Prepared by

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Expect More. Experience Better.

2013-2021 Housing Element Update

Environmental Assessment Appendices

May 2018

Prepared for

City of Encinitas

Environmental Assessment
Technical Appendices

2013-2021 Housing Element Update

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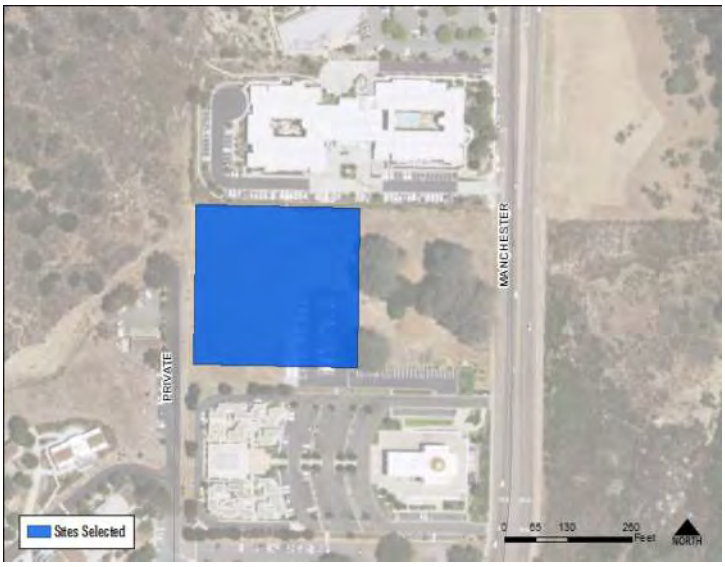
Appendix A

Candidate Sites Fact Sheets

GREEK CHURCH PARCEL

SITE NUMBER 01

2016 PEIR Site C-6



SITE DESCRIPTION

This site is a portion of a property owned by the Greek Orthodox Church and part of a larger parcel with existing multi-family residential uses and an existing church.

SITE FEATURES

- Primarily vacant, open space
- Concrete pad

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2611506400 (STS CONSTANTINE & HELEN GREEK ORTHODOX CHURCH)	**PARCEL SIZE (AC) (GROSS/NET)**	2.5/2.0
SITE STATUS	Vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	3459 Manchester Avenue	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Cardiff	**MAXIMUM UNIT CAPACITY**	60
GENERAL PLAN LAND USE	Rural Residential 1	**CONSTRAINTS**	None
ZONING	Rural Residential 1 (RR-1) 1 DU/AC		

CANNON PROPERTY (PIRAEUS)

SITE NUMBER 02

SITE DESCRIPTION

This site is a vacant property at the corner of Piraeus Street and Plato Place, both of which are two-lane local streets. The southern portion of the site is flat due to previous grading, with the majority of the site sloping up towards a flat pad on the northeast corner.

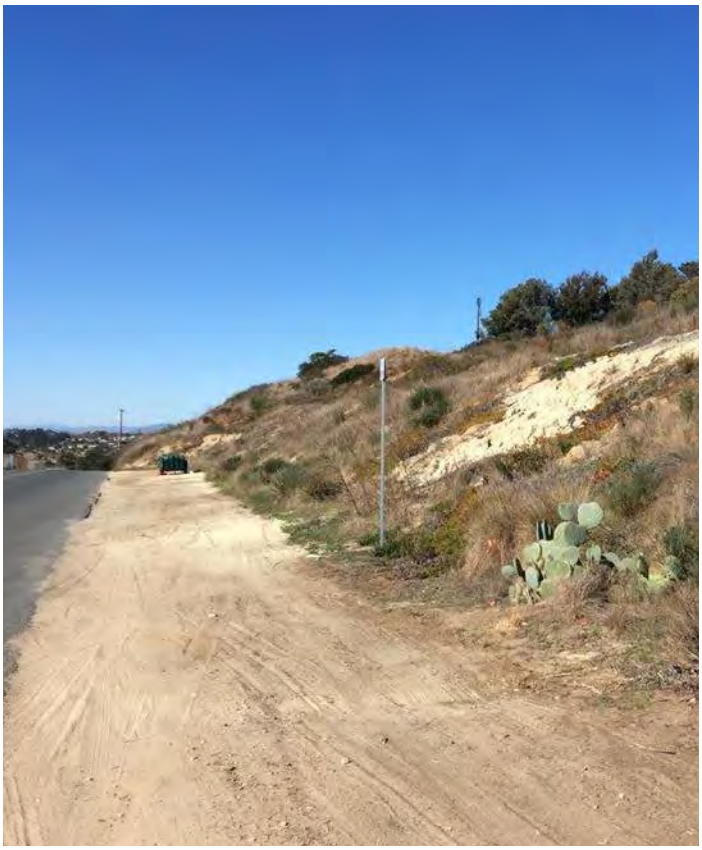
SITE FEATURES

- Vacant, natural landscape
- Partially graded
- Some mature trees/vegetation on the northern portion of the site
- Slight topography change

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2541440100 (CANNON MARIA T)	**PARCEL SIZE (AC) (GROSS/NET)**	6.9/6.9
SITE STATUS	Vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	Piraeus Street	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**MAXIMUM UNIT CAPACITY**	208
GENERAL PLAN LAND USE	Rural Residential 2	**CONSTRAINTS**	• Slight Topography (less than 25% slope, so no deductions)
ZONING	Rural Residential 2 (RR-2) 2 DU/AC		



L-7 PARCEL

SITE NUMBER 03

2016 PEIR Site L-7

SITE DESCRIPTION

This site is a vacant property surrounded by low density single-family residential uses and agricultural greenhouses to the north. The site sits adjacent to a two-lane arterial with bicycle lanes in each direction and a raised center median. The site slopes gently from the east up to the west and has an existing concrete building pad in the southeast corner.

SITE FEATURES

- Vacant, natural landscape
- Existing concrete pad in the southeast corner
- Paved ingress/egress point
- Some mature trees and vegetation

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2570111700 (CITY OF ENCINITAS)	**PARCEL SIZE (AC) (GROSS/NET)**	7.6/7.6
SITE STATUS	Vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	634 Quail Gardens Lane	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**MAXIMUM UNIT CAPACITY**	228
GENERAL PLAN LAND USE	Rural Residential 1	**CONSTRAINTS**	None
ZONING	Rural Residential 1 (RR-1) 1 DU/AC		

ENCINITAS BLVD & QUAIL GARDENS PARCELS

SITE NUMBER 05

2016 PEIR Site OE-7

SITE DESCRIPTION

Parcel 2581111600 is a vacant parcel adjacent to a six-lane arterial with bicycle lanes in both directions and a raised concrete median. The property has an access road and an existing medical office use to the west. The site has a moderately steep slope from south to north and contains existing walking paths and an unpaved access road.

Parcel 2581304500 is a narrow vacant property adjacent to a six-lane arterial with bicycle lanes in each direction and a raised concrete median. The site rises steeply from the street.

Parcel 2581308100 is a vacant parcel adjacent to a six-lane arterial with bicycle lanes in both directions and a raised concrete median. The site contains vehicular access points from Encinitas Blvd and Quail Gardens Dr. There is also a moderate slope from west to east.

Parcel 2581303400 is landlocked by vacant parcels and contains an older, vacant single-family residential structure and private access road. The landowner has stated that the home is uninhabitable, and it is intended to be demolished.

APN(S) (Ownership)	2581111600, 2581304500, 2581308100, 2581303400 (SHOWPROP DOWNEY LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	2581111600 - 2.2/2.2 2581304500 - 0.4/0.2 2581308100 - 1.3/1.3 2581303400 - 1.0/1.0 Total: 4.9/4.7
SITE STATUS	Vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	550 Encinitas Blvd, 696 Encinitas Blvd, Quail Gardens Dr	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Old Encinitas	**MAXIMUM UNIT CAPACITY**	144
GENERAL PLAN LAND USE	Office Professional	**CONSTRAINTS**	• Steep topography on some portions. Acreage reduced per City code.
ZONING	Office Professional (OP) 0.75 FAR		
LAND VALUE (2581303400)	$999,600	**TOTAL VALUE (2581303400)**	$1,020,000

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.

SITE FEATURES

- One vacant, single-story single-family house
- Some manufactured slopes that are determined to not be a constraint on future development
- Primarily vacant, natural land
- Flat, graded area on the eastern portion

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel size reflects the full gross acreage for the following parcels:

- 2581111600
- 2581308100
- 2581303400

Parcel 2581304500 contains 0.2 acres of slopes greater than 40% (Not developable per City of Encinitas Municipal Code). Resulting in a net acreage of 0.2 acres for this parcel.

JACKEL PROPERTIES
SITE NUMBER 07

SITE DESCRIPTION
Parcel 2160412100 is a vacant property that sits between existing commercial uses and attached residential. The site has an approximately 55-foot wide driveway adjacent to North Highway 101, a four-lane arterial with bike lanes in each direction and a center median. The site slopes gently up from east to west with a slope of less than 25 percent.

Parcel 2160412000 is a vacant parcel adjacent to a four-lane arterial with bike lanes in each direction and a center median. The site contains a vacant restaurant and a large vacant surface parking lot with a single ingress/egress point.

SITE FEATURES
- One vacant, natural parcel
- Existing single-story vacant restaurant with outdoor patio
- Large surface parking lot
- Moderate slope adjacent to Highway 10 (less than 25%)
- Existing mature trees and vegetation

PARCEL SIZE CALCULATION
There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2160412000, 2160412100 One Owner for all parcels: (F C A ENCINITAS LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	2160412000 - 1.9/1.9 2160412100 - 1.1/1.1 Total: 3.0/3.0
SITE STATUS	Vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	1950 HWY 101	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**MAXIMUM UNIT CAPACITY**	89 (if developed all residential)
GENERAL PLAN LAND USE	Visitor-Serving Commercial	**CONSTRAINTS**	None.
ZONING	North 101 Specific Plan - Limited Visitor Serving Commercial (N-LVSC) 1.0 FAR		

RANCHO SANTA FE PARCELS (GAFFNEY/ GOODSEN)

SITE NUMBER 08

2016 PEIR Site O-6 (Parcel 2592313200)

SITE DESCRIPTION

Parcel 2592313200 is a vacant parcel adjacent to a two-lane arterial with bicycle lanes in each direction. The site is surrounded to the north and west by existing low density single-family residential uses. There is a moderate slope on the site rising from the northeast to the south.

Parcel 2592312800 is a non-vacant parcel with several single-story residential structures. It contains a private access road that connects to an adjacent four-lane major arterial. The site also contains existing mature vegetation.

Parcel 2592313000 is a non-vacant parcel with a single two-story residential structure and is landlocked by low density single-family residential uses, a vacant parcel, and a strip commercial center. The site also contains existing mature vegetation.

Parcel 2592313100 is a non-vacant parcel with a single one-story residential structure and is landlocked by low density single-family residential uses and a vacant parcel. The site also contains existing mature vegetation.

APN(S) (Ownership)	2592313200, 2592312800, 2592313000 One Owner for the above parcels: (OLIVENHAIN TOWN CENTER 5.6 L P) 2592313100 (GAFFNEY DAVID R & RICA G REVOCABLE TRUST 04-11)	**PARCEL SIZE (AC) (GROSS/NET)**	2592312800 - 3.9/3.6 (Non-vacant) 2592313000 - 0.5/0.5 (Non-vacant) 2592313100 - 0.5/0.5 (Non-vacant) 2592313200 - 1.8/1.5 (Vacant) Total: 6.7/6.1
SITE STATUS	One vacant Three non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	Rancho Santa Fe Dr Encinitas Boulevard, 2230 Encinitas Boulevard, 2228 Encinitas Boulevard, 2220	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Olivenhain	**MAXIMUM UNIT CAPACITY**	Vacant: 44 Non-vacant: 137
GENERAL PLAN LAND USE	Rural Residential 2	**CONSTRAINTS**	• Multiple owners • Some landlocked parcels • Slight topography
ZONING	Rural Residential 2 (RR-2) 2 DU/AC		

SITE FEATURES

- One vacant, natural parcel
- Moderate slopes on the vacant parcel
- Approximately five residential structures ranging from one- to two-stories and spread across multiple parcels
- Existing mature trees and vegetation
- Paved access road

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas on Parcels 2592313000 and 2592313100. Therefore, the parcel's net acreage equals the full gross acreage for these parcels.

The net acreage shown for Parcel 2592312800 reflects the following deductions from the gross acreage:

- 0.6 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)

The net acreage shown for Parcel 2592313200 reflects the following deductions from the gross acreage:

- 0.6 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)

0.6 acres (50% of the overall 1.2 acre reduction due to slopes) was removed from the overall gross acreage to get the parcel size shown in the previous table.

ECHTER PROPERTY
SITE NUMBER 09

SITE DESCRIPTION
This site is a large parcel containing mostly temporary greenhouse agricultural structures along with an existing single-family residential structure. The site sits at the junction of a major four-lane arterial and a local two-lane road.

The Agricultural Zone provisions of the Encinitas Ranch Specific Plan in which the site is located encourage the continued agricultural use of portions of the Specific Plan Area and the provision of a favorable setting in which to continue agricultural operations.

SITE FEATURES
- Several buildings serving the agricultural practice onsite
- Temporary covered structures and greenhouses
- Large service tanks
- Interior roads
- Single-family residence in southwest corner

PARCEL SIZE CALCULATION
There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage for this parcel.

Only 9.9 acres of the 21.5 gross acres are designated for housing. This 9.9 is shown as the net acreage of developable area in the table below.

APN(S) (Ownership)	2546121200 (R E L S INC)	**PARCEL SIZE (AC) (GROSS/NET)**	21.5/9.9
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	1150 Quail Gardens Drive	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**MAXIMUM UNIT CAPACITY**	296
GENERAL PLAN LAND USE	Specific Plan 3 (SP-3)	**CONSTRAINTS**	• Owner has indicated interest in only developing 250 units
ZONING	Encinitas Ranch Specific Plan - Agriculture (ER-AG) 0.10 DU/AC		
LAND VALUE	$1,180,201	**TOTAL VALUE**	$1,736,450

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.

EL CAMINO REAL SOUTH PARCEL

SITE NUMBER 11

SITE DESCRIPTION

This site is a long, narrow parcel with agricultural uses located adjacent to a four-lane arterial with existing bicycle lanes in each direction and a painted median turn lane. The site contains existing greenhouse and temporary agricultural structures. The site is primarily flat with a moderate slope on the western half of the site. The low value of the existing structures makes it a suitable candidate for residential development.

As set forth in many policies of the General Plan the City favors maintaining agricultural uses in the City yet does not require the continued use of agricultural uses.

SITE FEATURES

- Existing greenhouse and other temporary agriculture-related structures
- Existing single-story commercial building
- Small paved parking lot
- Moderate slopes on the western portion of the site

PARCEL SIZE CALCULATION

The net acreage shown for this parcel reflects the following deductions from the gross acreage:

- 0.7 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)

0.4 acres was removed from the overall gross acreage to get the parcel size shown in the adjacent table.

APN(S) (Ownership)	2621601400 (FERNANDEZ VICTORIA TR)	**PARCEL SIZE (AC) (GROSS/NET)**	2.3/1.9
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	El Camino Real	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	New Encinitas	**MAXIMUM UNIT CAPACITY**	58
GENERAL PLAN LAND USE	Residential 3	**CONSTRAINTS**	• Moderate slopes on rear portion of the parcel
ZONING	Residential 3 (R-3) 3 DU/AC		
LAND VALUE	$385,036	**TOTAL VALUE**	$533,788

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.

SUNSHINE GARDENS PARCELS

SITE NUMBER 12

SITE DESCRIPTION

Parcel 2581309700 is on-vacant parcel comprised primarily of a paved surface parking lot and a variety of retail uses in both permanent and temporary structures. The site is adjacent to a four-lane major arterial with bicycle lanes in each direction and a paved center median. The site has been graded to be mostly flat with moderate slopes directly adjacent to Encinitas Blvd.

Parcel 2581309900 is an underutilized parcel comprised primarily of a single-story commercial building, a paved surface parking lot, and a variety of retail uses in both permanent and temporary structures. The site is at the intersection of a four-lane major arterial and a two-lane collector road.

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

SITE FEATURES

- Single-story commercial building
- A variety of retail uses
- Several temporary agriculture and outdoor sales related structures
- Large paved surface parking lot
- Unpaved dirt areas

APN(S) (Ownership)	2581309700, 2581309800 One Owner for all parcels: (CAM-MAR GROWERS)	**PARCEL SIZE (AC) (GROSS/NET)**	2581309700 - 2.0/2.0 2581309800 - 1.4/1.4 Total: 3.4
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	630 Encinitas Boulevard, Encinitas Boulevard	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Old Encinitas	**MAXIMUM UNIT CAPACITY**	102
GENERAL PLAN LAND USE	Office Professional	**CONSTRAINTS**	None.
ZONING	Office Professional (OP) 0.75 FAR		
LAND VALUE	$3,448,000	**TOTAL VALUE**	$3,575,000

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.

SAGE CANYON PARCEL

SITE NUMBER AD01

SITE DESCRIPTION

The site is a vacant property surrounded by natural open space and adjacent to a four-lane major road with a striped center turn lane, bicycle lanes going both directions, and parallel street parking along the west side of the road. Based on previous development plans, there are some known environmental constraints that shrink the gross buildable area.

SITE FEATURES

- Existing mature trees and natural vegetation
- Some steep slopes adjacent to El Camino Real
- Previously graded, vacant area
- Private access point off a roundabout shared by a single-family residential neighborhood

PARCEL SIZE CALCULATION

Net acreage shown in the table was determined from the net buildable area based on numerous studies of the topographic and environmental constraints by the owner.

APN(S) (Ownership)	2620618500 (PACIFIC CANYON LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	5.2/2.4
SITE STATUS	Vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	Sage Canyon Drive	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	New Encinitas	**MAXIMUM UNIT CAPACITY**	72
GENERAL PLAN LAND USE	Residential 3	**CONSTRAINTS**	• Steep Topography in some areas • Environmentally sensitive areas • Existing drainage canal
ZONING	Residential 3 (R-3) 3 DU/AC		

BALDWIN & SONS PROPERTIES

SITE NUMBER AD02

SITE DESCRIPTION

Parcels 2570203600, 2570203700, 2581308000, 2581308200, 2581308600 are vacant parcels adjacent to Quail Gardens Drive, a two-lane arterial with bicycle lanes in each direction and a center turning lane.

Parcels 2581309100, 2581309300, 2581309400 are vacant parcels surrounded by other vacant parcels, single-family residential uses to the east, and commercial uses to the south. The parcels are landlocked with no direct access to a street.

SITE FEATURES

- Mature trees and vegetation
- Paved concrete pads
- Telephone pole lines overhead

PARCEL SIZE CALCULATION

Net acreage shown in the table was determined based on numerous studies of the topographic and environmental constraints and a 50-foot riparian buffer requirement for off-site wetlands that encroaches on Parcel 2570203600.

APN(S) (Ownership)	2581308000, 2581308200 2581308600, 2581309100 2581309300, 2581309400 2570203600, 2570203700 One Owner for all parcels: (QUAIL MEADOWS PROPERTIES LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	2581308000 - 1.0/1.0 2581308200 - 1.3/1.3 2581308600 - 2.2/2.2 2581309100 - 0.5/0.5 2581309300 - 3.2/0.6 2581309400 - 0.3/0.3 2570203600 - 1.9/1.9 2570203700 - 1.3/1.3 Total: 11.7/9.1
SITE STATUS	Vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	195 Quail Gardens Dr, Quail Gardens Dr, 185 Quail Gardens Dr, Mays Hollow Ln, Encinitas Blvd, 225 Quail Gardens Dr	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Old Encinitas	**MAXIMUM UNIT CAPACITY**	270
GENERAL PLAN LAND USE	Residential 3 Residential 5	**CONSTRAINTS**	• Some landlocked parcels • Utility easement
ZONING	Residential 3 (R-3) 3 DU/AC, Residential 5 (R-5) 5 DU/AC		

DEWITT PROPERTY

SITE NUMBER AD07

SITE DESCRIPTION

The site is a on-vacant parcel containing approximately four single-story commercial buildings. The site is adjacent to North Coast Highway 101, a four-lane street with bicycle lanes in each direction. The site is adjacent to a vacant property to the north and west, North Coast Highway 101 to the east, and a small public road to the south.

The planned multimodal improvements on Highway 101 will not impact the area of the site.

SITE FEATURES

- Four single-story small commercial buildings
- Direct access from North Coast Highway 101
- Temporary storage structures
- Paved parking lot

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2160410600 (DEWITT GARY TRUST 09-08-04)	**PARCEL SIZE (AC) (GROSS/NET)**	0.8/0.8
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	1900 N Highway 101	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**MAXIMUM UNIT CAPACITY**	24
GENERAL PLAN LAND USE	General Commercial	**CONSTRAINTS**	Existing operational businesses
ZONING	North 101 Specific Plan - Commercial Residential Mixed 1 (N-CRM-1) 25 DU/AC		

OPEN

ARMSTRONG PARCELS
SITE NUMBER 06

SITE DESCRIPTION

Parcel 2574702400 is a vacant property adjacent to an eight-lane major arterial. The site is mostly flat due to previous grading, with several existing retail uses to the north and existing office uses to the south. The property has a small area of existing wetland vegetation which would require proper mitigation prior to development and could impact the number of units that will be able to be developed on the site.

Parcel 2574702300 is a on-vacant parcel with an existing retail garden center, paved surface parking lot, and private drive aisles. The site is adjacent to an eight-lane major arterial with bicycle lanes in each direction and a raised concrete median.

SITE FEATURES

- One vacant, natural parcel
- Small area of existing wetland vegetation on the vacant parcel
- Existing Armstrong retail garden center and surface parking lot

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas on Parcel 2574702300. The net parcel size reflects the full gross acreage for this parcel.

The net acreage shown for Parcel 2574702400 reflects the following deductions from the gross acreage:

- 0.6 acres of existing wetlands. Calculation includes 50-foot riparian buffer.
- 0.4 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)

Removal of 0.8 acres from the overall gross acreage was used to get the parcel size shown in the table.

APN(S) (Ownership)	2574702300, 2574702400 One Owner for all parcels: (WHITE BYRON F 2001 REVOCABLE TRUST 08-08-01)	**PARCEL SIZE (AC) (GROSS/NET)**	2574702300 - 1.9/1.9 (non-vacant) 2574702400 - 1.9/1.1 (vacant) Total: 3.8/3.0
SITE STATUS	One vacant One non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	El Camino Real	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	New Encinitas	**MAXIMUM UNIT CAPACITY**	Vacant: 32 Non-vacant: 56
GENERAL PLAN LAND USE	General Commercial	**CONSTRAINTS**	Small area of existing wetland vegetation
ZONING	General Commercial (GC) 1.0 FAR		

STRAWBERRY FIELDS PARCEL

SITE NUMBER 10

SITE DESCRIPTION

This site is a partially vacant site located along a major four-lane arterial with bike lanes in each direction and a striped median. The site is primarily used for agricultural purposes and contains no existing permanent structures. The site slopes gently from the south up to the north and is located across the road from sensitive habitat in the San Elijo Lagoon.

As set forth in many policies of the General Plan the City favors maintaining agricultural uses in the City yet does not require the continued use of agricultural uses.

SITE FEATURES

- Graded site sloping gently away from Manchester Avenue
- Existing agricultural rows and temporary greenhouse structures
- Dirt roads, no paved roads onsite

PARCEL SIZE CALCULATION

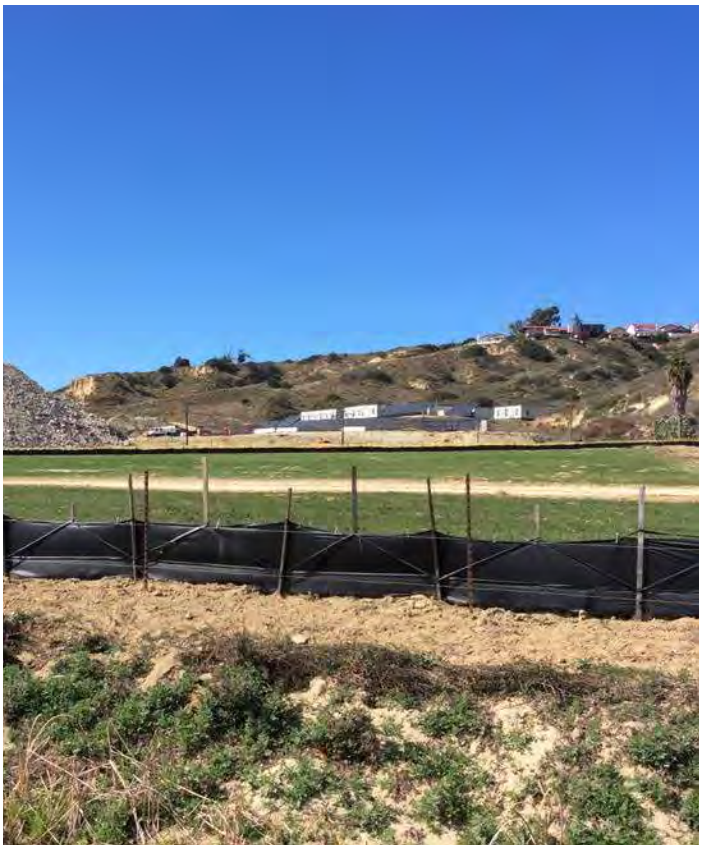
The net acreage shown for this parcel reflects the following deductions from the gross acreage:

- 0.9 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)
- 1.2 acres contain slopes greater than 40% (not developable per the City of Encinitas Municipal Code)

Only 9.9 acres of the 16.9 gross acres are designated for housing. This 9.9 is shown as the net acreage of developable area in the table.

APN(S) (Ownership)	2612100100 (YASUDA FAMILY LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	16.9/9.9
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	3111 Manchester Avenue	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Cardiff	**MAXIMUM UNIT CAPACITY**	296
GENERAL PLAN LAND USE	Rural Residential 2	**CONSTRAINTS**	Steep slopes
ZONING	Rural Residential 2 (RR-2) 2 DU/AC		
LAND VALUE	$1,226,836	**TOTAL VALUE**	$1,226,836

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.



MICHAELS/BIG LOTS PROPERTIES

SITE NUMBER AD06

SITE DESCRIPTION

Parcel 2570623300 is a non-vacant parcel containing two single-story commercial buildings with multiple tenants. The site also contains a paved private drive aisle and parking. The site is adjacent to El Camino Real, a six-lane major arterial with bike lanes in each direction and a raised, planted median. The parking lot and buildings sit approximately 5'-8" above street level. The parcel is part of a larger commercial center.

Parcel 2570623400 is a non-vacant parcel containing one minor anchor commercial store (Michaels). It is landlocked by adjacent commercial and residential uses, with access to El Camino Real through parking drive aisles. The parcel is part of a larger commercial center.

Parcel 2570623500 is a non-vacant parcel containing one large commercial store (formerly Big Lots), which is currently vacant. It is landlocked by adjacent commercial and residential uses, with access to El Camino Real through parking drive aisles. The parcel is part of a larger commercial center.

Parcel 2570623600 is a non-vacant parcel containing one single-story commercial building with a single

APN(S) (Ownership)	2570623300, 2570623400, 2570623600 One Owner for the above parcels: (335 NO ELCAMINO REAL LLC) 2570623500 (CIRCUIT CITY STORES WEST COAST INC)	**PARCEL SIZE (AC) (GROSS/NET)**	2570623300 - 1.2/1.2 2570623400 - 2.2/1.2 2570623500 - 3.6/3.0 2570623600 - 0.8/0.8 Total: 7.8/6.2
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	331, 333, 335, 337 N El Camino Real	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	New Encinitas	**MAXIMUM UNIT CAPACITY**	188
GENERAL PLAN LAND USE	General Commercial	**CONSTRAINTS**	• Some steep slopes at the rear of the property • Existing operational businesses
ZONING	General Commercial (GC) 1.0 FAR		

tenant. The site is adjacent to El Camino Real, a six-lane major arterial with bike lanes in each direction and a raised, planted median. The parking lot and buildings sit approximately 5-feet above street level. The parcel is part of a larger commercial center.

Parcel 2570623500 is landlocked by parcels.

SITE FEATURES

- Three single-story commercial buildings with multiple tenants
- Two large anchor commercial uses towards the rear of the sites
- Some moderate slopes towards the rear of the sites
- Paved surface parking
- Current access from the office uses to the north

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas on Parcels 2570623300 and 2570623600. Therefore, the parcels' net acreage equals the full gross acreage.

The net acreage shown for Parcel 2570623400 reflects the following deductions from the gross acreage:

- 1.0 acre reduction due to slopes greater than 40% (Not developable per the City of Encinitas Municipal Code)

The net acreage shown for Parcel 2570623500 reflects the following deductions from the gross acreage:

- 0.6 acre reduction due to slopes greater than 40% (Not developable per the City of Encinitas Municipal Code)

VULCAN & LA COSTA

SITE NUMBER AD08

SITE DESCRIPTION

This site is a non-vacant parcel with existing agricultural uses and several single-story structures related to agricultural sales. The property is adjacent to North Vulcan Avenue, a two-lane local arterial. The majority of the site is occupied by temporary agricultural structures such as greenhouses.

As set forth in many policies of the General Plan the City favors maintaining agricultural uses in the City yet does not require the continued use of agricultural uses.

SITE FEATURES

- Greenhouse structures and frames
- Single-story agricultural-related structures
- Small paved parking lot

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2160520100 (RONHOLM CRAIG NICHOLS JOHN F)	**PARCEL SIZE (AC) (GROSS/NET)**	2.0/2.0
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	1967 N Vulcan Ave	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**MAXIMUM UNIT CAPACITY**	60
GENERAL PLAN LAND USE	Residential 3	**CONSTRAINTS**	Existing operational business
ZONING	North 101 Specific Plan - Residential 3 (N-R3) 3 DU/AC		

ROSES
9.99

ROSES
9.99

SEACOAST CHURCH

SITE NUMBER AD09

SITE DESCRIPTION

This site is a non-vacant parcel with existing church buildings, four in total with associated parking lots to the north and south. The four buildings look to be a chapel, school/daycare, and meeting rooms/ offices, and storage. The property is adjacent to Interstate 5 highway, an eight-lane scenic view corridor. The central portion of the site is occupied by church structures with two vacant triangle pieces on the south and northwest corners. The church pastor has expressed interest in developing this site for residential uses.

SITE FEATURES

- Four buildings and a tower
- Two-story church-related structures
- Small paved parking lot
- Two vacant pieces

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2582411000 (SEACOAST COMMUNITY CHURCH)	**PARCEL SIZE (AC) (GROSS/NET)**	4.4/4.4
SITE STATUS	Non-vacant	**MAXIMUM PROPOSED DENSITY**	30 DU/AC
ADDRESS(ES)	1050 Regal Road	**MINIMUM PROPOSED DENSITY**	25 DU/AC
NEIGHBORHOOD	Old Encinitas	**MAXIMUM UNIT CAPACITY**	132
GENERAL PLAN LAND USE	Residential 11	**CONSTRAINTS**	Existing operational business
ZONING	Residential 11 (R-11) 11 DU/AC		

EXIT
ONLY

Appendix B

Candidate Sites Table

ENCINITAS HOUSING ELEMENT UPDATE - ENVIRONMENTAL ASSESSMENT
MAXIMUM REALISTIC YIELD (MRY)

KEY: "TEXT" = Measure T Site previously analyzed in 2016 PEIR.

SITE KEY	SITE #	COM-MUNITY # (1-5)	ADDRESS	COMMUNITY AREA	SITE ID NAME	APN	GROSS PARCEL (AC)	NET PARCEL (AC)	VACANT OR NON-VACANT SITE	OTG EXISTING RES (DU)	OTG EXISTING RES (SF for DEMO)	OTG EXISTING NON-RES (FOOTPRINT)	OTG EXISTING NON-RES (SF)	GP EXISTING	GP EXISTING DENSITY RES (DU/AC)	GP EXISTING MRY RES (DU)	GP EXISTING INTENSITY NON-RES (FAR)	GP EXISTING MRY NON-RES (SF)	GP PROPOSED	GP PROPOSED DENSITY RES (DU/AC)	GP PROPOSED MRY RES (DU)	GP PROPOSED INTENSITY NON-RES (FAR)	GP PROPOSED MRY NON-RES (SF)	ZONING EXISTING	ZONING EXISTING DENSITY RES (DU/AC)	ZONING EXISTING MRY RES (DU)	ZONING EXISTING INTENSITY NON-RES (FAR)	ZONING EXISTING MRY NON-RES (SF)	ZONING PROPOSED	ZONING PROPOSED DENSITY RES (DU/AC)	ZONING PROPOSED MRY RES (DU)	ZONING PROPOSED INTENSITY NON-RES (FAR)	ZONING PROPOSED MRY NON-RES (SF)
506400	01	3	3459 Manchester Ave	Cardiff	2016 PEIR Site C-6 (@ 4.6 AC); Greek Church Site	2611506400	2.5	2.0	Vacant	0	0	0	0	RR-1	1	2	--	--	RR-1, R-30 OL	30	60	--	--	RR-1	1	2	--	--	RR-1, R-30 OL	30	60	--	--
C1-S02	02	1	Piraeus St	Leucadia	Cannon Property (Piraeus Site)	2541440100	6.9	6.9	Vacant	0	0	0	0	RR-2	2	14	--	--	RR-2, R-30 OL	30	208	--	--	RR-2	2	14	--	--	RR-2, R-30 OL	30	208	--	--
C1-S03	03	1	634 Quail Gardens Lane	Leucadia	2016 PEIR Site L-7	2570111700	7.6	7.6	Vacant	0	0	0	0	RR-1	1	8	--	--	RR-1, R-30 OL	30	228	--	--	RR-1	1	8	--	--	RR-1, R-30 OL	30	228	--	--
C2-S05	05	2	Encinitas Blvd	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581111600	2.2	2.2	Vacant	0	0	0	0	OP	--	--	0.75	72,527	OP, R-30 OL	30	67	0.75	72,527	OP	--	--	0.75	72,527	OP, R-30 OL	30	67	0.75	72,527
	05	2	Quail Gardens Dr	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581304500	0.4	0.2	Vacant	0	0	0	0	OP	--	--	0.75	7,514	OP, R-30 OL	30	7	0.75	7,514	OP	--	--	0.75	7,514	OP, R-30 OL	30	7	0.75	7,514
	05	2	550 Encinitas Blvd	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581308100	1.3	1.3	Vacant	0	0	0	0	OP	--	--	0.75	42,798	OP, R-30 OL	30	39	0.75	42,798	OP	--	--	0.75	42,798	OP, R-30 OL	30	39	0.75	42,798
	05	2	696 Encinitas Blvd	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581303400	1.0	1.0	Vacant	1	0	0	0	OP	--	--	0.75	33,323	OP, R-30 OL	30	31	0.75	33,323	OP	--	--	0.75	33,323	OP, R-30 OL	30	31	0.75	33,323
C1-S07	07	1	1950 Highway 101	Leucadia	Jackel Property	2160412000	1.9	1.9	Vacant	0	0	0	0	VSC	--	--	1	83,200	VSC, R-30 OL	30	57	1	83,200	N-LVSC	--	--	1	83,200	N-LVSC, R-30 OL	30	57	1	83,200
	07	1	N/A	Leucadia	Jackel Property	2160412100	1.1	1.1	Vacant	0	0	0	0	VSC	--	--	1	46,174	VSC, R-30 OL	30	32	1	46,174	N-LVSC	--	--	1	46,174	N-LVSC, R-30 OL	30	32	1	46,174
C4-SAD01	AD01	4	Sage Canyon Dr	New Encinitas	Sage Canyon Parcel	2620618500	5.2	2.4	Vacant	0	0	0	0	R-3	3	7	--	--	R-3, R-30 OL	30	72	--	--	R-3	3	7	--	--	R-3, R-30 OL	30	72	--	--
C2-SAD02	AD02	2	195 Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581308000	1.0	1.0	Vacant	0	0	0	0	R-5	5	5	--	--	R-5, R-30 OL	30	30	--	--	R-5	5	5	--	--	R-5, R-30 OL	30	30	--	--
	AD02	2	Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581308200	1.3	1.3	Vacant	0	0	0	0	R-5	5	6	--	--	R-5, R-30 OL	30	38	--	--	R-5	5	6	--	--	R-5, R-30 OL	30	38	--	--
	AD02	2	185 Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581308600	2.2	2.2	Vacant	0	0	0	0	R-5	5	11	--	--	R-5, R-30 OL	30	67	--	--	R-5	5	11	--	--	R-5, R-30 OL	30	67	--	--
	AD02	2	Mays Hollow Ln	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581309100	0.5	0.5	Vacant	0	0	0	0	R-5	5	3	--	--	R-5, R-30 OL	30	15	--	--	R-5	5	3	--	--	R-5, R-30 OL	30	15	--	--
	AD02	2	Encinitas Blvd	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581309300	3.2	0.6	Vacant	0	0	0	0	R-5	5	3	--	--	R-5, R-30 OL	30	18	--	--	R-5	5	3	--	--	R-5, R-30 OL	30	18	--	--
	AD02	2	Encinitas Blvd	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581309400	0.3	0.3	Vacant	0	0	0	0	R-5	5	1	--	--	R-5, R-30 OL	30	8	--	--	R-5	5	1	--	--	R-5, R-30 OL	30	8	--	--
	AD02	2	Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2570203600	1.9	1.9	Vacant	0	0	0	0	R-3	3	6	--	--	R-3, R-30 OL	30	56	--	--	R-3	3	6	--	--	R-3, R-30 OL	30	56	--	--
	AD02	2	225 Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2570203700	1.3	1.3	Vacant	0	0	0	0	R-3	3	4	--	--	R-3, R-30 OL	30	38	--	--	R-3	3	4	--	--	R-3, R-30 OL	30	38	--	--
C1-S09	09	1	1150 Quail Gardens Dr	Leucadia	Echter Property	2546121200	21.5	9.9	Non-Vacant	1			606,076	SP-3	3	30	--	--	SP-3, R-30 OL	30	296	--	--	ER-AG	0.1	1	--	--	ER-AG, R-30 OL	30	296	--	--
C3-S10	10	3	Null	Cardiff	Previosly Site C5, but not analyzed in 2016 PEIR Site C5; Strawberry Fields Parcel	2612100100	16.9	9.9	Non-Vacant	1			3,880	RR-2	2	20	--	--	RR-2 R-30 OL	30	296	--	--	RR-2	2	20	--	--	RR-2 R-30 OL	30	296	--	--
C4-S11	11	4	El Camino Real	New Encinitas	El Camino Real South Parcel	2621601400	2.3	1.9	Non-Vacant	0			43,765	R-3	3	6	--	--	R-3, R-30 OL	30	58	--	--	R-3	3	6	--	--	R-3, R-30 OL	30	58	--	--
C2-S12	12	2	630 Encinitas Blvd	Old Encinitas	Sunshine Gardens Parcel	2581309700	2.0	2.0	Non-Vacant	0			2,536	OP	--	--	0.75	66,647	OP, R-30 OL	30	61	0.75	66,647	OP	--	--	0.75	66,647	OP, R-30 OL	30	61	0.75	66,647
	12	2	Encinitas Blvd	Old Encinitas	Sunshine Gardens Parcel	2581309800	1.4	1.4	Non-Vacant	0			4,313	OP	--	--	0.75	44,105	OP, R-30 OL	30	41	0.75	44,105	OP	--	--	0.75	44,105	OP, R-30 OL	30	41	0.75	44,105
C4-S06	06	4	El Camino Real	New Encinitas	Armstrong Parcels (Armstrong)	2574702400	1.9	1.1	Vacant	0			0	GC	--	--	1	46,174	GC, R-30 OL	30	32	1	46,174	GC	--	--	1	46,174	GC, R-30 OL	30	32	1	46,174
	06	4	El Camino Real	New Encinitas	Armstrong Parcels (Armstrong Nursery II Parcel)	2574702300	1.9	1.9	Non-Vacant	0			5,421	GC	--	--	1	81,457	GC, R-30 OL	30	56	1	81,457	GC	--	--	1	81,457	GC, R-30 OL	30	56	1	81,457
C5-S08	08	5	2220 Encinitas Blvd	Olivenhain	Rancho Santa Fe Sites (Gaffney/Goodsen)	2592312800	3.9	3.6	Non-Vacant	1			8,061	RR-2	2	7	--	--	RR-2, R-30 OL	30	107	--	--	RR-2	2	7	--	--	RR-2, R-30 OL	30	107	--	--
	08	5	2230 Encinitas Blvd	Olivenhain	Rancho Santa Fe Sites (Gaffney/Goodsen)	2592313000	0.5	0.5	Non-Vacant	1			3,082	RR-2	2	1	--	--	RR-2, R-30 OL	30	16	--	--	RR-2	2	1	--	--	RR-2, R-30 OL	30	16	--	--
	08	5	2228 Encinitas Blvd	Olivenhain	Rancho Santa Fe Sites (Gaffney/Goodsen)	2592313100	0.5	0.5	Non-Vacant	1			3,297	RR-2	2	1	--	--	RR-2, R-30 OL	30	14	--	--	RR-2	2	1	--	--	RR-2, R-30 OL	30	14	--	--
	08	5	Rancho Santa Fe Dr	Olivenhain	2016 PEIR Site O-6 (excluded other 3 Site 08 parcels); Rancho Santa Fe Sites (Gaffney/Goodsen)	2592313200	1.8	1.5	Vacant	0			0	RR-2	2	3	--	--	RR-2, R-30 OL	30	44	--	--	RR-2	2	3	--	--	RR-2, R-30 OL	30	44	--	--
C4-SAD06	AD06	4	337 N El Camino Real	New Encinitas	Michaels/Big Lots Property	2570623300	1.2	1.2	Non-Vacant	0			14,243	GC	--	--	1	53,143	GC, R-30 OL	30	37	1	53,143	GC	--	--	1	53,143	GC, R-30 OL	30	37	1	53,143
	AD06	4	335 N El Camino Real	New Encinitas	Michaels/Big Lots Property	2570623400	2.2	1.2	Non-Vacant	0			22,535	GC	--	--	1	53,143	GC, R-30 OL	30	37	1	53,143	GC	--	--	1	53,143	GC, R-30 OL	30	37	1	53,143
	AD06	4	333 N El Camino Real	New Encinitas	Michaels/Big Lots Property	2570623500	3.6	3.0	Non-Vacant	0			35,104	GC	--	--	1	131,987	GC, R-30 OL	30	91	1	131,987	GC	--	--	1	131,987	GC, R-30 OL	30	91	1	131,987
	AD06	4	331 N El Camino Real	New Encinitas	Michaels/Big Lots Property	2570623600	0.8	0.8	Non-Vacant	0			5,290	GC	--	--	1	33,977	GC, R-30 OL	30	23	1	33,977	GC	--	--	1	33,977	GC, R-30 OL	30	23	1	33,977
C2-SAD09	AD09	2	1050 Regal Road	Old Encinitas	Seacoast Church	2582411000	4.4	4.4	Non-Vacant	0			22,930	R-11	11	48	0.6	--	R-11, R-30 OL	30	132	0.6	--	R-11	11	48	--	--	R-11, R-30 OL	30	132	--	--
C1-SAD07	AD07	1	1900 N Highway 101	Leucadia	Dewitt Property	2160410600	0.8	0.8	Non-Vacant	0			4,574	GC	--	--	1	34,848	GC, R-30 OL	30	24	1	34,848	N-CRM-1 (N101SP)	25	20	1	34,848	N-CRM-1 (N101SP), R-30 OL	30	24	1	34,848
C1-SAD08	AD08	1	1967 N Vulcan Ave	Leucadia	Vulcan & La Costa Site	2160520100	2.0	2.0	Non-Vacant	1	0	0	8,650	R-3	3	6	--	--	R-3, R-30 OL	30	60	--	--	N-R3 (N101SP)	3	6	--	--	N-R3 (N101SP), R-30 OL	30	60	--	--
17					***36***		***111.2***	***83.1***		***7***	***0***	***0***	***793,757***			***191***		***831,016***		***2,494***		***831,016***			***183***		***831,016***			***2,494***		***831,016***	

2,303	0
GP PROP : GP EXIS DELTA	
2,487	-793,757
GP PROP : EXIS OTG DELTA	

CEQA PROJECT: 2,494 DU

2,312	0
ZONING PROP : ZONING EXIS DELTA	
2,487	-793,757
ZONING PROP : EXIS OTG DELTA	

2016 PEIR TABLES 3-5 & 3-7, MMUP	
3,261	1,610,066
ZONING PROPOSED:2016 PEIR DELTA	
-767	-1,610,066
-24%	-100%

Appendix C

Draft 2013-2021 Housing Element Update

CITY OF Encinitas

2013-2021 HOUSING ELEMENT UPDATE

HCD REVIEW DRAFT
MAY 9, 2018

CITY OF
Encinitas

City of Encinitas
Development Services Department
505 S. Vulcan Avenue, Encinitas, California 92024-3633

May 9, 2018

Department of Housing and Community Development
Division of Housing Policy Development
Attn: Ms. Robin Huntley
2020 W. El Camino Avenue, Suite 500
Sacramento, CA 95833

Re: City of Encinitas 2013-2021 Housing Element Update – Clarifications & Revisions

Dear Ms. Huntley:

The City of Encinitas submitted the 2013-2021 Housing Element Update for review on April 13, 2017. A subsequent revision was submitted on April 26, 2018, to remove one site (referred to as L-7) from the inventory included in Appendix C of the draft Housing Element. The enclosed revised document is provided to clarify proposed programs, provide updated data associated with accessory dwelling units, and to include a discussion detailing the approach in compiling the sites for moderate units.

All modifications are indicated in redline/strikeout format. For your convenience, the attached table provides an annotated summary of changes in the document.

If you have any questions or concerns regarding these revisions, please feel free to contact me at (760) 633-2712 or Diane Langager, Principal Planner at (760) 633-2714. We appreciate your assistance throughout the certification process.

Thank you,

Brenda Wisneski
Development Services Director

Attachments:

1. Summary table of document modifications
2. One hard copy and one CD with an electronic PDF copy of the City of Encinitas 2013-2021 Housing Element

Attachment 1

Table 1 Summary of Modifications to Draft 2013-2021 Housing Element		
No.	**Modification Description**	**Page/Section Reference**
Universal Revisions		
1	All footers of affected documents were revised to read [DRAFT 05 09 18].	--
2	Minor text corrections (typos, removal of extra spaces) were made upon second review and redlined throughout the document. Revisions like these that are not related to substantive changes are not called out individually in the rest of this table.	--
Section 1		
3	"Table 2-3: RHNA Progress to December 31, 2017" title and footnote added.	Page 1-9/Program 1A – Table 2-3
4	"Accessory Dwelling Unit" column added and populated in Table 2-4. Suitable Site Capacity and Excess Capacity figures updated in table.	Page 1-10/Program 1A – Table 2-4
5	Accessory Unit Production updated from 50 to 79 in Table 2-5 based on recent ADU survey findings. Remaining RHNA number updated and footnotes revised.	Page 1-10/Program 1A – Table 2-5
6	Table 2-6 was modified to remove the L-7 Parcel line item and update the Vacant Subtotal and Total line items to reflect the new gross acreage, net acreage, and unit yield.	Page 1-11/Program 1A – Table 2-6
7	Figure 2-1 was updated to reflect the removal of the L-7 Parcel.	Page 1-12/Program 1A – Figure 2-1
8	Updated unit counts and percentages relating to the removal of the L-7 Parcel.	Page 1-12/Program 1A
9	Various text revisions made for clarification.	Page 1-13/Program 1B
10	Description of ADU survey method and results added.	Page 1-14/Program 1C
11	"Objectives" section of the table revised to clarify and add objectives.	Page 1-18/Program 2B
12	Date revised.	Page 1-19/Program 2D
13	Text revised for clarity. "Objectives" section of table revised to clarify and add objectives. "Timeframe" section of the table revised.	Page 1-24/Program 3C
Appendix A		

14	Revised meeting notes based on a member of the public requesting to clarify his comments regarding support for L-7.	Housing Element Task Force/City Council Meeting Public Comments – February 28, 2018
Appendix B		
15	Appendix B title header added for clarification.	Page B-i/Appendix B
16	Table of Contents updated.	Page B-i through B-v/Appendix B
17	"Table B-4: Poverty Status by Race/Ethnicity" table updated to reflect accurate data.	Page B-3/Section 1.3 – Race/Ethnicity Characteristics
18	Figure B-4 was updated to reflect a missing title.	Page B-29/Section 5.3 - Housing Type
19	A date was revised updated from 2015 to 2016.	Page B-46/Section 8.1.9 – State Density Bonus Law
20	Text change clarifying Program 3C from Section 1.	Page B-49/Section 8.1.11 – Proposition A – Voter's Right Initiative
21	Text changes were made in this section to the number of parcels, number of lower income units, net acreage of lower income sites, and number of vacant units to reflect the removal of the L-7 Parcel.	Page B-86/Section 11 – Sites Suitable for Lower Income Housing
22	Table B-48 was modified to remove the L-7 Parcel line item and update the Vacant Subtotal and Total line items to reflect the new net acreage, and unit yield.	Page B-87/Section 11 - Table B-48
23	Figure B-6 was updated to reflect the removal of the L-7 Parcel.	Page B-88/Section 11 – Figure B-6
24	ADU projection changed from 50 to 79.	Page B-88/Section 11.1 – Accessory Dwelling Unit Production
25	Text added to describe ADU survey process and results.	Page B-89/ Section 11.1 – Accessory Dwelling Unit Production
26	Figure B-7 and Figure B-8: April Accessory Dwelling Unit Survey added.	Page B-90 and B-91/ Section 11.1 – Accessory Dwelling Unit Production
27	The lower income unit count figure was updated to reflect to removal of the L-7 Parcel	Page B-93/Section 11-3 – Credits toward the 2013-2021 RHNA
28	Table B-50 was modified to reflect changes in the Subtotal RHNA line to reflect an error in the	Page B-94/Section 11-3 –

	table.	Table B-50
29	Text changes were made to the number of units accommodated on lower income sites and revisions were made to reflect the impact of the removal of the L-7 Parcel on pending litigation.	Page B-96/Section 11-4 – RHNA Carryover from the Previous Planning Period
30	Text changes were made to update the figure for total units accommodated on sites within the Housing Element.	Page B-96/Section 11.5 – Adequacy of Sites for RHNA
31	Table B-52 was updated to reflect changes to the Sites Proposed for Rezoning and Total Capacity line items associated with the removal of the L-7 Parcel. Table also updated to reflect revised Sites available, Accessory Unit Production and footnotes revised.	Page B-94/Section 11.5 – Table B-52
Appendix C		
32	Table C-1 was updated to reflect changes to the Accessory Unit Production, RHNA Carryover, Candidate Site Unit Yield, and Total Capacity line items associated with the removal of the L-7 Parcel, Accessory Unit production survey results, and moderate site revisions.	Page C-1/Appendix C – Table C-1
33	The table titled “Net Acreage and Unit Yield Per Site” was modified to remove the L-7 Parcel line item and update the Vacant Subtotal and Total line items to reflect the new net acreage, and unit yield.	Page C-4/Very Low and Low RHNA Sites Inventory
34	The title of the table “Percentage of VL/L Sites by Site Type” was updated for accuracy.	Page C-4/Very Low and Low RHNA Sites Inventory
35	The table titled “Percentage of VL/L Sites by Site Type” was updated to reflect changes to the Vacant and Total line items associated with the removal of the L-7 Parcel.	Page C-4/Very Low and Low RHNA Sites Inventory
36	The cut sheets for the L-7 Parcel were removed.	Pages C-11 & C-12/Very Low and Low RHNA Sites Inventory
37	Existing Site Conditions” sheets were added to show the approximate location of environmental constraints, steep slopes, and other impediments to development.	Page C-15, C-20, C-23, C-26, C-31/Very Low and Low RHNA Sites Inventory
38	“Calculation of Unit Capacity” and “Process of Site Evaluation” sections added to show the capacity for downtown sites to redevelop.	Page C-36 and C-37/Moderate and Above Moderate Sites Candidate Inventory
39	Table C-2 “Infill Development Examples in	Page C-37/Table C-2 - Infill

	RHNA Planning Period" added to show examples of infill developments within the RHNA planning period.	Development Examples in RHNA Planning Period
40	Map of Moderate and Above Moderate Sites revised.	Page C-38/Map of Moderate and Above Moderate Sites
41	Sites have been vetted to exclude recent development, existing higher density housing development, and other sites not likely to redevelop for housing within the planning period.	Pages C-39 through C-45/ Moderate and Above Moderate Sites Candidate Inventory
42	A revised letter of interest has been added to Appendix C stating that the units to be developed will be available to the general public.	Page C-53/Section C.4 Letters of Interest From Property Owners for Very Low and Low-Income Candidate Sites

1. Introduction

The Housing Element provides the City with a coordinated and comprehensive strategy for promoting the production of safe, decent, and affordable housing for all within the Encinitas community.

1.1 Role of Housing Element

The Housing Element as part of the Encinitas General Plan is developed to ensure that the City establishes policies, procedures, and incentives in its land use planning and development activities that result in the maintenance and expansion of the housing supply to adequately accommodate households currently living and expected to live in Encinitas. The Housing Element institutes policies that will guide City decision-making and establishes an implementation program to achieve housing goals through the year 2021.

1.2 Local Need

The City is facing some significant challenges when it comes to meeting its housing needs --- housing costs in Encinitas continue to climb, while the availability and variety of housing is lacking. According to HomeDex, in February 2018, the median sales price in Encinitas was 43 percent higher than the median sales price for the North County region. At the same time, the City has a growing population, and its existing residents have changing needs.

- Baby Boomers are aging, and the City's senior citizen population (over 60 years in age) is projected to nearly double by 2035. Many seniors will seek to downsize and move into smaller homes in areas with easy access to services, transportation and amenities.
- Millennials have been slower to buy single-family homes than earlier generations. Rising student debt, the cost of housing, and challenges in securing mortgages have contributed to this, but they often want different kinds of housing and neighborhoods than are available today. They are looking for pedestrian and bike-friendly communities with services and amenities nearby.
- According to SANDAG's regional growth forecast, Encinitas can expect an anticipated 11 percent population growth through 2050.

It is important to note that, while accommodating new residential development and providing housing for all economic segments of the community, Encinitas must also plan to provide the infrastructure needed to maintain existing levels of service and to ensure that residential development will not degrade the local environment, including the hillside areas, natural stream channels, and wetlands. All of these areas are viewed by residents as resources worth preserving, and the sites selected for housing preserve these amenities. Another important goal of this element is to ensure that the City embraces the distinct identity and character of its five communities and becomes a place where one can live their entire life with housing for all ages, incomes and abilities. The City envisions itself as a sustainable community that embraces its quality of life through environment, fiscal health, community health and equity. This Housing Element provides policies and programs to address these issues.

1.3 Housing Element and State Law

1.1.1 Background

The Housing Element of the General Plan identifies and analyzes the City's existing and projected housing needs and contains a detailed outline and work program of the City's goals, policies, quantified objectives, and programs for the preservation, improvement, and development of housing for a sustainable future. The Housing Element is one of the seven mandatory General Plan elements. The Housing Element identifies ways in which housing needs of current and future residents can be met.

1.1.2 State Requirements

California State Housing Element Law (California Government Code Article 10.6) establishes the requirements for the Housing Element of the General Plan. Specifically, Government Code Section 65588 requires that local governments review and revise the Housing Element of their comprehensive General Plans not less than once every eight years.

The California Legislature has determined that a primary housing goal for the State is ensuring every resident has a decent home and suitable living environment. Section 655880 of the Government Code describes the goal in detail:

a. *The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every Californian, including farmworkers, is a priority of the highest order.*

b. *The early attainment of this goal requires cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians in all economic levels.*

c. *The provision of housing affordable to low- and moderate-income households requires the cooperation of all levels of the government.*

d. *Local and State governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for housing needs of all economic segments of the community. The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan and to cooperate with other local governments and the state in addressing regional housing needs.*

This Housing Element addresses the 2013-2021 planning period, which extends from April 30, 2013 to April 30, 2021. Because the City did not adopt the 2013-2021 Housing Element within 120 days of the due date, Government Code Section 65588(e) requires the City to adopt the 2021 – 2029 Housing Element by April 30, 2021, an updated Housing Element by April 30, 2025, and the 2029 – 2037 Housing Element at the end of the eight-year planning period.

The Housing Element identifies housing programs aimed at new housing construction, rehabilitation, and conservation of the existing affordable housing stock. This Housing Element builds upon the land use goals and policies which are primarily concerned with where new housing is to be located and at what density it will be constructed. Other concerns of the Housing Element include the identification

of strategies and programs that focus on housing affordability, rehabilitation of substandard housing, meeting the existing demand for new housing, eliminating constraints on housing development, and maintaining an adequate supply of rental housing. The Housing Element includes Appendix A, Public Participation, Appendix B, the Housing Profile Report, and Appendix C, the Adequate Sites Inventory, which contain certain required Housing Element components.

1.1.3 Regional Housing Needs Assessment

Section 65583 of the Government Code sets forth the specific components of a jurisdiction's housing element. Included in these requirements is an obligation on the part of local jurisdictions to provide their "fair share" of regional housing needs. Local governments and Councils of Governments (COGs) are required to determine existing and future housing need and the allocation of said need must be approved by the California Department of Housing and Community Development (HCD). Encinitas is a member of the San Diego Association of Governments (SANDAG) and SANDAG is responsible for preparing the Regional Housing Needs Assessment for the territory that it represents. This Housing Element provides sites adequate to accommodate the City fair share, as determined by SANDAG.

1.4 General Plan Consistency

The Housing Element is one of seven elements of the Encinitas General Plan and must be consistent with all of those elements. The Land Use Element, for instance, establishes the location, type, intensity and distribution of land uses throughout the City, and the presence and potential for jobs affects the current and future demand for housing at the various income levels in the City. The Circulation Element is designed to provide transportation facilities that can accommodate all planned development in the City.

As part of the adoption of the Housing Element, the City will modify policies in other elements as needed to achieve internal General Plan consistency.

1.5 Public Participation

Section 65583(c)(8) of the Government Code states that, "The local government shall make a diligent effort to achieve public participation of all economic segments of the community in the development of the housing element, and the program shall describe this effort." A discussion of citizen participation is provided below and in Appendix A.

The City of Encinitas conducted an extensive public outreach process beginning in 2014 to prepare a 2013-2021 Housing Element. Outreach efforts included 45 presentations, numerous mailers and ads, and community dialogue sessions attended by 479 persons. That effort culminated in the adoption of a 2013-2021 Housing Element by the City Council in June 2016 and its placement on the November 2016 ballot as Measure T. However; the voters did not approve Measure T.

The City immediately began an effort to adopt a revised 2013-2021 Housing Element to be submitted to the voters in the November 2018 election. On November 16, 2016, even before the certification of the Measure T election results on December 13, 2016, the City Council approved the formation of a Housing Element Subcommittee to work with all groups to adopt a Housing Element. The City Council held a special community workshop on February 1, 2017, attended by well over 100 people, to discuss adoption of an adequate Housing Element and also held a special meeting on February 6, 2017, at which it appointed a Housing Element Update Task Force, comprised of the Council Subcommittee and two public members, including one supporter and one opponent of Measure T. Eleven public meetings were held by the Task

Force in 2017, two of which were joint meetings with the City Council, in addition to regular updates to the City Council. To date in 2018, one Task Force meeting, three joint Task Force-City Council meetings have been held, and one community informational open house. All meetings were advertised to an extensive mailing list (hard copy and email/e-alert) and the City maintained a web site with all information submitted to the Task Force. The meetings were attended by, among others, representatives of the San Diego Housing Federation, Building Industry Association, affordable housing and market-rate developers, and many community members. Additionally, two stakeholder meetings were held. Refer to Appendix A for the public notice mailing list, public notices, Council meeting minutes, and stakeholder meeting notes.

As required by Government Code Section 65585(b)(2), all written comments regarding the Housing Element made by the public have previously been provided to each member of the City Council.

Appendix A contains a summary of oral public comments regarding the Housing Element received by the City at scheduled public meetings, and the Appendix has been provided to the City Council.

1.6 Element Organization

This Encinitas Housing Element is comprised of the following sections:

- **Section 1: Introduction and Housing Element Goals, Policies and Implementation Programs** contains the Housing Element background and the requisite policies and programs to address housing need in the community.
- **Appendix A: Summary of Community Engagement** provides a summary of the community engagement activities that have occurred throughout the development of the Housing Element document.
- **Appendix B: Housing Profile Report** provides the required demographic analysis, needs, constraints, and other analyses required by state law.
- **Appendix C: Adequate Sites Inventory** provides an inventory of sites to meet the estimated RHNA need throughout the planning period.

2. Goals, Policies and Implementation Programs

This section of the Housing Element contains the goals and policies the City intends to implement to address a number of important housing-related issues. The following three major issue areas are addressed by the goals and policies of the Housing Element: ensure that a broad range of housing types are provided to meet the needs of both existing and future residents; ensure that housing is both sound and safe for occupants; and ensure that the existing housing stock is maintained and preserved. Each issue area and the supporting goals and policies are identified and discussed in the following section. In addition, housing programs that implement each goal and policy are summarized in a table located at the end of this section.

2.1 Housing Opportunities

The City wants to encourage the construction of new housing units that offer a wide range of housing types to ensure that an adequate supply is available to meet existing and future needs. The maintenance of a balanced inventory of housing in terms of unit type (e.g. single-family, multiple-family, etc.), cost, and style will ensure that the existing variety is maintained. Each of the five communities have a distinct character due in large part to the nature of their existing residential neighborhoods. New housing constructed in the City should reflect the character of the surrounding neighborhood in particular and the community in general. The diverse make-up of the City with its five distinct communities will continue to attract a wide variety of people. The City has made a strong and firm commitment that fair housing practices will continue in Encinitas.

GOAL 1: THE CITY WILL ENCOURAGE THE PROVISION OF A WIDE RANGE OF HOUSING BY LOCATION, TYPE OF UNIT, AND PRICE TO MEET THE EXISTING AND FUTURE HOUSING NEEDS IN THE REGION AND CITY.

POLICY 1.1: Strive to maintain a balance of housing types in the City.

POLICY 1.2: Strive to provide a wide variety of housing types so that a range of housing needs and tastes will be made available to existing and future residents.

POLICY 1.3: When existing residential units are replaced, they should be replaced with units that are compatible in design with the surrounding residential neighborhood as planned by the City.

POLICY 1.4: Provide opportunities for low and moderate income housing in all five communities in the City and ensure that its location will not tend to cause racial segregation. Require that such housing should be high quality in terms of design and construction without sacrificing affordability.

POLICY 1.5: If a diminishing inventory of rental housing creates an imbalance, the City should make every effort to preserve the existing stock of quality rental housing.

POLICY 1.6: Encourage retention of all existing mobile home parks as permitted by applicable state law.

POLICY 1.7: Coordinate with local social service providers to address the needs of the City's homeless population and to provide housing suitable for special needs populations, including seniors, large families, the disabled, and farmworkers.

POLICY 1.8: Continue to provide assistance to agencies that ensure that the provisions of the Federal and State laws that prohibit housing discrimination are enforced.

POLICY 1.9: Support ongoing efforts of the State and Federal agencies and local fair housing agencies to enforce fair housing laws, as well as regional efforts in promoting fair housing.

2.2 Quality of Housing

New housing opportunities in the City must be made available to all persons.

GOAL 2: SOUND HOUSING WILL BE PROVIDED IN THE CITY OF ENCINITAS FOR ALL PERSONS

POLICY 2.1: Encourage developers to provide a balance of housing opportunities.

POLICY 2.2: Continue to assess development fees on new residential units adequate to pay for all related local and regional impacts on public facilities.

POLICY 2.3: Allow for some cluster-type housing and other innovative housing design that provides adequate open areas around and within these developments.

POLICY 2.4: Coordinate the provision of open areas in adjoining residential developments to maximize the benefit of the open space.

POLICY 2.5: Encourage street planting, landscaping, and undergrounding of utilities.

POLICY 2.6 Encourage high standards of design, materials, and workmanship in all construction and developments.

POLICY 2.7: Discourage residential development of steep slopes, canyons, and floodplains.

POLICY 2.8: Continue to develop and promote an energy efficiency conservation measure consistent with the strategies outlined in the City's Climate Action Plan.

2.3 Maintenance and Preservation of Housing

Substandard and deteriorating housing units, in addition to the obvious problems of blight, can expose occupants to a wide range of hazards ranging from electrical fire to exposure to toxic substances used in construction. Many factors can determine the "life expectancy" of a dwelling including quality of workmanship, age, type of construction, location, and numerous other factors. A major focus of this Housing Element is to provide goals and policies which underscore the City's commitment to ensure that the existing housing stock in the five communities is maintained.

GOAL 3: THE CITY WILL ENCOURAGE THE MAINTENANCE AND PRESERVATION OF THE EXISTING HOUSING STOCK AS WELL AS QUALITY DESIGN IN NEW HOUSING.

POLICY 3.1: Where determined to be dangerous to the public health and safety, substandard units in the City shall be repaired so that they will comply with the applicable building, safety and housing codes. When compliance through repair is not or cannot be achieved, abatement of substandard units shall be achieved.

POLICY 3.2: Enforce the building, safety and housing codes through vigorous code enforcement efforts.

POLICY 3.3: Continue to apply for and support existing available federal state and local housing programs which provide housing assistance. These include assistance to property owners that can demonstrate financial need in the upgrading of their substandard units. Continue existing city programs for housing rehabilitation, and work to obtain additional external funding.

2.4 Housing Conservation

The City's existing housing stock includes units which are affordable to very low, low, and moderate-income households. A significant part of the City housing focus is on these existing affordable units, and how to ensure their continued affordability. Of particular concern are projects which were government-subsidized when built, in return for units being rent-restricted to be affordable. With passage of time, many such deed-restricted affordable units may be subject to being converted to market-rate rental units by the expiration or pre-payment of the government subsidy arrangement. State law requires that local housing elements address the status of these "units at risk." The City is committed to doing what it can so that affordable units remain affordable to target-income households.

GOAL 4: THE CITY WILL ATTEMPT TO ENSURE THE CONTINUED AFFORDABILITY OF DEED-RESTRICTED AFFORDABLE UNITS.

POLICY 4.1: The City will continue to develop necessary actions to attempt to ensure the continued affordability of affordable "units at risk" of conversion to market rate units due to expiration of use restrictions, affordability covenants, or funding subsidies.

2.5 Removal of Governmental and Nongovernmental Constraints

GOAL 5: THE CITY WILL DEVELOP STRATEGIES AND ACTIONS TO REDUCE OR ELIMINATE GOVERNMENTAL AND NON-GOVERNMENTAL CONSTRAINTS TO THE DEVELOPMENT OF HOUSING.

POLICY 5.1: The City periodically evaluate adopted zoning provisions, entitlement procedures, fees and other city requirements that may create constraints to the development of housing. Should constraints be identified, actions such as amendments to policies and procedures may be implemented to reduce or eliminate those constraints

POLICY 5.2: The city will monitor non-governmental constraints, such as interest rates, construction costs, and others through consultation with developers, lenders and other entities directly involved in the provision of housing. Should constraints be identified, actions such as amendments to policies and procedures may be implemented to reduce or eliminate those constraints.

2.6 Related Goals and Policies

The Land Use Element sets forth the amount and type of residential development permitted under the General Plan, thereby affecting housing opportunity in Encinitas. In addition, the Land Use Element contains policies directed at maintaining the existing housing stock, as well as ensuring the quality of new residential development. The Circulation Element contains policies to minimize roadway traffic into residential neighborhoods, and the Noise Element sets forth policies to minimize the level of noise in neighborhoods. The Resource Management Element establishes development standards to minimize the impact of residential development on sensitive resources, such as hillside areas, ecological habitat, and scenic view sheds. Finally, the Public Safety Element sets forth policies to ensure the safety of the City's

housing stock through such measures as code enforcement, and mitigation of environmental hazard as a condition to development.

Table 2-1: Housing Policy Matrix depicts General Plan elements that support the goals of the Housing Element.

Table 2-1: Housing Policy Matrix					
Issue Area	**Land Use**	**Circulation**	**Resource Mgmt.**	**Noise**	**Public Safety**
Housing Opportunities	X	X			X
Housing Quality	X				
Maintenance and Preservation	X	X	X	X	X
Housing Conservation	X				X

While each of the elements is independent, the elements are also interrelated. Certain goals and policies of each element may also address issues that are primary subjects of other elements. This integration of issues throughout the General Plan creates a strong basis for the implementation of plans and programs and achievement of community goals.

The City will ensure internal consistency among the various elements in accordance with state planning law. This Housing Element builds upon other General Plan elements and, with concurrent amendments to the Land Use Element, is entirely consistent with the policies and proposals set forth by the General Plan. The City will ensure that future amendments to other elements in the General Plan remain consistent with the Housing Element.

2.7 Implementation Programs

The programs below identify the actions that will be taken to make sites available during the planning period with appropriate General Plan, Specific Plan, zoning and development standards and with services/facilities to accommodate the City's share of regional housing need for each income level.

PROGRAM 1: ADEQUATE SITES

PROGRAM 1A: Accommodate the City's Regional Housing Needs Assessment Allocation

The City of Encinitas has been assigned a total Regional Housing Needs Allocation (RHNA) of 2,606 for the 2013-2021 Housing Element, which includes 2,353 units for the 2013 – 2021 planning period and 'carryover' RHNA allocations of 253 units from the prior planning period. The breakdown of the RHNA is as follows:

TABLE 2-2: CITY OF ENCINITAS RHNA ALLOCATION 2013-2021			
INCOME CATEGORY	**RHNA**	**RHNA CARRYOVER***	**TOTAL**
Very Low	587	144	731**
Low	446	109	555
Moderate	413	0	413
Above Moderate	907	0	907
TOTAL	2,353	253	2,606
*See calculation in Appendix B. Allocated proportionately to very low and low.			
** Estimated to include 365 extremely low income units and 366 very low income units.			

TABLE 2-3: RHNA PROGRESS TO DECEMBER 31, 2017				
INCOME CATEGORY	**RHNA**	**BUILDING PERMITS ISSUED**	**PROJECTS APPROVED***	**REMAINING RHNA**
Low/Very Low	1,286	61	5	1,220
Moderate	413	4	--	409
Above Moderate	907	784	108	15
TOTAL	2,606	849	113	1,644
*See list of approved projects in Appendix C.				

The "projection period" (the period for which the RHNA was calculated) in San Diego County began on January 1, 2010. **Table 2-3** shows the City's progress in meeting its RHNA obligations to December 31, 2017 in all income categories, including both building permits issued and projects with all discretionary entitlements. The City has nearly met its total RHNA for above moderate income housing but a significant gap remains in meeting the need for lower and moderate-income housing.

Appendix C lists sites suitable for meeting the City's remaining need for above moderate and moderate-income housing. These sites can accommodate the need for housing at these income levels without the need for rezoning, as shown in Appendix C and summarized as follows:

TABLE 2-4: SITES AVAILABLE TO MEET REMAINING MODERATE AND ABOVE MODERATE RHNA				
INCOME CATEGORY	REMAINING RHNA	SUITABLE SITE CAPACITY	ACCESSORY DWELLING UNITS	EXCESS CAPACITY
Moderate	409	~~526~~492	54	~~117~~137
Above Moderate	15	~~187~~177	--	~~172~~165
TOTAL	424	~~713~~669	--	~~289~~302

The City has met a portion of its RHNA allocation for the low/very low income units as reflected below.

TABLE 2-5: REMAINING LOWER INCOME RHNA OBLIGATION	
RHNA ADJUSTMENTS	RHNA (V/VL)
Low/Very Low	1,286
Accessory Unit Production [1]	~~50~~ 79
New Construction and Approved Projects[2]	66
REMAINING RHNA	1,~~170~~141

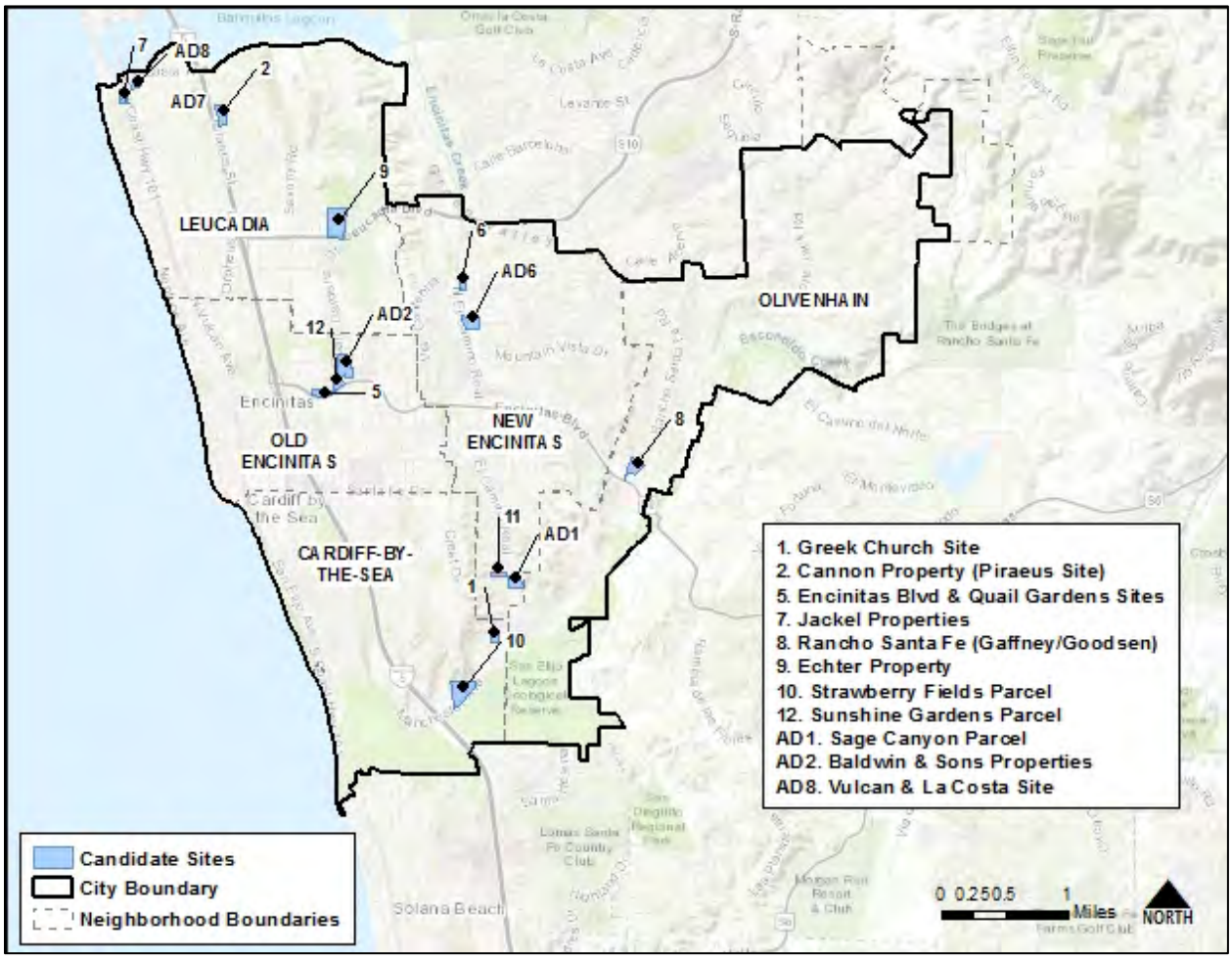
[1] Based on survey ~~data~~ completed April 30, 2018~~to date~~, current rate of construction, and modifications to the ADU ordinance, ~~assumes~~ projects that the City will issue an estimated 320 permits total for second dwelling units (of which ~~50~~ 79 will be counted as units that accommodate lower income households) ~~and 20 permits for conversion of unpermitted accessory dwelling units over the planning period~~. The April 2018 survey effort revealed that 24.6 percent of the second units granted permits since January 1, 2010 were rented at levels affordable to very low and low income households. See additional discussion in Appendix B.

[2] ~~All but two units of these units that are either built or approved will be deed-restricted (including density bonus and inclusionary units and units restricted under City's Affordable Housing Unit program legalizing ADUs. Affordability of the two non-restricted units was determined consistent with the requirements of Health & Safety Code Section 50052.5.~~ Of the 66 units, 59 of these units have been issued building permits and are deed-restricted to be affordable to very low or low income households. Two units have been issued building permits but are not deed-restricted. A survey of actual rents found that the rent charged was affordable to lower income households, using the formula contained in Health & Safety Code Section 50052.5. Five units have been approved as lower income housing under the City's density bonus or inclusionary ordinance and are required by conditions of approval to be deed-restricted. The developers of these five units are not permitted to pay an in-lieu fee or otherwise avoid the obligation to provide the lower income units.

The City is committed to providing adequate sites with appropriate zoning to accommodate the remaining RHNA and to accommodate the need for groups of all income levels as required by State Housing Element Law. The City has identified those sites listed in **Table 2-6** and shown on **Figure 2-1**, the Housing Strategy Map; and further described in Appendix C as those sites to be rezoned to accommodate the development of lower income housing.

TABLE 2-6: SITES AVAILABLE TO MEET REMAINING VERY LOW AND LOW INCOME RHNA				
Site Number	**Site Name**	**Gross Acreage**	**Net Acreage**	**Unit Yield**
Vacant				
01	Greek Church Parcel	2.50	2.00	50
02	Cannon Property (Piraeus)	6.93	6.93	173
~~03~~	~~L-7 Parcel~~	~~7.60~~	~~7.60~~	~~190~~
05	Encinitas Blvd & Quail Gardens Parcels	4.93	4.78	117
07	Jackel Properties	2.97	2.97	33*
AD1	Sage Canyon	5.23	2.40	60
AD2	Baldwin & Sons Properties	11.59	9.05	223
Subtotal		*~~41.75~~34.15*	*~~35.73~~28.13*	*~~846~~656*
Non-vacant				
08	Rancho Santa Fe Parcels (Gaffney/Goodsen)	6.63	6.02	149
09	Echter Property	21.49	9.85	246
10	Strawberry Fields Parcel	16.90	9.85	246
12	Sunshine Gardens Parcels	3.39	3.39	84
AD8	Vulcan & La Costa	2.00	2.00	50
Subtotal		*50.41*	*31.11*	*775*
Total		**~~92.16~~84.56**	**~~66.84~~59.24**	**~~1,621~~1,431**
*Unit Yield anticipates that this site will be developed for mixed-use.				

FIGURE 2-1: HOUSING STRATEGY MAP – VERY LOW AND LOW INCOME SITES



This rezoning program will create an opportunity for ~~1,621~~1,431 units that may be constructed during the planning period pursuant to Section 65583.2. This exceeds the remaining RHNA lower income obligation of ~~1,170~~1,141 units by ~~451~~ 290 units (~~39~~ 25 percent), providing an adequate buffer in consideration of the no net loss requirement under SB 166; requirements of AB 1397 for determining site capacity; and desire to provide some flexibility for future development to property owners. The capacity of vacant sites is ~~846~~ 656 units, ~~66~~ 51 percent of the City's total lower income RHNA.

This program also includes a provision to make all necessary changes in other General Plan elements and in specific plans to ensure consistency. Since the City has adequate capacity to accommodate the moderate and higher income RHNA categories of housing units, no zoning changes associated with this Housing Element update will occur on properties that are already zoned for those types of housing units, except that replacement housing will be required for non-vacant sites as required by State law.

In November 2018, the voters will be presented with the Housing Element, rezoning of sites on the Housing Strategy Map, Zoning Code text amendments allowing increased height, and required General Plan and specific plan amendments. This approach will be taken because voter approval is required when major amendments are made to certain land use planning policy documents pursuant to Encinitas General Plan Land Use Policies and Municipal Code Chapter 30, a voter-adopted initiative (Proposition A).

Since accommodating the RHNA necessitates major changes to the General Plan Land Use Element, Housing Element, Zoning Map, Zoning Code, and certain specific plans, a vote of the people is required. Presenting all of the required changes concurrently provides maximum transparency to the voters.

Funding:	• Development Services Department budget • City Clerk Department budget
Responsible Agencies:	• Development Services Department • Planning Commission • City Council • Voters of Encinitas • California Coastal Commission
Objectives:	• Adopt the above-described General Plan, specific plan, and zoning amendments by July 2018 and place on the November 2018 ballot for voter approval. If approved, submit changes to the California Coastal Commission. • Ensure internal consistency with all General Plan elements • Make available the sites inventory to interested developers
Timeframe:	• November 2018 General Election • November 2019 Coastal Commission certification of Local Coastal Program Amendments

PROGRAM 1B: Adopt Amendments to the Zoning Code to Accommodate Lower Income Housing

The City of Encinitas will adopt amendments to the zoning code to accommodate lower income housing. These amendments will provide the necessary development standards and entitlement procedures to ensure that sites have development standards appropriate for units affordable to lower income residents. The rezoning program will permit for-sale and rental multifamily residential uses as permitted uses. Fifty percent of the remaining lower income RHNA need will be accommodated on sites permitting residential as the only permitted use. Density will range from a minimum of 25 dwelling units per acre to a maximum of 30 dwelling units per acre. 'By right' approval will be specified for projects containing at least 20 percent lower income housing and not including a subdivision, and replacement affordable housing will be mandated on all ~~non-vacant sites~~sites identified in the Housing Element as required by State law.

All sites designated can accommodate ~~20~~ 16 units or more. Some of the sites consist of several individual parcels that are in common ownership. Although only three of the individual parcels are too small to contain 16 units, the rezoning will apply only to projects containing at least 16 units to ensure that lots are consolidated as needed.

Changes to development standards will be necessary to accommodate a density of 30 units per acre. These changes include increasing the allowable building height to three stories, with elements of two stories to create appropriate transitions, but only for residential developments meeting at least the minimum density of 25 units per acre on sites rezoned for lower income housing. Development standards will also be revised to address other zoning issues to ensure that new standards will accommodate the minimum density required in the zone.

Environmental review will still apply to future development projects on the Housing Strategy Map unless, as required by State law, the project includes 20 percent low income units and does not include a

subdivision. ~~Subsequent~~Residential projects throughout the City may tier from the Measure T Housing Element's Program EIR or the environmental assessment completed for this Housing Element.

Funding:	• Development Services Department budget • City Clerk Department budget
Responsible Agencies:	• Development Services Department • Planning Commission • City Council • Voters of Encinitas • California Coastal Commission
Objectives:	• Adopt the above-described zoning amendments by July 2018 and place on the November 2018 ballot for voter approval. If approved, submit changes to the California Coastal Commission.
Timeframe:	• November 2018 General Election • November 2019 Coastal Commission certification of Local Coastal Program Amendments

PROGRAM 1C: Promote the development of accessory housing units

Accessory dwelling units (ADUs) help meet the City's affordable housing needs by providing a housing resource for seniors and low and moderate income households. The City will continue to apply Zoning Code regulations that allow accessory units (also known as second units or granny flats) by right in all residential zones allowing single-family homes, in accordance with State law.

Between January 1, 2010 and December 31, 2017, the City's ADU ordinance has resulted in the construction of 203 new units. Of these units, 16 have been restricted for very-low and low-income households. In April 2018, the City conducted additional survey efforts to determine affordability levels of second units built during the planning period. The results of that survey effort revealed that 24.6 percent of the second units were rented at levels affordable to very low and low income households and 17 percent were rented at levels affordable to moderate income households. In the past three years, permits have averaged 35 per year. The City projects that within the projection period, about 320 ADUs will be constructed, of which ~~50~~ 79 will be affordable to lower income households and 54 will be affordable to moderate income households.

After passage of new State ADU laws effective January 1, 2017, the City applied State standards in evaluating ministerial applications for ADUs. The City adopted its own ADU and junior accessory dwelling unit (JADU) ordinances in March 2018 which contain numerous provisions to encourage ADU and JADU construction:

- An owner may construct both an ADU and a JADU on one lot;
- Setbacks are reduced to five feet in many cases;
- ADUs may have a maximum size of 1,200 sf so long as they do not exceed the floor area of the primary dwelling unit.
- Floor area ratios and lot coverage may be increased on lots less than 10,000 sq. ft.
- Development fees are waived.

In addition, the City is currently completing implementation of two programs to further ADU production:

- 'Permit ready' program. Staff is preparing packages of pre-approved designs for ADUs that may be used by owners and will provide expedited processing
- Tiny homes and micro-units. The City is exploring the availability of prefabricated tiny homes and micro-units that may be suitable for ADUs, with the intent of providing additional information to interested homeowners.

The City will continue to monitor the extent of ADU production to ensure that the ordinance modifications are successful and that its goals can be met.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department • Planning Commission • City Council • California Coastal Commission
Objectives:	• Continue to administer the accessory unit ordinance • Develop permit-ready packets to market accessory unit production; explore tiny homes and micro-units. • Achieve an average of 40 accessory units annually.
Timeframe:	• November 2018 permit-ready packets

PROGRAM 1D: Ensure that adequate sites remain available throughout the planning period

The City will monitor the consumption of residential acreage to ensure an adequate inventory is available to meet the City's RHNA obligations. The City will develop and implement an evaluation procedure pursuant to Government Code Section 65863 and will make the findings required by that code section if a site is proposed for development with fewer units or at a different income level than shown in the Housing Element. Should an approval of development result in a reduction of capacity below the residential capacity needed to accommodate the remaining need for lower income, moderate, or above moderate income households, the City will identify and, if necessary, rezone sufficient sites within 180 days to accommodate the shortfall and ensure "no net loss" in capacity to accommodate the RHNA.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department • City Council
Objectives:	• Review each housing approval on sites listed in the Housing Element and make findings required by Government Code Section 65863 if site is proposed with fewer units or different income level than shown in the Housing Element. If insufficient suitable sites remain, identify and, if necessary, rezone sufficient sites within 180 days. • Report as required through the HCD annual report process
Timeframe:	• Ongoing • April annual report

PROGRAM 1E: Energy conservation and energy efficiency opportunities

In January 2018, the City adopted an update to its Climate Action Plan. To further advance community energy and water conservation goals, the City will implement the following actions listed in its Climate Action Plan to achieve residential-focused greenhouse gas emission reductions.

- Reduce citywide potable water consumption.
- Require energy audits of existing residential units.
- Require new single-family homes to install solar photovoltaic systems and solar water heaters.
- Require residential electric vehicle charging stations
- Educate homeowners about water efficiency rebate and incentive programs offered to San Diego Water District and OMWD customers.

In addition, the City will continue to promote regional water conservation incentive programs and encourage broader participation in the City's Green Building Incentive Program.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department
Objectives:	• Implement the residential strategy measures listed in the City of Encinitas Climate Action Plan
Timeframe:	• Ongoing

PROGRAM 2: AFFORDABLE HOUSING

The programs below identify the actions that will be taken to promote affordable housing.

PROGRAM 2A: Continue and improve inclusionary housing policies

The City's inclusionary housing program requires that subdivisions of at least 10 units set aside or pay a fee in lieu equivalent to one in 10 units for low income households. As a condition of approval of any tentative subdivision map for residential dwellings, community apartments, stock cooperatives or conversions of 10 units or more, the subdivider is required to reserve the unit(s) for very low income households. All required affordable units are required to be constructed concurrently with market rate units to ensure completion. Through December 31, 2017 the ordinance has created approximately 146 units for very low and low income households.

The City has received recommendations from affordable and market-rate developers for updates to the ordinance. The City is in the process of updating its current Inclusionary Housing Ordinance to more effectively meet the City's affordable housing goals and to grant developers greater flexibility in how they fulfill their inclusionary housing requirement. The adoption of AB 1505 in 2017 allows the City to require inclusionary units in rental projects as well as for-sale projects.

Additional alternatives to on-site development of affordable housing are being considered, such as payment of an in-lieu fee, site construction, use of alternative housing types for the affordable units, preservation of 'at-risk' units, and impact fees for projects with one to six units.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department • City Council • California Coastal Commission
Objectives:	• Continue the inclusionary housing program • Update the City's Inclusionary Housing Ordinance to be more effective and provide greater flexibility in meeting the inclusionary housing requirements while ensuring that the projects will create affordable units
Timeframe:	• November 2018 updated inclusionary housing program • July 2019 Coastal Commission certification of Local Coastal Program amendments

PROGRAM 2B: Facilitate affordable housing

The City will continue to proactively support housing for low income, extremely low income, and persons with disabilities (including developmental disabilities). The City has used a wide variety of financing programs to create 119 deed-restricted affordable units, all but three affordable to very low and low-income households, using federal Community Development Block Grants and HOME Investment Partnership funds, City affordable housing funds, tax credits, other HUD financing, and legalization of units constructed illegally.

As opportunities arise, new funding sources will be sought from available non-profit, local, state, and federal programs, and the City will seek to partner with other agencies that own property in Encinitas, including San Diego County and North County Transit. The City will also continue to utilize its existing CDBG and other funds. Planning and entitlements should consider how to position an affordable project to qualify for future grant applications. The City will attempt to subsidize off-site public improvement costs by coordinating its CIP with affordable housing sites and is considering the waiver, deferral or reduction of development fees. For City-owned housing sites, land cost write-downs will be used to promote affordable housing.

The City will also work with developers to facilitate affordable housing development. Specifically, as funding permits, the City will provide gap financing to leverage State, federal, and other public affordable funding sources. Gap financing will focus on rental housing units affordable to lower income households and households with special needs (such as seniors and disabled). To the extent feasible, the City will also ensure a portion of the affordable housing units created will be available to extremely low income households.

Additionally, the City is hiring a housing coordinator to facilitate opportunities for affordable housing; work with the development community to identify locations and opportunities to construct new affordable housing; preserve existing affordability restrictions; and acquire or rehabilitate units for affordable housing purposes.

Funding:	• Development Services Department budget, CDBG and HOME funds, Affordable Housing Fund, LIHTC, Multifamily Housing Revenue Bonds, Cap and Trade Affordable Housing Program, National Housing Trust Fund and other resources, as available
Responsible Agencies:	• Development Services Department • Planning Commission • City Council
Objectives:	• Annually allocate designated Affordable Housing Funds, CDBG, and HOME funds to increase the supply of affordable housing for lower income households, including seniors, extremely-low and lower income disabled, homeless and those at risk of homelessness. Seek to leverage these funds to increase the amount of affordable housing on housing strategy sites. • Work with developers of housing strategy sites and nonprofit developers to identify opportunities to increase the amount of affordable housing by applying for available funds, with the goal of developing 250 affordable units. • Analyze sites owned by the City and other public agencies (including San Diego County and the Transit District) to identify those that ~~w~~could be suitable to support affordable housing development and determine whether housing development would be feasible and what actions would be needed to develop housing on those sites.
Timeframe:	• Ongoing

PROGRAM 2C: Utilize Section 8 housing choice vouchers

This program provides rental assistance to eligible very low income households (with incomes not exceeding 50 percent of the area median). The subsidy represents the difference between the rent that exceeds 30 percent of a household's monthly income and the actual rent charged. To cover the cost of the program, U.S. Department of Housing and Urban Development (HUD) provides funds to allow the City of Encinitas Housing Authority to make housing assistance payments on behalf of the families. HUD also pays the Housing Authority a fee for the costs of administering the program. HUD has not issued any new vouchers to the City of Encinitas for the past five years.

In January 2004 and January 2005, HUD capped the Section 8 budget, which required the City to reduce program operating costs. The City responded in part by increasing the payment standards and enhancing occupancy standards which provides for more rental unit opportunity. On March 1, 2013, around $85 billion in federal budget cuts, known as sequestration, took effect. The cuts are part of a 10-year plan of catastrophic funding reductions to our nation's discretionary domestic programs, including the HUD and the military. The impact of sequestration on the City's Housing Authority has resulted in the loss of annual funding for rental subsidy payments and program administration.

Although the City will continue to administer its 136 housing vouchers, due to high market rents, especially considering the recent implementation of Small Area Fair Market Rents it currently has funding to subsidize only 104 households, and the City has allocated general fund dollars to pay for administrative costs to replace in part declining federal support. The City's ability to expand or even maintain this program

at its current level is derived from the annual Federal budget process. Recent indications from HUD are that Federal support for Section 8 will not be expanded. However, when additional funds become available to assist new families, the City will provide additional housing vouchers.

Funding:	• HUD Section 8 Housing Choice Voucher Allocations
Responsible Agencies:	• Encinitas Housing Authority
Objectives:	• Continue to administer and fund the housing choices vouchers based on HUD funding availability • Promote the Housing Choice Voucher program to rental property owners
Timeframe:	• Ongoing

PROGRAM 2D: Ensure that the density bonus ordinance continues to be consistent with State law

Government Code Section 65915 requires that a jurisdiction adopt a local Density Bonus Ordinance consistent with State law. State Density Bonus Law requires a local jurisdiction to grant an increase in density, if requested by a developer, for providing affordable housing as part of a development project. Key provisions of the law include incremental density bonuses that correspond to the percentage of housing set aside as affordable units. State law caps the maximum density bonus at 35 percent and allows the developer to request up to three incentives or concessions, if required to provide the affordable units. The law also provides reduced parking requirements and allows requests for waivers of development standards, such as increased height limits and reduced setback requirements. The developer must demonstrate that incentives reduce costs and are needed to provide affordable units; and that waivers are required because the usual standards physically preclude the project from achieving the allowed density

Many developers in the City utilize State Density Bonus Law, and the City has a standard procedure for routinely processing density bonus applications as part of housing development applications. Projects that meet the City's inclusionary requirements are eligible for density bonuses. As of December 31, 2017, the City had approved 27 density bonus projects that included 49 lower income units. The City's implementing ordinance is consistent with the current Government Code and has been updated to be consistent with the most recent amendments to State Density Bonus Law enacted in ~~2015~~2016. The City will review any future amendments to State Density Bonus law to ensure that its local ordinance remains consistent with State law.

Funding:	• Development Services Department Budget
Responsible Agencies:	• Development Services Department • Planning Commission • City Council • Coastal Commission
Objectives:	• Ensure the City's density bonus ordinance is consistent with future amendments to State density bonus law
Timeframe:	• Within one year after amendments are passed to State Density Bonus Law

PROGRAM 2E: Accommodate specialized housing types

Special needs groups often spend a disproportionate amount of their income to secure safe and decent housing and are sometimes subject to discrimination based on their specific circumstances. The development of affordable and accessible homes is critical to expand opportunities for persons with special needs. Many special needs persons, especially those in emergency shelters, transitional and supportive housing, and single-room occupancy units, may be extremely low income individuals, and implementation of the zoning changes below will enable development of housing serving their needs.

Agricultural Worker Housing:
Pursuant to the State Employee Housing Act (Section 17000 et seq. of the Health and Safety Code), employee housing for agricultural workers consisting of no more than 36 beds in a group quarters or 12 units or spaces designed for use by a single family or household is permitted by right in a zoning district that permits agricultural uses by right. Therefore, for properties that permit agricultural uses by right, a local jurisdiction may not treat employee housing that meets the above criteria any differently than an agricultural use. The Act also requires that any employee housing providing accommodations for six or fewer employees be treated as a single-family structure, with no conditional or special use permit or variance required.

The City will amend its Zoning Code to be consistent with State law regarding agricultural worker housing and employee housing.

Emergency Shelters:
Senate Bill 2 requires local governments to identify one or more zoning categories that allow emergency shelters (year-round shelters for the homeless) without discretionary review. The statute permits the City to apply limited conditions to the approval of ministerial permits for emergency shelters. Pursuant to State law, the City may establish only objective standards for the location, siting, operations and maintenance of emergency shelters.

The City will amend the Zoning Code to permit emergency shelters by right without a discretionary review process in the Light Industrial (LI) and Business Park (BP) zones (28 acres total), subject to the same development and management standards that apply to residential or commercial development in those zones, with the addition of the above standards.

Transitional and Supportive Housing:
State Housing Element Law mandates that local jurisdictions shall address zoning for transitional and supportive housing. Transitional housing is included in the Encinitas Zoning Code as a residential care facility. Supportive housing is not specifically addressed in the Zoning Code. The City will amend its Zoning Code to identify transitional/supportive housing meeting the Government Code Section 65582 (g-j) definitions as a residential use of a property in a dwelling to be allowed under the same conditions as apply to other residential dwellings of the same type in the same zones.

Single-Room Occupancy (SRO) Housing:
SRO units are typically one-room units intended for occupancy by a single individual. They are distinct from a studio or efficiency unit, in that a studio is a one-room unit that must contain a kitchen and bathroom. Although SRO units are not required to have a kitchen or bathroom, many SROs have one or the other and could be equivalent to an efficiency unit. State law requires that the City accommodate

this housing type, and they provide smaller, less expensive housing units The City will permit SROs in its multifamily zones to encourage units that are cheaper by design.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department • Planning Commission • City Council • Coastal Commission
Objectives:	• Amend the Zoning Code to accommodate special needs housing consistent with State law
Timeframe:	• November 2018 adoption of all code amendments • July 2019 Coastal Commission certification of Local Coastal Program Amendments

PROGRAM 2F: Continue programs to reduce homelessness

The City has provided financial assistance to nonprofit service agencies such as the Community Resource Center, YMCA-Oz North Coast, Fraternity House, Catholic Charities, and Interfaith Shelter Network to provide shelter and supportive services for the homeless. The City also provides funding to the Community Resource Center to operate the Opening Doors program, which matches homeless households with housing navigators and housing resources, to ultimately be placed into permanent housing. The Community Resource Center established an Advisory Committee on Homelessness in Encinitas, comprised of public agency staff, law enforcement, community members, homeless activists, and others. The group meets on a quarterly basis to provide the opportunity for all parties to share their experiences, thoughts, and ideas related to homelessness in Encinitas and the *Opening Doors* pilot project. After an outbreak of Hepatitis A among homeless persons in the County of San Diego, the County provided handwashing stations on a temporary basis, and the City installed temporary toilets for use by the public. The City will evaluate the short and long-term needs and locations for access to 24/7 bathroom and handwashing facilities.

To the extent that funds are available, the City will continue to sponsor or assist emergency shelter facilities, inside City limits or outside within a reasonable proximity to the City, as well as encourage or support facilities by providing grants, or low cost loans, to operating agencies.

Funding:	• City General Fund
Responsible Agencies:	• Development Services Department • City Manager • City Council
Objectives:	• Continue to support programs to prevent homelessness and serve homeless persons to the extent funds are available
Timeframe:	• Ongoing

PROGRAM 3: MITIGATION OF CONSTRAINTS

The City reviews and updates development standards and processing procedures that constrain housing development, particularly for lower and moderate-income households. The programs below list steps to be taken to remove governmental constraints that limit the ability to maintain, improve, and develop housing for all income levels. The City will also attempt to understand and, where possible, modify nongovernmental constraints that create a gap between the City's approval of housing and construction of housing.

PROGRAM 3A: Establish parking standards appropriate for different kinds of housing

Basic construction costs for residential developments have rapidly increased, and together with land prices, have increased the cost of housing. This has made homeownership unattainable for many households. Parking is more expensive to supply in some places, so parking requirements add a cost to development and a developer might build fewer housing units or may not develop at all.

The Downtown Encinitas and the North 101 Corridor Specific Plans contain modified parking standards to encourage mixed-use and affordable housing development. Mixed-use units that are guaranteed to be affordable to low or very low income households are allowed a reduced, one-space-per-unit parking requirement. State Density Bonus Law allows even lower parking standards for projects eligible for a density bonus.

However, how people travel continues to change as more focus is being placed on alternative modes of transportation such as bikes and rideshares. The City looks to update its housing standards to reflect current and anticipated parking needs and to adopt parking standards appropriate for affordable, senior-aged, mixed-use, and transit-oriented housing projects.

Funding:	• Departmental budgets
Responsible Agencies:	• Development Services Department • Public Works Department • Planning Commission • City Council • Coastal Commission
Objectives:	• Update the City's parking regulations
Timeframe:	• January 2020 adoption of all code amendments • January 2021 Coastal Commission certification of Local Coastal Program

PROGRAM 3B: Modify regulations that constrain the development of housing

Governmental constraints are policies, standards, requirements or actions imposed by the various levels of government upon land, housing ownership and development. Although federal and state agencies play a role, the City cannot modify the policies of these agencies and they are therefore not addressed in this program section.

Ground-Floor Commercial Uses Only:
Portions of the North 101 Corridor Specific Plan and Downtown Encinitas Specific Plan have mixed-use zones where residences are allowed. However, 1) ground floor uses in a storefront location are limited to retail-serving uses only; or 2) residential uses are permitted only above or behind a primary use. However, it may be difficult to market and develop a property with these ground floor commercial requirements

because there is a finite economic market available to support retail uses. Mixed-use thrives when it is focused in a compact area, not over lengthy corridors, as is currently mandated in these specific plans. For mixed-use projects, the City will amend zoning regulations to require ground floor commercial uses only at key locations or preference areas based on context or planning objectives to ensure future projects are feasible and the desired community character is preserved. Key locations will be determined by the City Council.

Design Review Findings for Residential Projects:
The City requires design review approval for most proposed developments. Unless exempt, residential projects need to be consistent with the City's design guidelines and comply with certain findings before they may be constructed. Among these findings is the requirement that the project "would not tend to cause the surrounding neighborhood to depreciate materially in appearance or value (EMC 23.08.080)."

Under the Housing Accountability Act, the inability to make this subjective finding cannot be used by the City to deny or reduce the density of any residential development. As noted in the Constraints Analysis, there is no history that a residential project was denied solely on the basis of this finding, and its effectiveness in assuring high-quality development is minimal. As such, the City will amend the language for residential projects. The City will also review other findings that may result in denial of a project to ensure that they are consistent with the Housing Accountability Act.

Separate Lot or Airspace Ownership Requirements in North Highway 101 Specific Plan:
Section 3.1.1(A)(4) of the North 101 Corridor Specific Plan requires that "all [new] residential detached and attached dwelling units in residential-only developments must be constructed on a legally subdivided lot or must be subdivided to permit ownership of airspace in the form of a dwelling unit with an undivided share in common elements." While this requirement is appropriate for single-family homeownership projects, it is inconsistent with provisions of State law that require that the City not discriminate against multifamily rental housing. As such, the City will amend the North 101 Corridor Specific Plan to eliminate the airspace requirement for multi-family housing.

Funding:	• Departmental budgets
Responsible Agencies:	• Development Services Department • Planning Commission • City Council • Coastal Commission
Objectives:	• Remove the above constraints to residential development
Timeframe:	• January 2020 adoption of all code amendments • June 2020 adopt zoning amendments • January 2021 Coastal Commission certification of Local Coastal Program Amendments • May 2021 Coastal Commission certification of Local Coastal Program

PROGRAM 3C: Right to Vote Amendment

In 2013, a citizen initiative resulted in the Right to Vote Amendment (Proposition A), which requires voter approval of most land use changes and building heights higher than two stories. Proposition A cannot be modified except by another vote of the people. If a proposed Housing Element does not achieve community support, Proposition A ~~has been~~may act as a constraint on the City's ability to comply with state Housing Element law. Assuming that this Housing Element is approved in November 2018, the City will develop strategies to ensure that future Housing Elements can be adopted in a timely fashion and that requirements for a vote of the people do not constrain the City's compliance with State law.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department
Objectives:	• Develop strategies in advance of the next Housing Element due date (2021) to ensure that future Housing Elements and implementing actions can be adopted in a timely fashion- consistent with State law. These strategies may include: • Provide information to Encinitas residents about housing, state law requirements and other topics related to housing for all income levels. • Begin preparation of the next housing element as soon as the City receives its RHNA allocation in early 2019. If additional sites must be rezoned, work to identify the sites and policies most acceptable to the community.
Timeframe:	• ~~Develop strategies by January 2020~~Commence developing the sixth cycle Housing Element in 2019 when the City receives its RHNA allocation.

PROGRAM 3D: Rescind Obsolete Growth Management Policies and Programs

The Land Use Element portion of the Encinitas General Plan contains goals and policies that manage new growth. The measures provide a framework on how the City will ensure that new development does not outpace the ability to provide essential services and infrastructure to support it. One measure establishes

a Growth Management Plan which phases development through building permit limitations. In 1999, the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result the City discontinued calculation of the permit cap due to the carryover of unallocated permits. As the Growth Management Plan has no impact on the pace of development, the City will eliminate the requirement and ensure that there are no potential constraints to meeting its obligation, under California law, to satisfy its current or future Regional Housing Needs Allocation.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department
Objectives:	• Rescind the Growth Management Plan Ordinance to eliminate the annual housing permit allocation process and grant approvals to projects. • Amend the growth management policies of the Land Use Element
Timeframe:	• January 2020 adoption of all code amendments • January 2021 Coastal Commission certification of Local Coastal Program

PROGRAM 3E: Improve the efficiency of the development review process for housing projects

The City continues to improve the efficiency of the development review process. Recently, the City improved its permitting process by placing more information on the City's website; implemented an Internet-based case management system, which is accessible to the public, that tracks permit review and status; and established an interdepartmental team (Project Issue Resolution) that quickly resolves problems and issues as they arise. The City will continue to find opportunities to streamline the permitting process to remove unnecessary barriers, without compromising public health, safety and community character and will process projects outside the coastal zone under SB 35 if requested by an applicant for an eligible project. The City will emphasize working with non-profit and for-profit housing developers to better utilize an expedited process, which would include priority plan review and inspection services. Streamlining includes the environmental review already completed for this Housing Element to address as many environmental issues as possible now to focus future environmental review on project-specific issues.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department
Objectives:	• Expedite permit processing for projects that exceed the City's inclusionary requirements and provide on-site affordable housing. • To the extent permitted by State law, use existing environmental documents to limit review of new developments to impacts not considered in the earlier document
Timeframe:	• Ongoing

PROGRAM 3F: Review nongovernmental constraints impeding development of approved housing projects

Most housing developments approved by the City have received building permits within a reasonable time period. However, building permits or final maps have not been obtained for approximately 75 units approved over one year ago. The City will contact applicants to discover why units have not been constructed. If due to nongovernmental constraints, such as rapid increases in construction costs, shortages of labor or materials, or rising interest rates, to the extent appropriate and legally possible, the City will seek to identify actions that may help to remove these constraints.

Additionally, the City will proactively work with stakeholders to identify constraints or other considerations that may impede the construction of housing in the Encinitas. The City will work collaboratively to find strategies and actions that can eliminate or reduce identified constraints.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department
Objectives:	• Contact applicants of projects to discover nongovernmental constraints preventing construction. • To the extent appropriate and legally possible, identify actions that may help to remove these nongovernmental constraints.
Timeframe:	• Complete by January 2020

PROGRAM 4: CONSERVATION OF EXISTING HOUSING STOCK

The programs below demonstrate how the City shall conserve and improve the condition of the existing affordable housing stock.

PROGRAM 4A: Pursue opportunities to create safe and healthy housing

The City has a number of accessory units that were constructed or converted illegally (without the benefit of building permits) prior to the City's incorporation and might not meet City codes. Recognizing that many of these units provide affordable housing that may not otherwise be available, the City adopted an Affordable Unit Policy (AUP) in 1993 to allow dwelling units built or converted without required permits to apply for legalization. In the period between January 1, 2010 and December 31, 2017, 14 units have been approved through the AUP program.

The City Council in November 2014 revised the compliance program with less restrictive, more preferential terms, which are valid through June 2018. A further extension of the program will be considered in May 2018. Here are the key changes:

- The unit must have existed prior to January 1, 2004. This is a change from the current policy that requires the unit to be in existence prior to incorporation in 1986.
- The unit must be reserved as affordable housing for "low" income households for a period of twenty (20) years. This is a change from the current policy that requires the affordability restriction in perpetuity.
- The standard AUP application fee ($900) may be waived for property owners that qualify as low/very-low income.

The City has sponsored amendments to State law that would permit more flexibility in applying past building codes to units constructed without permits. Some units constructed without permits may also be able to be legalized under new State ADU regulations if they can meet current building codes.

The City continues to monitor the program and adjust the policy as needed to maximize participation, while ensuring the protection of public health and safety, as well as compliance with State law. The City periodically markets the program to homeowners via City newsletter, website, and/or flyers at public counters.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department • City Council
Objectives:	• Healthy and safe housing
Timeframe:	• Consider extension of the AUP Program by June 2018

PROGRAM 4B: Assist in rehabilitating housing

The City's current Residential Rehabilitation Program provides grants and/or low-interest, deferred, and/or forgivable loans for building code violations, health and safety issues, essential repairs, upgrades of major component systems, and modifications to accommodate disabilities. The assistance is available to low-income homeowners and to owners of rental units that will rent to low income households. The key funding source available for the rehabilitation program comes from Community Development Block Grants (CDBG). The City anticipates that funding allocated over an eight-year period, from 2013 to 2021, will help administer assistance to about 40 households. The estimated funding amounts are not known until federal appropriations for each fiscal year are finalized and HUD notifies the City of the yearly grant amount. Subject to federal funding, the City will look to assist an average of five households annually (ranging from single-family, multi-family, and mobile homes).

Funding:	• Community Development Block Grants
Responsible Agencies:	• Development Services Department • City Council
Objectives:	• Healthy and safe housing • Assist 40 households
Timeframe:	• Ongoing

PROGRAM 5: EQUAL HOUSING OPPORTUNITIES

Below identifies the programs that promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, family status, or disability.

PROGRAM 5A: Reasonably accommodate housing for the disabled

State law requires jurisdictions to analyze potential and actual governmental constraints on the development, maintenance and improvement of housing for persons with disabilities and demonstrate local efforts to remove or mitigate those constraints.

Through its building permit authority, the City enforces State Title 24 accessibility regulations. As needed on a case-by-case basis, the City has made reasonable accommodations with respect to accessibility in its application of zoning/development standards. To ensure full compliance with reasonable accommodation

procedures of the Fair Housing Act, the City will adopt a Reasonable Accommodation Ordinance to establish procedures for the review and approval of requests to modify zoning and development standards to reasonably accommodate persons with disabilities, including persons with developmental disabilities.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department
Objectives:	• Adopt reasonable accommodations ordinance for persons with disabilities
Timeframe:	• November 2018 adopt new reasonable accommodations ordinance • July 2019 certification of Local Coastal Program Amendments

PROGRAM 5B: Promote fair housing

The City of Encinitas receives Community Development Block Grant (CDBG) funds from HUD. As a recipient of these funds, the City certifies that it will affirmatively further fair housing.

The City currently contracts with Legal Aid Society of San Diego to provide fair housing and landlord/tenant services to residents and landlords in Encinitas. Legal Aid will help mediate and will assist with filing fair housing complaints, and the City refers complaints to Legal Aid. Legal Aid also conducts free educational workshops for housing providers and tenants, as well as conducting fair housing testing to ascertain if fair housing issues are occurring in the City.

For the past three iterations, the City has partnered with all jurisdictions in the County to conduct a Regional Analysis of Impediments to Fair Housing Choice (AI). The AI identifies specific improvements to the City's Zoning Code to expand fair housing choices for all. The AI has outlined numerous actions for the City and the other cities in the County. Some of the most significant actions are these:

- Promote the Housing Choice Voucher program to rental property owners, in collaboration with the various housing authorities in the region.
- Increase housing options for special needs populations, including persons with disabilities, senior households, families with children, farmworkers, the homeless, etc.
- Conduct random testing on a regular basis to identify issues, trends, and problem properties. Expand testing to investigate emerging trends of suspected discriminatory practices.
- Diversify and expand the housing stock to accommodate the aired housing needs of different groups
- Work collaboratively with local housing authorities and affordable housing providers to ensure affirmative fair marketing plans and de-concentration policies are implemented

Funding:	• Community Development Block Grants
Responsible Agencies:	• Development Services Department • City Council

Objectives:	• Continue to contract with Legal Aid Society or other capable organization to review housing discrimination complaints, attempt to facilitate equitable resolution of complaints, and, where necessary, refer complainants to the appropriate state or federal agency for further investigation and action. • Implement the actions contained in the AI • Update the AI as needed • Collaborate with the jurisdictions in the San Diego region to complete the
Timeframe:	• Ongoing

PROGRAM 6: AT RISK HOUSING

There are some government-assisted projects or units that are or may be at-risk of conversion to market rate. At-risk units are occupied by seniors or lower income families who cannot afford to pay market rate rents and who could be displaced if the project or unit converts. Many of these units typically convert to market rate as subsidy contracts or regulatory agreements expire. The programs included herein identify how the City will attempt to preserve assisted housing developments that are at risk of converting to market-rate.

PROGRAM 6A: Monitor publicly assisted housing projects

The Housing Element is required to include a program to monitor and work to preserve affordable housing units that are eligible to convert to non-low-income housing uses. All inventoried units eligible to prepay, opt-out, or terminate long-term use/affordability restrictions during the next 10-years are considered by HCD as "at-risk". Thus, this Housing Element's "at-risk" housing analysis covers the period from November 2018 through November 2028.

As described in Appendix B, no assisted units in the City are at risk of loss in the next 10 years. However, the City will continue to monitor and review all assisted units so that it can act in advance of the loss of any units.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department
Objectives:	• Monitor the status of any Notices of Intent and Plans of Action filed by property owners to convert to market rate units • Identify non-profit organizations as potential purchasers/managers of at-risk housing units • Explore funding sources available to purchase affordability covenants on at-risk projects, transfer ownership of at-risk projects to public or non-profit agencies, purchase existing buildings to replace at-risk units or construct replacement units • Ensure the tenants are properly noticed and informed of their rights that they are eligible to obtain special Section 8 vouchers reserved for tenants of converted properties
Timeframe:	• Ongoing

PROGRAM 6B: Explore providing credit under the inclusionary ordinance for preservation of at-risk housing

As part of its update to the City's inclusionary ordinance described in Program 2A, the City will consider providing credit for preservation of at-risk housing and for conversion of market-rate units to affordable units when consistent with Government Code Section 65583.1 and will explore inclusion of preservation and conversion projects in the 2021 – 2029 Housing Element.

Funding:	• Development Services Department budget
Responsible Agencies:	• Development Services Department • City Council
Objectives:	• Consider allowing developers to meet inclusionary requirements by preserving at-risk housing units or converting market-rate units to affordable when consistent with the provisions of Government Code Section 65583.1.
Timeframe:	• November 2018 updated inclusionary housing program • July 2019 Coastal Commission certification of Local Coastal Program Amendments

TABLE 2-7 QUANTIFIED OBJECTIVES (2013-2021)

	Extremely Low Income	Very Low Income	Low Income	Moderate Income	Above Moderate Income	TOTALS
New Construction	365	366	555	413	907	2,353
Rehabilitation	---	---	40	---	---	40
Conservation and 'At-Risk'	20	---	---	---	---	20[3]
Section 8	57	56	---	---	---	113

[1] The City does not have anything 'At-Risk' in the current planning period; however, the City will continue to monitor the status of deed-restricted affordable housing units. Units reported account for AUP units anticipated to be legalized during the planning period.

Appendix A: Community Engagement Summary

Section 65583 (c) (7) of the Government Code states that, "The local government shall make diligent effort to achieve public participation of all economic segments of the community in the development of the housing element, and the program shall describe this effort." A discussion of citizen participation is provided below.

The City of Encinitas conducted an extensive public outreach process beginning in 2014 to prepare a 2013-2021 Housing Element. Outreach efforts included 45 presentations, numerous mailers and ads, and community dialogue sessions attended by 479 persons. That effort culminated in the adoption of a 2013-2021 Housing Element by the City Council in June 2016 and its placement on the November 2016 ballot as Measure T. However, the voters did not approve Measure T.

The City immediately began an effort to adopt a revised 2013-2021 Housing Element to be submitted to the voters in the November 2018 election. On November 16, 2016, even before the certification of the Measure T election results on December 13, 2016, the City Council approved the formation of a Housing Element Subcommittee to work with all groups to adopt a Housing Element. The City Council held a special community workshop on February 1, 2017, attended by well over 100 people, to discuss adoption of an adequate Housing Element and also held a special meeting on February 6, 2017, at which it appointed a Housing Element Update Task Force, comprised of the Council Subcommittee and two public members, including one supporter and one opponent of Measure T. Eleven public meetings were held by the Task Force in 2017, two of which were joint meetings with the City Council, in addition to regular updates to the City Council. In 2018, two Task Force meetings, two joint Task Force-City Council meetings and one community informational open house have occurred or have been planned. All meetings were advertised to an extensive mailing list (hard copy and email/e-alert) and the City maintained a web site with all information submitted to the Task Force. The meetings were attended by, among others, representatives of the San Diego Housing Federation, Building Industry Association, affordable housing and market-rate developers, and many community members. Additionally, two stakeholder meetings were held. Refer to Appendix A for the public notice mailing list, public notices, Council meeting minutes, and stakeholder meeting notes.

As required by Government Code Section 65585(b)(2), all written comments regarding the Housing Element made by the public have previously been provided to each member of the City Council.

Table A-1 shows the date or anticipated date of each meeting for the housing element. Summary notes for each meeting shown in the table are provided within Appendix A.

Table A-1: Summary of Public Comments from Housing Element Meetings

HOUSING ELEMENT TASK FORCE(HETF)	NOTES
February 13, 2017	HETF meeting
February 23, 2017	HETF meeting
March 9, 2017	HETF meeting
April 10, 2017	HETF meeting
May 4, 2017	HETF meeting
August 10, 2017	HETF meeting
September 5, 2017	HETF meeting
September 26, 2017	HETF meeting
October 16, 2017	HETF meeting
February 28, 2018	HETF meeting
CITY COUNCIL	**NOTES**
February 6, 2017	Special meeting
November 8, 2017	Regular meeting
December 16, 2017	Joint meeting with Task Force
January 10, 2018	Joint meeting with Task Force
April 4, 2018	Joint meeting with Task Force
STAKEHOLDER	**NOTES**
February 28, 2018	Stakeholder meeting #1
April 4, 2018	Stakeholder meeting #2 (Pending)
WORKSHOPS/OPEN HOUSE	**NOTES**
February 1, 2017	Special Council Meeting/Housing Element Workshop
May 10, 2018	(Pending)

A.1 Housing Element Task Force Public Comments

This section contains a summary of the public comments provided during each of the Housing Element Task Force (HETF) meetings. Opportunities for public comment were provided at the beginning and end of each meeting.

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – FEBRUARY 13, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Community Member – Short buildings and low density.
- Bob – Supports ADU policy and recommended reading report on ADUs.
- Robin – Concern with parcels in Cardiff. Not appropriate for the plan. Traffic and building height concerns.
- Richard – Commends the task force for their work.
- Steve – Suggests focusing on the best plan – market will decide. Also suggests hiring staff to get ADUs built.
- Amy – presented ideas for creating ways to build affordable housing for artists.
- Ron – Suggested putting HCD rules/regulations on website to help the public understand what HCD is looking for to approve the housing element.

End of meeting -

- Bob – consider more sites than just our shopping centers. Consider long-term study through HCD to achieve low cost housing.
- Glen – Need feedback mechanism for public comments. Get a good expert for housing element. Should be able to go more than 2-stories. Mixed use does not work. Preserve historic sites and community character.
- Mark – You need a process. Establish milestones and due dates. Have structure. Concerned about density calculations.
- Community Member – Likes the open approach to the meetings.
- Sheila – ADUs are grandfathered. Look at Oceanside bonds. Use the original General Plan, not overlay. Downtown site should be off the table. Why start with existing sites?
- Glenn – Look at Los Gatos regulations to understand background on thoughts. We never had a workshop on inclusionary and affordable housing, which had been discussed.
- Russ – Talked about a style of proto-type developments to consider that worked in La Jolla.

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – FEBRUARY 23, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Kathleen – Simply thanked the task force for their work.
- Bob – Provided information regarding ADUs built in the City.
- Damien – Affordable builder. He has an affordable plan for his property and wants it considered.
- Peter – Based on court case (CBA vs San Jose) consider 15% inclusionary housing ordinance.
- Community Member – Suggested affordable housing at the Encinitas Community Park.
- Community Member – Why can't we just take city property and build affordable housing.

End of meeting -

- Ron – Wants staff to confirm the effort to notify the public of upcoming meetings.
- Bob – Wants to know how the new laws will affect the ADUs regulations.
- Sheila – No RFP until we know what we want in the plan. Wants specifics. Can we have an HCD rep?
- C.J. – Are the meeting minutes on the website? (Staff explained meetings are recorded and posted on the Subcommittee's webpage).
- Community Member – Suggested the buffer be doubled to gain HCD's acceptance.
- Glenn – Talked about the housing element consultant's role.
- Cardiff Resident – What is the vision as we grow? Need good planning efforts.
- Glenn – Plan needs to be confined in order to pass.
- Community Member – There needs to be educational materials on the City's homepage.

HOUSING ELEMENT TASK FORCE/CITY COUNCIL MEETING

PUBLIC COMMENTS – FEBRUARY 28, 2018

PUBLIC COMMENTS:

Beginning of meeting

- Peter Stern – This Housing Element process has been the most transparent process. Remember that zoning is very important and that you need to work beyond selection of sites.
- Lois – Recommends keeping L-7 on the list.
- Richard – L-7 should be rezoned to R-3 and funds from project could be used for affordable housing project near bus lines. Too much increased density proposed on Quail Gardens Drive. Use public works site.
- Sylvia – Recommends keeping L-7 on the list.
- Glen – Should be a rational planning process. Concerned about density on Quail Gardens Drive.
- Kevin – Concerned about L-7 site.
- Encinitas Resident – Affordable housing supporter.
- Tom – City needs to have affordable housing available.
- CRC – Affordable housing advocate spoke in support of affordable housing.
- Ron – Could we use the El Camino Real Home Depot open space?
- Angela – Recommends L-7 site and supports affordable housing.

End of meeting

- Sue Reynolds – Suggested keeping L-7 on the list.
- Bob K. – Spoke on behalf of Leichtag and supported keeping the L-7 site on the list, with the understanding that any housing intensification would include the implementation of the recommendations of the previously prepared traffic calming plan.~~suggested not selecting L-7 site due to traffic impacts.~~
- Peter Curry – Suggested considering the use of an overlay.
- Resident – Spoke of her concerns with low-income~~-~~ development.

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – MARCH 9, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Bob – Consider the landfill site as an option for affordable housing.
- Damien – Presented a spreadsheet on sites and options based on land value the 30 DUA.

End of meeting -

- Glenn – Asked various questions about the consultant selection and if they will work with staff and the task force.
- Community Member – Expressed concerns about affordable housing and that many teachers can't afford to live in Encinitas.

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – April 10, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- None

End of meeting -

- Citizen – Parking ordinances. Required 2 for 1 bedroom currently. He ran numbers at 1.5 per bedroom. Reanalyzing the parking
- Glenn - 15 vs. 16 Adopted the environmentally friendly map but there was no option to change it. Should look at more than one outside site. Give Council the discretion to look at other outside sites.
- Citizen – 16 to 20 sites then add more that were on other maps?
- John Gjata – Looking at cost per square foot. Looking at it financially. Coordinate with the more elderly population.
- Ron – Map 4 most sustainable. We need a final EIR approved.

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – May 4, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Citizen - Hearing Encinitas anti-affordable housing in the media…but ironic because we shut down Measure T. Suggests City should help itself in the process of setting the record straight. More affordable housing mandated. City should be more vocal.

End of meeting -

- Damien – Max density could be governed by height.
- Citizen – is there a range the state requires two/three bedrooms? Percentage of types of units?
- Citizen - Any example in communities of affordable units owned by the city? How is the affordable unit in perpetuity after someone passes away?

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – AUGUST 10, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Brisbane SF – Small City by choice (Baylands Project).
- Community Member – Why sites on Coast Highway 101? Does not support.
- Kevin J. (SELC) – No upzoning near the lagoon.

End of meeting -

- Community Member – Are you tracking legislation related to housing?
- Community Member – Legal definition of "affordable"? Can underground parking be used? Any mechanisms in place to prevent marketeering?
- Glenn – Measure T tried to change this city by making small sites larger, but the Consultant is working with small sites and change standards. Does DB give developer opportunity to change the size of the box?
- Glenn O. – Does HCD give credit from public participation from Measure T? Only certain dates for elections.
- Jerry – Are we trying to get truly affordable housing, did not hear Consultant talk about that.
- Ron – Share the burden across the community and be aware of AB 72
- Community Member – Why include mixed use? Do we need it?

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – SEPTEMBER 5, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Damien M. – Discussed his property as an option for consideration and an affordable housing project for the site.
- Faith – Interested in adding sites west of the I-5 off Manchester Ave.
- Richard S. –
- Glenn J. – We need to get going on selecting the sites R25 for small and R30 for larger? Do not include City Hall.
- Lansing – Interested in adding sites.
- Property Owner of 7-11 on Encinitas Blvd. wanted his site considered
- Community Member – The Kimley Horn analysis will not work with the development stds. proposed. Need to look closer at what is being proposed.

End of meeting -

- None

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – SEPTEMBER 26, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Glen J. – Get this Housing Element Plan approved
- Damien M. – Discussed his property as an option for consideration and his partnership with Community Housing Works
- Angela – Talked about the importance of affordable housing opportunities

End of meeting -

- Louise – Does not want access from County burn site off Shields Avenue
- Kathleen L. – Does not want the Sprouts site or Ralphs site considered
- Property Owner of 7-11 on Encinitas Blvd. – Can't City build the affordable housing?
- Ron – Task Force should use an even hand for the distribution of sites in the 5 communities
- Gerald S. – Made a suggestion on a site to consider (not clear which)
- Nancy N. – Wants affordable housing on City owned vacant properties
- Community Member – Stated that we should want affordable housing
- Angela – repeated the need for affordable housing

HOUSING ELEMENT TASK FORCE PUBLIC COMMENTS – OCTOBER 16, 2017

PUBLIC COMMENTS:

Beginning of meeting -

- Glen J. – Provided a comment letter (in project file) encouraging the Task Force not to get caught up in the small details and get a plan together.
- Doug G. (SELC) – Encouraged the Task Force to consider protecting the lands around the lagoon.
- Kevin J. (SELC) – Highlighted multiple sections in the General Plan's Resource Mgmt. Element, which encourage protection of areas around the lagoon.
- Steve H. – Does not support upzoning vacant sites near Sienna Canyon Drive.
- Nikki (Greek Orthodox Church) – Would like to have portion of the church's property included as one of the sites for consideration.
- Damien M. – Encouraged the Task Force to support projects with true affordable housing.
- Kathleen L. – Stressed the need for affordable housing in the City.

End of meeting -

- Glen O. – Asked that the Task Force consider the economic viability of the sites.
- Property Owner of 7-11 on Encinitas Blvd. – Had a question related to 30 units per acre.
- Kathleen L. – Requested the Task Force consider the Vons Shopping Center site.
- Glen J. – Can Density Bonus be used as an option?
- Community Member – Requested to have the sites the Task Force selects posted on the City's website.
- Community Member – Asked if public support of the Task Force process is necessary at the City Council meeting.

A.2 City Council Meeting Notes

This section contains the meeting minutes and all public comments from each of the City Council meetings related to the Housing Element Update.

Note: The April 4, 2018 meeting minutes are currently being processed and will be added when available.

MINUTES OF THE ENCINITAS CITY COUNCIL SPECIAL MEETING
FEBRUARY 6, 2017, 6:00 P.M., 505 SOUTH VULCAN AVENUE

CALL TO ORDER/ROLL CALL

Mayor Blakespear called the meeting to order at 6:00 P.M.

Present: Mayor Catherine S. Blakespear, Deputy Mayor Tony Kranz, Council Members Tasha Boerner Horvath, Joe Mosca and Mark Muir

Absent: None

Also present: City Manager Brust, City Attorney Sabine, Special Counsel Barbara Kautz, Principal Planner Langager, City Clerk Hollywood and Deputy City Clerk Bingham

There being a quorum present, the meeting was in order.

PLEDGE OF ALLEGIANCE

AGENDA ITEMS

1. **City Council discussion on next steps regarding the development of a legally compliant Housing Element Update.**

   ***RECOMMENDED ACTION*: Provide direction to the Council subcommittee of Mayor Blakespear and Deputy Mayor Kranz and staff regarding next steps for developing a legally compliant Housing Element Update.**

   SPEAKERS:
   Bob Bonde, Gene Chapo, Eileen Troberman, Nancy DeGhionno, Kathleen Lees, Richard Boger, Rhonda Graves and Glen Johnson.

   Special Counsel Barbara Kautz and Principal Planner Langager responded to questions and comments from the public and Council.

   COUNCIL CONSENSUS:
   There was Council Consensus to direct staff to bring back the Inclusionary Housing Ordinance and In-Lieu Fees for Council consideration.

SPEAKERS CONTINUED:
Bruce Ehlers, Gene Chapo, Glen Johnson, Bob Bonde, Glenn O'Grady, Kathleen Lees, Andrew Matuszeski, Audrey, Tom Cozens and Linda Durham.

ACTION:

Blakespear moved, Boerner Horvath seconded to: 1) Convene a Housing Element Update Task Force consisting of Mayor Blakespear, Deputy Mayor Kranz, Bruce Ehlers and Kurt Groseclose to bring forward an alternative proposal with flexibility to add members as needed; 2) Direct the Task Force to prepare a time line; 3) Direct staff to place a standing agenda item on the City Council agenda beginning with the first meeting in March; 4) Authorize the Task Force to commission studies as necessary; and 5) Include timely check-ins with the Planning Commission. Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None.

Mayor Blakespear asked if there was Council Consensus to tie the Strategic Planning sessions to the budget and to schedule these sessions ahead of the budget presentations. There was Council Consensus.

ADJOURNMENT

Mayor Blakespear adjourned the meeting at 8:45 P.M.

Kathy Hollywood, City Clerk
By: Claudia Bingham
Deputy City Clerk

Catherine S. Blakespear, Mayor

MINUTES OF THE ENCINITAS CITY COUNCIL REGULAR MEETING NOVEMBER 8, 2017, 6:00 P.M., 505 SOUTH VULCAN AVENUE

1. CALL TO ORDER

Mayor Blakespear called the meeting to order at 6:00 P.M.

2. ROLL CALL

Present: Mayor Catherine S. Blakespear, Deputy Mayor Tony Kranz, Council Members Tasha Boerner Horvath, Joe Mosca and Mark Muir

Absent: None

Also present: City Manager Brust, City Attorney Sabine, Director of Development Services Wisneski, City Clerk Hollywood, Principal Planner Langager, Special Counsel Kautz, consultants Dave Barquist and Nick Chen of Kimley Horn, consultants Mike Singleton and John Holloway of KTUA, Special Counsel Skinnell, consultant Doug Johnson of National Demographics Corporation, Project Manager O'Grady, Fire Chief Stein

There being a quorum present, the meeting was in order.

3. PLEDGE OF ALLEGIANCE

4. SPECIAL PRESENTATIONS AND PROCLAMATIONS

There were no presentations or proclamations.

5. ORAL COMMUNICATIONS / POSSIBLE DIRECTION TO STAFF

John Hyde spoke regarding damage to the wetlands along Escondido Creek.

James McDonald spoke regarding bees.

6. REPORT FROM CLOSED SESSION

No Closed Session meeting was held.

7. CHANGES TO THE AGENDA

There were no changes to the posted agenda.

8. CONSENT CALENDAR

Council Member Mosca stated that he would abstain from voting on Agenda Item 8B due to his employment with SDG&E.

Item 8H was removed from the Consent Calendar by a member of the public.

COUNCIL ACTION:
Kranz moved, Muir seconded to close and adopt the amended Consent Calendar. Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None. Abstain: Mosca (8B).

8A. Approval of the Minutes of the October 11, 2017 Regular Meeting, October 11, 2017 Special Closed Session, October 18, 2017 Regular Meeting and October 30, 2017 Special Closed Session. Contact Person: City Clerk Hollywood

Recommended Action: Approve the Minutes.

8B. Approval of the Warrants List. Contact Person: Finance Manager Lundgren

Recommended Action: Approve the Warrants.

Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None. Abstain: Mosca.

8C. Amendment 11 to the Agreement with Tyler Technologies, Inc. for the purchase of licenses and re-configuration of existing Tyler Content Management (TCM) software to enable new functionality. Contact Persons: IT Supervisor Van Pelt and IT Project Manager Salmon

Recommended Action: Approve Amendment 11, in substantial form, in consultation with the City Attorney, and authorize the City Manager to enter into the amended agreement with Tyler Technologies, Inc. for software licenses and professional services not to exceed $39,250 and annual software maintenance fees in the amount of $7,290 beginning in FY 18-19.

8D. Caltrans Adopt-A-Highway northbound Interstate 5 on/off ramps at Birmingham Drive. Contact Person: Interim Public Works Director Lamb

Recommended Action: Recommend that the City of Encinitas apply to enter into an agreement with Caltrans for adoption of the northbound Interstate 5 on/off ramps for litter removal.

*8E. Public Hearing - Request to vacate/abandon an existing biological open space easement historically consisting of Diegan coastal sage scrub and non-native grassland. Contact Person: City Planner Sapa'u

Recommended Action: Adopt attached Resolution No. 2017-76 **(Attachment CC-1)** approving the Final Mitigated Negative Declaration **(Attachment CC-3)** for the project, certifying the abandonment fee of $87,500 the landowner must pay to the County Treasurer, and approving the request to abandon the existing biological open space easement.

There were no public speakers on this item.

8F. Contract Amendment for Construction Inspection Services. Contact Person: City Engineer Magdosku

Recommended Action: Authorize the Director of Development Services, or the Director's designee, in consultation with the City Attorney, to execute an amendment to an existing agreement with Geopacifica in the amount of $35,380 plus 15% contingencies, for a total contract amount not to exceed $220,687.

8G. Easement Agreement for Use of Rail Right-of-Way and Memorandum of Understanding for Construction of the Cardiff Coastal Rail Trail Improvements. Contact Person: Associate Civil Engineer Kellar

Recommended Action: 1) Authorize the City Manager, in consultation with the City Attorney, to execute the Easement Agreement with North County Transit District (NCTD) (in substantial form as provided in Attachment 1) for construction and maintenance of improvements in the rail right-of-way; and 2) Authorize the City Manager, in consultation with the City Attorney, to execute the Memorandum of Understanding (MOU) with San Diego Association of Governments (SANDAG) (in substantial form as provided in Attachment 2) to facilitate the construction of the Cardiff Coastal Rail Trail improvements by SANDAG and ultimate maintenance of the improvements by the City.

9. ITEMS REMOVED FROM THE CONSENT CALENDAR

8H. Mobility Project Update - Capital Improvement and Traffic Engineering Divisions. Contact Person: City Engineer Magdosku

Recommended Action: 1) Receive report on the status of Capital Improvement and Traffic Engineering projects; and 2) Receive report on the status of the effort to develop a publicly available GIS map of active projects.

Michael von Neumann expressed appreciation to the City for its efforts to improve bike and pedestrian safety.

COUNCIL ACTION:
Blakespear moved, Boerner Horvath seconded to: 1) Receive report on the status of Capital Improvement and Traffic Engineering projects; and 2) Receive report on the status of the effort to develop a publicly available GIS map of active projects. Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None. Abstain: None.

10. ACTION ITEMS

10A. Housing Element Task Force/City Council discussion regarding the Housing Plan Update and associated analysis to achieve a State-certified Housing Element. Contact Person: Principal Planner Langager

Recommended Action: Staff and the Housing Element Task Force (HETF) recommend that the Council: 1) Provide comments on the sites proposed for inclusion as part of the Housing Element Update and give direction to the HETF regarding their scope of work; and 2) Request that Kimley-Horn prepare a revised scope of work regarding the tasks required to complete the Housing Element update, and direct staff to return with a new contract or contract amendment, for Council review and approval, for completion of a draft Housing Element.

Principal Planner Langager; Housing Element Task Force Members Mayor Blakespear, Deputy Mayor Kranz, Bruce Ehlers and Kurt Groseclose; Special Counsel Barbara Kautz; and consultants Dave Barquist and Nick Chen from Kimley-Horn provided the report and responded to questions.

SPEAKERS:
James Kozak, Glen Johnson, Bob Bonde, Bob Echter, Daron Joffe, Lee Vance, David Gaffney and Randy Goodson

COUNCIL ACTION:
Council consensus to request that Kimley-Horn prepare a revised scope of work regarding the tasks required to complete the Housing Element update, and direct staff to return with a new contract or contract amendment, for Council review and approval, for completion of a draft Housing Element.

Council consensus to authorize the Housing Element Task Force to meet with HCD.

Council consensus to direct the consultant to prepare and provide more realistic numbers regarding sites and site constraints.

Council consensus to schedule an additional City Council meeting with the task force to receive and discuss additional information.

Mayor Blakespear called a recess from 8:43 p.m. to 8:56 p.m.

10B. Presentation, review, discussion and direction on the first draft of the Coastal Mobility & Livability Study (CMLS) related to the Active Transportation Plan (ATP). Contact Person: Principal Planner Langager

Recommended Action: Staff recommends that the Council: 1) Receive the report and provide input on the first draft of the CMLS specific to the ATP; and 2) Provide staff direction, as desired.

Principal Planner Langager and consultants Mike Singleton and John Holloway from KTUA provided the report and responded to questions.

SPEAKERS:
Marty Benson, Kellie Shay Hinze, Julie Hinze, Judy Berlfein, Elena Thompson

COUNCIL ACTION:
Council received the report and provided input on the first draft of the CMLS specific to the ATP.

10C. District-Based Elections / Content of Draft Maps, Sequence of Elections – Receive input from the community and introduce an ordinance to adopt a district boundary maps and sequence of elections pursuant to Elections Code § 10010. Contact Person: Project Manager O'Grady and Special Counsel Skinnell

Recommended Action: 1) Receive a report from National Demographics Corporation, the City's demographic consultant, concerning the maps proposed to date and potential election sequencing for a district-based election process pursuant to Elections Code § 10010; 2) Open the public hearing and invite members of the public to provide feedback on the draft maps and potential election sequencing presented; 3) Close the public hearing and select a preferred map and set the sequence of elections; and 4) Introduce Ordinance 2017-15, entitled "An Ordinance of the City of Encinitas, California, Establishing a By-District Election Process in Four Council Districts Pursuant to California Elections Code § 10010 & California Government Code §§ 34871(C) & 34886," incorporating the adopted map and sequence of elections.

Project Manager O'Grady, Special Counsel Skinnell and consultant Doug Johnson from National Demographics Corporation provided the agenda report and responded to questions.

SPEAKERS:
Kevin Dolan, Kevin Doyle, Kathleen Lees

COUNCIL ACTION:
Mosca moved, Blakespear seconded to close the public hearing and introduce Ordinance 2017-15, entitled "An Ordinance of the City of Encinitas, California, Establishing a By-District Election Process in Four Council Districts Pursuant to California Elections Code § 10010 & California Government Code §§ 34871(C) & 34886," incorporating Citizen 016 map and the sequence of elections - Districts 3 & 4 in 2018 and Districts 1 & 2 in 2020. Motion carried. Ayes: Blakespear, Boerner Horvath, Mosca. Nays: Kranz, Muir.

10D. Reduce Fire Department Response Times in the North Leucadia/Saxony Canyon area by adding a Peak Hour Fast Response Vehicle (Type-6 Engine). Contact Person: Fire Chief Stein

Recommended Action: City Council authorize the City Manager and Fire Chief to establish a pilot program for a peak hour Fast Response Vehicle (FRV) program in the North Leucadia/Saxony Canyon area.

This item was continued to a future City Council meeting.

10E. Marijuana-Related Activities and Uses—Consideration and Possible Adoption of a Draft Ordinance Prohibiting the Same to the Extent Authorized by California Law. Contact Person: City Attorney Sabine

Recommended Action: Take action to introduce draft Ordinance No. 2017-16 entitled, "An Ordinance of the City Council Adding Chapter 9.21 to the Encinitas Municipal Code to Prohibit Commercial and Personal Marijuana Related Activities and Uses to the Extent Authorized by California Law, and thereby, Prevent and Invalidate any State License or Authorization Regarding the Same."

City Attorney Sabine provided the agenda report and responded to questions.

SPEAKERS:
Randall Sims spoke.

Kelly McCormick and Judi Strang spoke in support of the ordinance.
Jeff Taylor and Sam Humeid spoke in opposition to the ordinance.

COUNCIL ACTION:
Muir moved, Mosca seconded to introduce Ordinance No. 2017-16 entitled, "An Ordinance of the City Council Adding Chapter 9.21 to the Encinitas Municipal Code to Prohibit Commercial and Personal Marijuana Related Activities and Uses to the Extent Authorized by California Law, and thereby, Prevent and Invalidate any State License or Authorization Regarding the Same." Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None. Abstain: None.

11. INFORMATIONAL ITEMS

11A. Housing Element Update Status Report. Contact Person: Council Subcommittee Members Blakespear and Kranz

This item was discussed as part of Agenda Item 10A.

12. COUNCIL MEMBER INITIATED AGENDA ITEM

There were no Council Member Initiated items.

13. FUTURE AGENDA ITEMS ADDED BY COUNCIL MEMBERS

No future agenda items were added.

14. CITY COUNCIL MEMBER REPORTS PURSUANT TO AB1234 (GC 53232.3(d)) / POSSIBLE DIRECTION TO STAFF

No reports were given.

15. CITY MANAGER REPORTS / PENDING POSSIBLE FUTURE AGENDA ITEMS

No report was given.

16. CITY ATTORNEY REPORTS

No report was given.

17. ADJOURNMENT

Mayor Blakespear adjourned the meeting at 11:32 P.M.

Kathy Hollywood, City Clerk

Catherine S. Blakespear, Mayor

MINUTES OF THE ENCINITAS CITY COUNCIL SPECIAL MEETING DECEMBER 16, 2017, 8:30 A.M., ENCINITAS COMMUNITY CENTER, 1140 OAKCREST PARK DRIVE

CALL TO ORDER/ROLL CALL

Mayor Blakespear called the meeting to order at 8:33 A.M.

Present: **City Council:** Mayor Blakespear, Deputy Mayor Kranz, Council Members Boerner Horvath, Mosca, and Muir

Housing Element Task Force: Mayor Blakespear, Deputy Mayor Kranz, Bruce Ehlers, and Kurt Groseclose

Absent: None

Also present: City Manager Brust, City Attorney Sabine, City Clerk Hollywood, Director of Development Services Wisneski, City Planner Sapa'u, Principal Planner Langager, Special Counsel Barbara Kautz, and consultants Dave Barquist and Nick Chen of Kimley Horn.

There being a quorum present, the meeting was in order.

AGENDA ITEM

1. Housing Element Task Force/City Council continued discussion regarding the Housing Plan Update and associated analysis to achieve a State-certified Housing Element. Contact Person: Principal Planner Langager

   RECOMMENDED ACTION: Staff and the Housing Element Task Force (HETF) recommend that the Council: 1) Discuss and provide comments on the sites proposed for inclusion as part of the Housing Element Update and give direction to the HETF regarding their work efforts; and 2) Direct staff to return with a new contract or contract amendment with Kimley-Horn, and a budget adjustment for Council review and approval for completion of the a draft Housing Element.

   SPEAKERS:

   - Richard Boger, Jim Gillie, Kathleen Gillie, spoke in opposition to the city-owned Quail Gardens site (L-7).

   - Glen Johnson spoke regarding sites on Quail Gardens Drive and in opposition to the city-owned site (L-7).

   - Helmut Kiffman spoke about process and community engagement.

- Damien Mavis spoke in support of including the Cannon Family/Piraeus site plus adding two additional parcels.

- Ruben Flores spoke regarding equal distribution of housing throughout the five communities of Encinitas.

- Alicia Bazzano, Bob Echter, and Jackie Kim spoke regarding the Echter property.

- Peter Stern spoke regarding the need for housing and preserving community character.

- Mike Andreen spoke regarding the dump site.

- Dennis Cook spoke regarding the burn site and dump site.

- Sheila Cameron spoke regarding the Sunshine Gardens site and the dump site.

Special Counsel Kautz provided a summary of the meeting with HCD and reviewed changes to State Housing Law that will impact and govern the City's Housing Element.

Housing Element Task Force Members Blakespear, Kranz, Ehlers, and Groseclose provided a summary of their meeting with HCD.

Sue Reynolds of Community Housing Works provided a presentation on affordable housing.

Mayor Blakespear called a recess from 10:30 a.m. to 10:40 a.m.

The City Council and Housing Element Task Force reviewed the list of properties and determined which properties would move forward with further analysis and consideration and which properties would be removed from further analysis and consideration.

COUNCIL ACTION:
Council and Task Force consensus to move forward the following properties for further analysis and consideration:

Cardiff by the Sea:
- **Manchester Avenue Sites**
- **Greek Church Site**
- **Strawberry Fields Site**

Leucadia:
- **Cannon Property (Piraeus) Site**
- **Highway 101 Sites**

New Encinitas:
- **Armstrong Site**

Old Encinitas:
- **Encinitas Boulevard & Quail Gardens Sites**
- **Sunshine Gardens Sites**

Olivenhain:
- **7-11 Center and Surrounding Sites**
- **Rancho Santa Fe Sites (Gaffney/Goodsen)**

COUNCIL ACTION:
Council and Task Force consensus to remove the following properties from further analysis and consideration:

Leucadia:
- **Echter Property**
- **L-7 Site**
- **Additional Cannon parcels (property owner presented at the meeting)**

New Encinitas:
- **County Burn Site**

Olivenhain:
- **Coassin/Lansing Site**
- **105 Rancho Santa Fe Site (letter received and staff presented at the meeting)**

COUNCIL ACTION:
Direction to staff to: 1) schedule a meeting in January to bring back the sites identified for further analysis and consideration; and 2) suggestions for vacant or developed land citywide that have owner interest with emphasis on New Encinitas and bring back for City Council/Task Force review.

ADJOURNMENT

Mayor Blakespear adjourned the meeting at 12:40 P.M.

Kathy Hollywood, City Clerk

Catherine S. Blakespear, Mayor

MINUTES OF THE ENCINITAS CITY COUNCIL REGULAR MEETING JANUARY 10, 2018, 6:00 P.M., 505 SOUTH VULCAN AVENUE

1. CALL TO ORDER

Mayor Blakespear called the meeting to order at 6:10 P.M.

2. ROLL CALL

Present: Mayor Catherine S. Blakespear, Deputy Mayor Joe Mosca, Council Members Tasha Boerner Horvath, Tony Kranz and Mark Muir

Absent: None

Also present: City Manager Brust, City Attorney Sabine, Development Services Director Wisneski, Principal Planner Langager, City Engineer Magdosku, Special Counsel Kautz, Dave Barquist with Kimley/Horn, City Clerk Hollywood and Deputy City Clerk Bingham

There being a quorum present, the meeting was in order.

3. PLEDGE OF ALLEGIANCE

4. SPECIAL PRESENTATIONS AND PROCLAMATIONS

There were no presentations or proclamations.

5. ORAL COMMUNICATIONS / POSSIBLE DIRECTION TO STAFF

Susan Hagen spoke regarding Starlight Drive.

Leslie Schneider and Judi Strang spoke regarding the Rohrabacher/Leahy amendment.

There was Council consensus to direct Senior Management Analyst McSeveney to prepare a report on the Rohrbacher/Leahy amendment for Council consideration.

Glen Johnson spoke regarding the Pledge of Allegiance.

6. REPORT FROM CLOSED SESSION

Mayor Blakespear reported the following from the 4:30 P.M. Closed Session meeting:

Regarding Agenda Item 1, on a 3-2 vote (Kranz, Muir voted no), Council authorized payment of fees to Shenkman & Hughes.

Regarding Agenda Item 2, there was Council consensus to direct staff to meet with the residents of Starlight Drive.

Regarding Agenda Items 3, 4 & 5 there was no reportable action and reported that the February 8th court hearing regarding these items had been rescheduled to April 30th.

Regarding Agenda Item 6, there was Council consensus to continue negotiations.

7. CHANGES TO THE AGENDA

There were no changes to the posted agenda.

8. CONSENT CALENDAR

City Clerk Hollywood announced that Agenda Item 8D was removed from the Consent Calendar by members of the public and Deputy Mayor Mosca announced that he would abstain from voting on Agenda Item 8B due to his employment with SDG&E.

COUNCIL ACTION:
Muir moved, Boerner Horvath seconded to close and adopt the amended Consent Calendar. Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None. Abstain: Mosca (8B).

8A. Approval of the Minutes of the December 16, 2017 Special Meeting and December 20, 2017 Regular Meeting. Contact Person: City Clerk Hollywood

Recommended Action: Approve the Minutes.

8B. Approval of the Warrants List. Contact Person: Finance Manager Lundgren

Recommended Action: Approve the Warrants.

Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Muir. Nays: None. Abstain: Mosca.

8C. Proposals for Public Art. Contact Person: Arts Program Administrator Gilliam

Recommended Action: That the City Council approve: 1) Three (3) proposals for public art to be donated to the City and added to the Encinitas Public Art Collection; and 2) One (1) proposal for a sculpture pedestal to be donated to the City, and the loan of a sculpture by artist Jeffrey Laudenslager for one (1) year.

8E. Adoption of Resolution 2018-06 approving an off-cycle budget appropriation of $546,027 to provide additional funding to the Housing Plan Update project budget, and authorization for the City Manager to sign contract Amendment #1 with Kimley-Horn for additional costs and a revised scope of work to complete the Housing Plan Update. Contact Person: Principal Planner Langager

Recommended Action: Staff recommends that the Council: 1) Adopt Resolution 2018-06 approving an off-cycle budget appropriation of $546,027 to the Housing Plan Update (WC14B) project budget; and 2) Authorize the City Manager, in consultation with the City Attorney, to sign contract amendment #1 (in substantial form) with Kimley-Horn for additional costs and a revised scope of work for the completion of the Housing Plan Update.

9. ITEMS REMOVED FROM THE CONSENT CALENDAR

8D. Mobility Project Update - Capital Improvement and Traffic Engineering Divisions. Contact Person: City Engineer Magdosku

Recommended Action: Receive the report on the status of Capital Improvement and Traffic Engineering projects.

City Engineer Magdosku presented the staff report.

SPEAKERS:
Kellie Hinze, Elena Thompson, Peter Curry and Marty Benson spoke in support of the recommended action.

COUNCIL ACTION:
Mosca moved, Muir seconded to receive the report on the status of Capital Improvement and Traffic Engineering projects. Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None.

10. ACTION ITEMS

10A. Resolution 2018-12 Establishing a No Parking Zone on Seeman Drive between the Hours of 10 PM and 6 AM. Contact Person: City Engineer Magdosku

Recommended Action: Adopt Resolution 2018-12, entitled "Establishing a No Parking Zone on Seeman Drive between the Hours of 10 PM and 6 AM, daily."

City Engineer Magdosku presented the staff report.

SPEAKERS:
Joe Weber, Larry Saker, Russ Wilson and Marty Benson spoke in support of the recommended action.

Lee Vance was in support of the recommended action, but chose not to speak.

COUNCIL ACTION:
Muir moved, Mosca seconded to adopt Resolution 2018-12, entitled Establishing a No Parking Zone on Seeman Drive between the Hours of 12:00 A.M and 6:00 a.m. daily, and to direct staff to work with the community regarding fire lanes. Motion carried. Ayes: Blakespear, Boerner Horvath, Kranz, Mosca, Muir. Nays: None.

10B. Housing Element Task Force (HETF)/City Council continued discussion regarding the Housing Plan Update and associated analysis to achieve a State-certified Housing Element. Contact Person: Principal Planner Langager

Recommended Action: Discuss and finalize the sites proposed for inclusion as part of the Housing Element Update and give direction to the HETF regarding their work efforts.

Consultants Dave Barquist and Nick Chen with Kimley/Horn presented the report.

Special Counsel Kautz reviewed changes to State Housing Law that would impact the City's Housing Element.

SPEAKERS:
Glenn Johnson spoke regarding El Camino Real sites.

Nicki Cometa requested Council to consider adding the Greek Church site.

Austin Delana, Bob Echter, Carris Rhodes, Tashi MacMillen, Melina Domingues and Brian Grover spoke in support of including the Dram/Echter (Fox Point Farms) site.

Sue Reynolds, Doug Gibson and Damien Mavis spoke in support of including the L-7 property.

Susan Turney spoke.

Robert Dyer and Stephen Lord spoke in support of including the Rancho Santa Fe (Gaffney/Goodsen) site.

Barry Pedler, Angelica Pedler, Christine Hawes and Jackie Kim spoke in opposition to the Dram/Echter property.

Greg Lansing spoke in support of including the Coassin/Lansing site.

Sheila Cameron spoke in opposition to the recommended action.

Mayor Blakespear called a recess from 8:51 P.M. to 9:04 P.M.

Council, along with Housing Element Task Force Members Bruce Ehlers and Kurt Groseclose, reviewed the list of properties to determine which properties would move forward with further analysis and consideration, and which properties would be removed from further consideration.

COUNCIL CONSENSUS:
There was Council Consensus to use the density of 25-30 units per acre for planning purposes.

COUNCIL CONSENSUS:
There was Council Consensus to move forward with the following properties for further analysis and consideration:

Swartz Property
Armstrong Nursery II Site
Credit Union Site
El Camino Real South Sites
Village Square Drive Parcels
Jackel Property
Harrison Site
Greek Church Site
Strawberry Fields Site
Cannon Property (Piraeus Site)
Armstrong Site

Encinitas Blvd & Quail Gardens Site
Sunshine Gardens Site
7-11 Center and Surrounding Sites
Rancho Santa Fe Sites (Gaffney/Goodsen)
Echter Property
L-7 site

11. INFORMATIONAL ITEMS

There were no informational items.

12. COUNCIL MEMBER INITIATED AGENDA ITEM

There were no Council Member initiated items.

13. FUTURE AGENDA ITEMS ADDED BY COUNCIL MEMBERS

No future agenda items were added.

14. CITY COUNCIL MEMBER REPORTS PURSUANT TO AB1234 (GC 53232.3(d)) / POSSIBLE DIRECTION TO STAFF

No reports were given.

15. CITY MANAGER REPORTS / PENDING POSSIBLE FUTURE AGENDA ITEMS

No reports were given.

16. CITY ATTORNEY REPORTS

No reports were given.

17. ADJOURNMENT

Mayor Blakespear adjourned the meeting at 10:47 P.M.

Kathy Hollywood, City Clerk
By: Claudia Bingham
Deputy City Clerk

Catherine S. Blakespear, Mayor

Special City Council 6:00 p.m.

Meeting Time: 02-06-17 18:00

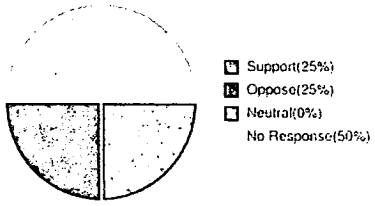
eComments Report

Meetings	Meeting Time	Agenda Items	Comments	Support	Oppose	Neutral
Special City Council 6:00 p.m.	02-06-17 18:00	7	4	1	1	0

Sentiments for All Meetings

The following graphs display sentiments for comments that have location data. Only locations of users who have commented will be shown.

Overall Sentiment



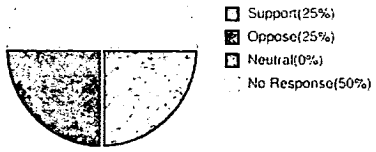
Special City Council 6:00 p.m.
02-06-17 18:00

Agenda Name	Comments	Support	Oppose	Neutral
AGENDA ITEMS	2	1	0	0
1. City Council discussion on next steps regarding the development of a legally compliant Housing Element Update.	1	0	1	0
ADJOURNMENT	1	0	0	0

Sentiments for All Agenda Items

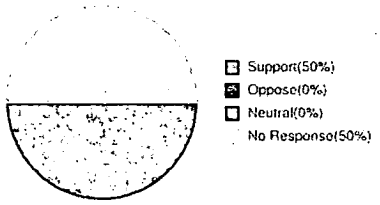
The following graphs display sentiments for comments that have location data. Only locations of users who have commented will be shown.

Overall Sentiment



Agenda Item: eComments for AGENDA ITEMS

Overall Sentiment



Sophie Rozenzhak
Location:
Submitted At: 6:21am 02-06-17

As the council considers developing residential units in the downtown area, those of us who already live there urge the council to strongly consider implementing a limit on late-night business that are open until 2am. They are a major nuisance and we are struggling with drunkenness and noise almost every night as residents of Pacific Station condos. A uniform rule for a 10 pm closing during the week or midnight on weekends closing time would be reasonable for a residential/commercial mixed-use neighborhood.

Lynn Marr
Location:
Submitted At: 1:16pm 02-05-17

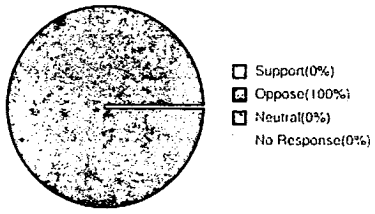
Council Member Tasha Boermer Horvath, shared, during Council Reports at the last regular council meeting, that

accessory units are considered de-facto affordable housing by the State, WITHOUT covenants being required. She learned this at the League of Cities Conference she attended.

More must be done to incentivize people with accessory units to come forward. A real amnesty would only require health and safety inspections, and would not require that the unit actually be rented, or that a covenant be recorded. Many more people would create units, or come forward to have existing units inspected, if covenants were not required. Because being able to rent out an accessory unit, makes the primary unit more affordable. State law also references this fact. These accessory units could be rented to family members, or not rented at all, and could still be counted by the State.

Agenda Item: eComments for 1. City Council discussion on next steps regarding the development of a legally compliant Housing Element Update.

Overall Sentiment



Lynn Marr
Location:
Submitted At: 1:23pm 02-05-17

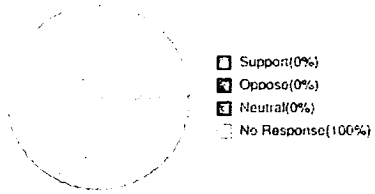
Another disincentive for the City's counting more accessory units, so that we don't need over-densification, has been fire sprinkler requirements. State Fire Code is clear that fire sprinklers SHALL NOT be required for additions or remodels to existing one or two family homes, except in high fire zones.

Encinitas code says that our Fire Marshal MAY require fire sprinklers. That MAY makes our local law discretionary. State law forbids discretionary permitting for accessory units; these permits are to be administrative, only. Legally, the City should not be requiring fire sprinklers, which, again, is a further disincentive for people to come forward to count their units toward our updated housing element.

The City needs to make accessory unit reform and incentivization a priority, to allow low cost, streamlined permitting, encouraging citizens to come forward.

Agenda Item: eComments for ADJOURNMENT

Overall Sentiment



Lynn Marr
Location:
Submitted At: 1:28pm 02-05-17

One thing I wanted to drive home: any coastal mobility/affordability public works development plans or policies should be considered as a whole overlay. Safe routes to school and a separated bike/ped lane railtrail corridor, through Leucadia, must be planned, engineered, and reviewed through an EIR concurrently with any new or improved RR Crossings, and any N101 Streetscape plans. According to Coastal Act Law, a comprehensive EIR for our transportation corridor along Coast Highway 101 is required. Piecemeal development to avoid an over-reaching EIR is disallowed.

The majority of voters oppose over densification, but favor more incentives for counting and creating new accessory units, including utilizing tiny homes. Thanks for your consideration.

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, February 07, 2017 10:06 AM
To: Melody Colombo
Subject: FW: Measure T, at home in encintas, housing element etc...

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

-----Original Message-----
From: S. Graydon Carter [mailto:pbilliege@msn.com]
Sent: Tuesday, February 07, 2017 9:47 AM
To: Karen Brust; Planning; Council Members; Samantha Morrow; Kathy Hollywood; Brandi Lewis; Glenn Sabine
Subject: Measure T, at home in encintas, housing element etc...

Hello,

Was just informed of the fact that the City of San Marcos has found that "mixed use" life style is not working. In fact they are going back to review the pre planning of this type of life style for its city. This is the most recent example of "mix use" (high density commercial/residential life style) type of neighborhoods not being received favorable nor useful for a suburban community and its citizens.

The City of Encinitas up zoning, morphing, creation of a commercial party zone and continued attempts of changing our long established residential neighborhoods by increasing the density and use will contribute to these long established desirable residential communities "demise". Taking long established single purpose commercial use properties and turning them into multi use directly affects the personality, charm and long established way of life within these residential communities. Prop A clearly states that "these more restrictive measures shall apply". But yet our city staff supports underground stories and lofts as not a story. Not following the citizens supported and voted on measures and Prop is not following the wishes of its citizens.

The City of San Marcos can support the fact that what looks good on paper does not work in practice. The theory of Mixuse commercial property is intended for an Urban life style not in a long established Suburban life style. If you go back to when our citizens who live in downtown old Encinitas in this type of building fought the morphing of one of its commercial uses into a late night bar (party zone contributor) that added or morphed into out door space as well. These residents fought to stop this without any support from our city. To this day you will find that most all of these residential residents are bitter for this defeat and lack of respect for their peaceful ,quite enjoyment of their homes. The words of preserving and protecting should mean just that. Preserving and protecting the morphing and changing of our city neighborhoods into high density, modern architecture buildings at the expense of the very thing these words represent "preserving and protecting our life style" are contrary to our citizens wishes. No on Measure T and yes on Prop A. The concept of "Home Rule" of the people, for the people and by the people.

Scott Carter

Leucadian

Brandi Lewis

From: drhfseldin@aol.com
Sent: Monday, February 06, 2017 9:46 AM
To: Council Members
Subject: Housing Element update

Dear Mayor Blakespear and Encinitas City Councilmembers:

I heard that the City will have a special meeting tonight to discuss the Housing Element update. I attended the City Council's forum last Wednesday. While I appreciate and agree with some of the concerns of the anti-T group that presented at the forum, I am concerned that if the Council moves ahead with what that group seems to want that the proposal will have new sites, each with a large number of high density units, which the majority of voters including me would reject. I've been attending various meetings and Council hearings on the Housing Element over past past more than 5 years, from when I served on the City's Environmental Commission. I hope that you will consider my thoughts in your deliberations.

Measure T failed in November, but the organized group who lead the No on T presentation at the forum didn't present an alternate plan that won. The "just say no" vote won. I didn't stay until the end of the forum, so maybe I missed it, but I don't think the anti-T group presented their alternative sites. The anti-T group clearly wanted new housing to not exceed the height limit of Prop A. But if the number of required new units is unchanged, where would those units go? An anti-T speaker also spoke against mixed-use development, and I don't think he made a good case for eliminating mixed-use zoning, just because of specific issues in two mixed use developments he cited. Again, if the plan eliminates all the mixed use housing, where will those units go?

During the City Council vote last year when the Council voted to put Measure T on the ballot, I recall one of the leaders of the anti-T group instead wanting a LOT of units of high density housing to go on a site that was not on the "environmentally superior plan" due to environmental concerns, among other issues. Although it was hard for me to tell which of the speakers reflected the organized anti-T group views, it seemed that the anti-T group wanted to put much of the required housing units in just a few locations, with many hundreds of units in each site, unlike the balanced spread of housing units in Measure T, which had new high density housing in all the Encinitas communities.

Looking at the votes on Measure T, and the spread, if just over 2000 voters had voted "yes" instead of "no," Measure T would have won. My concern is that if concessions are made to placate the organized anti-T group, the new measure could easily still fail. Some of those 2000 voters would vote no an anything that would mandate zoning changes and more housing. Some of the thousands of people (44% of voters) who voted Yes on Measure T would vote NO on a new plan proposed by the anti-T group.

I hope that the Council can work with the anti-T group but also with other residents with different views, so that the next iteration of the Housing Element doesn't also fail...or even worse if the voters pass a more flawed measure than T.

If there is a compromise, if there is wiggle room to lower some of the proposed heights to 30 feet, and still have enough units, I hope something can be worked out that doesn't make the situation worse.

Thank you for your consideration,

Harriet Seldin
Encinitas Resident

Helen Bourne
454 Requeza St., #301A
Encinitas 92024
760-487-1277
February 2, '17

Mayor and Council members
City of Encinitas

Dear Mayor Blakespear / Council Members,

I appreciate the informal community/council meeting of February first, and your efforts to create a housing element that will work for all of us. Very busy meeting, so I'm enclosing my comments for the record.

I agree with the presentation by the No on T group, and I feel it is most important to keep the original Prop A limits to 2 story, 30 foot maximum height. Developers should not be allowed to "opt out" of building ecologically appropriate, affordable units.

I also feel that square footage should be limited to 800 (not to exceed 1000) square feet on large residential developements, in order to build more homes while creating a beautiful community with mature vegetation (shade trees), walking paths, and garden space for residents. There is a demand for smaller to micro homes by people of all ages and diverse incomes. As adults, we need to prioritize the health and quality of life of our community, our planet, and the future generations. The economy will improve naturally as we begen to live more responsibly, taking no more than what we need. Outdated building codes must be changed.

Electric shuttles could be leased or owned by the city to provide much needed added transit. They could be recharged at city charging stations.

Thanks again for your work.

Helen Bourne

Brandi Lewis

From: Naimeh Tanha <naimeht@gmail.com>
Sent: Monday, February 06, 2017 4:18 PM
To: Catherine Blakespear; Council Members
Cc: Jim Gilliam; Karen Brust
Subject: Encinitas Housing Elements

Greetings,

I wish to thank you for allowing Encinitas residents such as myself to attend Last week's Housing Elements event and I am encouraged with your generous offer to take into consideration all the ideas which were presented that evening.

And while I had every intention to present few bullet points which I had put together, in the interest of time and to avoid redundancy I elected not to. The presentations in particular the one by Bruce and Sheila were constructive, informative, and thoughtful and I can see myself supporting it. Like many who spoke that evening, I also feel that tiny homes and accessory units offer us a great deal of possibilities. I just came across this article and thought it may be of interest to you. I love to see some young members of our community involved in these type of projects.

Tiny homes for flood victims

Majority of the points that I had on my list were presented that evening with the exception of the following:

- I would like for us to make every efforts not to lose our valued artists due to lack of affordable housing. Last year alone we lost several of great artists and when we lose artists we are in danger of losing much of what everyone loves about our community. I wish for us to partner with some of our very motivated artists to build tiny homes and or artists living and work Co-ops. There are many example which I am happy to forward to you if desired. This may involve City's active participation financially and operationally but ultimately offer grand rewards. This is not to say that we can not partner with developers.
- We could consider creating affordable housing for subgroups such seniors and artists together knowing that their transportation needs may be very different that others while offering shared studio space, dining area, child care, etc. I believe there are examples of these type of partnerships/living communities.
- Keep public art in the conversation as we talk about housing elements. It helps to keep our community desirable while employing local artists.

The task is monumental and may be overwhelming at times. Having had the pleasure of working with you in the past I know you will make the best decision. And as a member of Encinitas art community I do wish to convey our willingness to support and assist you however we can.

Thank you again and please feel free to contact me if I can be of any assistance.

Wam regards,

Naimeh Tanha Woodward
Arts Commissioner, City of Encinitas
President, Encinitas Friends of the Arts

HOUSING ELEMENT TASK FORCE/CITY COUNCIL MEETING

PUBLIC COMMENTS – NOVEMBER 8, 2017

PUBLIC COMMENTS:

- James C. (Lansing Companies) requested to include the 10.4 acre site off Manchester and Encinitas Blvd. – the site is shown in the Council Agenda Report on page 35 (Attachment 3) of the report.
- Glen Johnson expressed that a reasonable compromise has been proposed and full disclosure of sites considered.
- Bob Bonde emphasized the reliance of the ADU program to meet our housing needs as well as counting all existing assisted living units in the City.
- Darin Joffe stated he was an agrihood expert and advocate of Bob E. project.
- Lee Vance suggested keeping all 16 sites that were in Measure T. We need affordable housing for seniors.
- David Gaffney recommended keeping Randy Goodson's site as part of the Housing Element.

2017-11-08 ITEM 10A Comments

Melody Colombo

From: Kathy Hollywood
Sent: Wednesday, November 08, 2017 11:06 AM
To: Melody Colombo
Subject: FW: Fox Point Farms Agrihood Concept
Attachments: Site Plan_11x17.pdf; Fox Point Farms - Agrihood Concept Plan.pdf

For lobby – pertains to Housing Element and Marijuana items

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Bob Echter [mailto:bechter@drammechter.com]
Sent: Wednesday, November 08, 2017 10:46 AM
To: Council Members
Cc: bruce@ehlers-online.com; kg@pegsearch.com; Karen Brust; Kathy Hollywood; Brenda Wisneski; Diane Langager
Subject: Fox Point Farms Agrihood Concept

Dear Honorable Mayor and Council Members,

As you know, I am doing my very best to preserve my business and save the employees at my farm in Encinitas, while also trying to continue to make a positive economic impact in the City. As is evident by the fact that almost all the agricultural businesses that once existed in Encinitas have closed, it has taken massive effort and investment to just stay alive thus far. After 45 years in Encinitas, my business has made many product and market changes, and I am presenting you today with a concept that could potentially keep agriculture on my property.

The City and my business are at a particular juncture forcing both of us to make serious decisions. The City is currently engaged in an effort to meet the housing demands of the community and the requirements of the State of California. My business has been pursuing alternatives to our conventional agricultural business model, one of which is cannabis cultivation, as a means of increasing margins to get through the significant wage and overtime challenges we are faced with.

A new way that we might be able to mutually achieve our common goals is through development of an agrihood. An agrihood would provide the flexibility for my family to continue farming a significant portion of my property, while allowing for a unique way of meeting the City's housing needs that is rooted in agriculture. Attached please find our proposed concept plan. We are excited about the prospect of engaging in such an effort, and I am coming to you today to ask that you consider including my property as part of your Housing Element solution.

Sincerely,

Bob Echter
President
760-436-0188 ext 208
1150 Quail Gardens Drive
Encinitas CA 92024 USA

Fox Point Farms

Encinitas, CA

LEGEND

1. PRIMARY SITE ACCESS WITH ENTRY TRELLIS
2. FARMSTAND & POTENTIAL FARM STORE AND CAFE
3. GREENHOUSE
4. PARKING WITH OPTION FOR SOLAR CANOPIES
5. ORCHARD PASEO
6. EGRESS ONLY ACCESS
7. SECONDARY SERVICE ACCESS
8. PEDESTRIAN ACCESS ONLY
9. COMMUNITY COMMONS
10. COMMUNITY GARDENS
11. PATIO/ FARM TO TABLE DINNING AREA
12. COMMUNITY RECREATION CENTER
13. EVENT BARN
14. PLAY GARDEN
15. VERTICAL GARDENS ON BUILDINGS (TYPICAL)
16. SMALL ANIMAL PETTING AREA
17. FARM OPERATIONS/ POST HARVEST CENTER AND COMPOST AREA
18. STAGING AREA
19. CONNECTION TO EXISTING TRAIL SYSTEM
20. VINEYARD

RESIDENTIAL LEGEND

- A. SINGLE-FAMILY SMALL LOT HOMES WITH DETACHED GARAGE
- B. ZERO NET ENERGY TOWNHOMES OVER ARTIST STUDIOS
- C. ZERO NET ENERGY ROW TOWNHOMES WITH BALCONIES
- D. ZERO NET ENERGY FLATS

Agrihood Concept Plan

11.06.2017

DUDEK · SCHMIDT DESIGN GROUP, INC. · FARMER D CONSULTING · VILLAGE HABITAT DESIGN

Fox Point Farms

Encinitas, CA

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Agrihood Concept Plan

11.06.2017

DUDEK · Schmidt Design Group, Inc. · Farmer D Consulting · Leichtag Foundation · Village Habitat Design

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

November 7, 2017

Robert Echter
R.E.L.S., Inc.
1150 Quail Gardens Drive
Encinitas, CA 92024

Subject: ***Fox Point Farms – Agrihood Concept Plan***

Dear Mr. Echter,

Dudek understands that you are very interested in having your property (1150 Quail Gardens Drive) included as one of several Housing Element sites identified for high density/affordable housing in the City of Encinitas. While your property has not yet been identified as part of the Housing Element Task Force's site selection effort to date, Dudek believes that a strong argument can be made for its inclusion based on the lack of site constraints, location adjacent to a major roadway with access to utilities and existing services, development potential, and your willingness to convert a portion of your current agricultural operation to residential uses. All of these criteria meet or exceed The State Department of Housing and Community Development (HCD) requirements for inclusion as a Housing Element site.

Located at the northwest corner of Leucadia Boulevard and Quail Gardens Drive in the Leucadia neighborhood of the City of Encinitas, your approximately 20-acre property is an ideal location for an "agrihood" development. Like accessory dwelling units and multigenerational housing, the agrihood is an old idea made new again. The Urban Land Institute defines an agrihood as a single-family, multifamily, or mixed-use community built with a working farm as a focus. We understand that small-scale commercial farms, such as yours, struggle to compete with large scale industrial agriculture, and there is an opportunity to shift our urban farms from commercial production hubs toward a more community orientation. The agrihood concept provides a mechanism that allows for development-subsidized agriculture that is protected from the larger global economy, ensuring in perpetuity agriculture.

Agrihood Concept Plan Overview

In close coordination with Farmer D Consulting and Schmidt Design Group, Dudek has prepared an Agrihood Concept Plan for Fox Point Farms (Attachment 1). The plan pays homage to the

agricultural heritage of the site and the City of Encinitas by providing a roughly 50/50 split of residential and agricultural uses in a way that does not segregate either use, but rather encourages intermingling of the two uses in a way that is mutually beneficial. Developing communities in this way can support the growth of urban agriculture and promote a hyperlocal food system that provides Encinitas residents with locally-grown fresh and healthy food.

Source: KTGY

The concept plan has been developed in a way that is sensitive to the surrounding communities. Substantial buffers have been designed along the perimeter of the property, in the form of orchard paseos (on the west), vineyards (on the south), agricultural uses and parking (on the east), and organic farm fields (on the north). Edible paseos, vertical gardens, greenhouses, community gardens, an event barn, and vineyards are designed into the community and serve as an asset to residents while at the same time respecting the agricultural history of the site.

The bulk and scale of the concept plan is set back from the existing residential development to the west (Fox Point), and pedestrian connections have been made to allow surrounding residents access to the community's resources (farm stands, event garden, education garden, farm-to-table dining area, and trail access to the east via Quail Gardens). Views from Encinitas Ranch Golf Course are maintained by concentrating the development to the south of the site, leaving the northern portion for organic farm fields and programmed open spaces.

Local Agriculture

As mentioned previously (and detailed in Attachment 2), small-scale farms struggle to compete with large scale industrial agriculture, because they lack economies of scale and access to expensive equipment and technology. Development pressure drives up land costs, pushing farms further and further away from their markets. This results in higher transportation costs and lack of connectivity to the consumer. A high percentage of consumer profits are captured by middle men such as distributors, processors and retailers. Trends are moving in the direction of more competition in the distribution channel with companies such as Amazon buying Whole Foods that will likely drive down the price farmers are paid for their products.

Community farms are provide a solution. Growing food, plants, and other crops that serve the

immediate community and provide opportunities for education, events, and agritourism is the type of agriculture we need in Encinitas. There is tremendous value that agriculture can bring in the form of open space, engagement and education while fostering a thriving local food system that improves the health and economic well-being of communities. These community farms can also provide a platform to educate consumers about the complex issues in agriculture and our food system.

Housing and Site Design

Source: KTGY

In keeping with the "Residential Infill (Medium to Large Sites)" neighborhood prototype defined as part of the public outreach program for At Home in Encinitas, this prototype incorporates multi-family of larger scale with single-family attached as the site transitions into the existing single-family. A variety of dense housing types allow for diversity in unit size and income.

The concept plan includes the following housing types (see Attachment 1 for graphic representation):

- Single-family small lot homes with detached garage
- Zero Net Energy Townhomes over artist studios
- Zero Net Energy Row Townhomes with balconies
- Zero Net Energy Flats

The concept plan has been designed at a pedestrian scale, encouraging residents to walk along edible paseos in their front yard rather than driving straight into their garages. Townhomes and single-family small lot homes are all alley-loaded, such that these homes front onto pedestrian walkways or into the main courtyard, overlooking community gardens and the community recreation area. All surface parking areas are located along the edges of the site, giving the plan a "car-less" feel once you are home.

At this concept level, densities are proposed in the range of 20 to 30 units per acre on the approximately 10 acres of land designated for residential uses. The ultimate unit count will be dependent upon how the City and the Housing Element Task Force decide to structure the development standards in the Housing Element.

Proximity to Community Resources

The site is within walking/biking distance to Capri Elementary School (0.75 miles), shopping centers on El Camino Real (0.75 miles), Paul Ecke Sports Park and the YMCA (0.85 miles), and is 0.7 miles from the Leucadia Boulevard/Interstate 5 interchange. Transit stops are located on Leucadia Boulevard immediately adjacent to the site, providing residents with an affordable means of transportation to these community resources and jobs. Indian Head Canyon, a community resource for open space and trails, is located immediately north of the property.

Commitments

Source: KTGY

The property is zoned for agricultural uses, and we understand based on past experience there is always an expectation that agricultural-zoned land should remain as agriculture in perpetuity. However, as local agriculture faces greater challenges in the global market, the long-term feasibility of any agriculture depends on finding creative solutions. The agrihood concept is one such solution, and definitely the most appropriate solution for this site. Based on our discussions, Dudek understands that you are committed to ensuring in perpetuity agricultural use of approximately 50 percent of the site, and are willing enter into such an agreement if the City is so inclined. As part of this, any future development of the site would be conditioned to structure a program whereby the agricultural uses are partially subsidized through the HOA, or other mechanism, in perpetuity. You will also limit the residential development of the site at 250 units, as a message to the public that you are committed to this conceptual site design and are not interested in allowing outside interests to sacrifice the integrity of this proposal.

Robert Echter
Subject: Fox Point Farms – Agrihood Concept Plan

Summary

This concept plan exhibits a true agrihood concept. The site design is highly-amenitized, pedestrian-oriented, sustainable, and provides a mix of housing types, creating opportunities for attainably-priced housing for all income groups. In an era where traditional high-density housing tends to lack open space, amenities, and overall livability, this concept plan strives to serve as an innovative example for other cities to follow. In addition to serving as a benefit to the community, inclusion of the property would assist the City in developing an HCD-compliant Housing Element, while maintaining the historical integrity of Encinitas as a City committed to agriculture.

Please contact me if you have any questions.

Sincerely,

Brian Grover, AICP
Development Services

cc: *Sean Kilkenny, Dudek*
Daron Joffe, Farmer D Consulting
Jennifer Montgomery, Schmidt Design Group

Attachments: *Attachment 1 – Fox Point Farms Agrihood Concept Plan*
Attachment 2 – Farmer D Consulting, Fox Point Farms Agrihood Concept

ATTACHMENT 1

Fox Point Farms

Encinitas, CA

LEGEND

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Agrihood Concept Plan

11.06.2017

DUDEK · Summit Design Group, Inc. · Farmer D Consulting · Leighton Foundation · Village Habitat Design

Fox Point Farms

Encinitas, CA

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Agrihood Concept Plan

11.06.2017

DUDEK

SCHMIDT DESIGN GROUP, INC.

FARMER D CONSULTING

LEIGHTAS FOUNDATION

VILLAGE HABITAT DESIGN

ATTACHMENT 2

TO: BOB ECHTER, R.E.L.S., INC.

FROM: DARON JOFFE, FARMER D CONSULTING

CC: BRIAN GROVER, DUDEK

SUBJECT: FOX POINT FARMS AGRIHOOD

DATE: NOVEMBER 7, 2017

FOX POINT FARMS AGRIHOOD CONCEPT

The purpose of this memorandum is to present to the City of Encinitas the unique opportunity to create one of the first agrihoods in San Diego County. The site is the 20-acre Fox Point Farms, at the NW corner of Leucadia Boulevard and Quail Gardens Drive in the City of Encinitas. The site is zoned for agriculture; however, as part of the City's Housing Element Update, an exceptional opportunity has been identified to possibly rezone the property, while ensuring preservation of the agricultural uses onsite at the same time, through the development of an agrihood project. The intent is to design a 50/50 split of residential/agricultural uses on the site in a way that does not segregate either use, but rather encourages intermingling of the two uses in a way that is mutually beneficial. The site has approximately 19 acres of developable space and the initial concept consists of 9.5 acres of real estate and 9.5 acres of urban agriculture. Developing communities in this way can support the growth of urban agriculture and promote a hyperlocal food system that provides society with locally grown fresh and healthy food.

Challenges in Agriculture Today

In general, agriculture faces more challenges in today's global economy compared to other industries, which is exacerbated when farms are located in areas with high land, labor and water costs. Farming is inherently difficult and farmers face more uncertainty than other fields due to increasing challenges with unpredictable weather, pests, disease, and markets. These issues cause many farmers to go out of business and to be forced to sell.

Rising water costs and decreasing water quality are making it more expensive and difficult to farm. In general, the challenging regulatory environment including increased stormwater and strict permitting regulations make it very difficult and expensive to make critical improvements or changes to existing and new infrastructure.

While most agricultural jobs in California are low-paid farm laborers, there are high labor costs and strict labor laws associated with farming, in addition to a lack of affordable housing for farm workers. It is very difficult to find skilled labor with the average age of farmers being over the age of 60. As one of the most injury prone industries, agriculture presents very high insurance rates, especially for workers compensation.

There is also increased risk and regulations around food safety and post-harvest handling. Organic farmers face strict regulations and protocols for organic certification. In organic agriculture, there are increased pressures from insects, disease, pests and disease and more labor is required to maintain ecological homeostasis without the use of herbicides and pesticides. There is a low consumer tolerance for any but perfect produce and local farmers compete with other countries whom have the advantage of much lower labor costs and fewer regulations.

Small scale farms struggle to compete with large scale industrial agriculture, as they lack economies of scale and access to expensive equipment and technology. Development pressure drives up land costs, pushing farms

further and further away from their markets. This results in higher transportation costs and lack of connectivity to the consumer.

A high percentage of consumer profits are captured by middle men such as distributors, processors and retailers. Trends are moving in the direction of more competition in the distribution channel with companies such as Amazon buying Whole Foods that will likely drive down the price farmers are paid for their products.

Commercial farms operating in urban and suburban areas require large trucks for moving goods, which creates a tension between commercial and pedestrian traffic. Smaller scale community farms can be integrated into urban and suburban environments that support both the farmer, consumer and community as a whole.

Community Farms

There is a wonderful opportunity to shift our urban farms from commercial production hubs alone to a balance of less commercial and more community orientation. Growing food, plants and other crops that serve the immediate community and provide opportunities for education, events and agritourism is a much more complementary kind of agriculture for a community like Encinitas.

There is tremendous value that agriculture can bring in the form of open space, engagement and education while fostering a thriving local food system that improves the health and economic well-being of communities. These community farms can also provide a platform to educate consumers about the complex issues in agriculture and our food system. However, community farming has many of the same challenges as commercial farming, but is often less profitable. Challenges that community farmers face include competition for land use and that small farms can't take advantage of economies of scale due to small sizes of farms in urban areas.

Urban community farms rely on community support in the following ways:

- Community Supported Agriculture (CSA)
- Farm stand
- Agritourism
- Education and Events
- Volunteers and charitable support

Community farms are much more diversified in the variety of crops they grow. They often combine multiple farming systems like a vegetable, herb and flower gardens, animals, orchards and food forests, and vineyards. They are welcoming and in fact rely on visitors whereas commercial production farms are not places for public engagement. Community farms bring great value in serving as an urban oasis for ecological diversity, fresh local food, education for all ages and also preserve agriculture where people live.

Unique opportunity to be one of the first Agrihoods in San Diego County

Encinitas has the unique opportunity to create one of the first agrihoods in San Diego County, which can be a model to be followed by other agricultural property owners to ensure preservation of a portion of their agricultural uses in perpetuity. Like accessory dwelling units and multigenerational housing, the agrihood is an old idea made new again. The Urban Land Institute has identified over 200 agrihoods across the country and defines an agrihood as a single-family, multifamily, or mixed-use community built with a working farm as a focus. In their report "Cultivating Development: Trends and Opportunities at the Intersection of Food and Real Estate," they state:

"Real estate decision makers – developers, owners, property managers, designers, investors, and public officials – are increasing collaborating with an array of partners to leverage growing consumer interest in food. Partnerships with chefs, farmers, universities, private foundations, nonprofit organizations, and public health officials are supporting the creation of food-centric development projects that lead to multiple wins, including improved health outcomes, reduced pollution, and enhanced financial advantages for developers."

Agrihood residents can participate in all kinds of farm activities, including growing and harvesting produce under the tutelage of experienced farmers; buying shares in a community-supported agriculture (CSA) program, which ensures a steady supply of fresh and local produce to a homeowner's table every week; attending cooking classes and demonstrations; and shopping at the farmer's market.

A well-managed farm program also engages homeowners on a deeper level: their children's future. Kids learn about growing and preparing their own food, enriching soil fertility, and the importance of birds and insects in the food chain.

Fox Point Agrihood Design Program

Urban agricultural land set aside in relationship to integrated agricultural areas in urban spaces

Generally speaking, agricultural development as a percentage of a real estate project is thought of in terms of being maintained in perpetuity. For example, if X acres are committed to agriculture, then usually a substantive amount of that land is protected into the future and that is what is regarded as "set aside" for protected agriculture. Within that scope, a limited amount can be placed in the urban spaces between buildings and it is more for small scale applications and building character, which is more for perennials than annual production.

Agriculture managed in urban spaces is difficult to maintain in perpetuity, as those urban space uses will change over time as residents come and go, HOA's changes in composition, etc. Only limited amounts of area can be located for urban agriculture within urban spaces as there are other competing green space needs for gathering areas, greens, etc. Finally, the agriculture within urban spaces may require different ongoing management than the farmer working on the main farm area.

A rule of thumb for working out the amount of agricultural area within an agrihood would be a minimum of ag area represented within the urban spaces (ideally connecting to the farm), limited area on the periphery (integrating the surrounding neighborhood areas to the farm) and the vast majority as contiguous, protected land for the farm. In the case of Fox Point Farms, the breakdown of 9.85 acres consists of 7.5 acres in the contiguous farm area, 2 acres on the peripheral area in orchards, vineyards and other perennials and 0.35 acres within the urban spaces. Using this rule of thumb, the project proposes the following uses:

Uses within 7.5 acre contiguous farm area

- Event Green
- Event Barn
- Operations center/post harvest center
- Back of house/services/equipment storage, etc.
- Small animal area
- Farm fields- annual production
- Education gardens
- Greenhouses/hoop houses
- Pond - surface water and water storage areas
- Wildlife areas/pollinator gardens, nut trees

Uses within 2 acre peripheral perennial area

- Orchards
- Vineyards
- Wildlife areas/pollinator gardens, nut trees

Gardens/Perennials within urban spaces - 0.35 acres

- Trellis grapes
- Vertical landscaping
- Kitchen gardens
- Community gardens
- Edible landscaping

Farm Character

The open farm areas adjacent to the real estate development are what give it its farm character (looking out over the farm). And since it is community agriculture, the farm open area is designed to be broken up into a number of pieces that residents can immerse themselves into (the farm becomes a bit of a village in that sense - where the community can immerse and have a number of different rich experiences with berries, flowers, pollinator gardens, orchard boscs,, trellised grapes, pavilions..... not just production fields).

Farm Markets

Food grown and produced on the farm is for a CSA program designed for resident and surrounding neighbors, farm stand/store/cafe, clubhouse dining and value-added goods.

Pedestrian/Car relationship

Success is more immanent within an agrihood when there are no streets/parking to cross between the majority of the homes and the farm aspects using alley loaded homes and edge parking lots.

Water/Irrigation

Buying water is expensive for irrigation and particularly during droughts - better to supplement with surface rainwater collection and by well water when applicable.

Case for Rezoning

We are moving from a single use, industrial model of agricultural operations to a community-oriented agricultural model that will preserve 1/2 the land for agriculture, offer fresh produce and food products to the surrounding neighborhood as well as unending opportunities for education, events, etc. The project would respect and preserve the agricultural heritage of Encinitas, while also providing for a mix of housing types to meet the needs of all Encinitas residents.

HOUSING ELEMENT TASK FORCE/CITY COUNCIL MEETING

PUBLIC COMMENTS – DECEMBER 16, 2017

PUBLIC COMMENTS:

- Richard – Spoke about L-7 site. Concerned with traffic and other impacts to the neighborhood.
- Jim – Resident of Quail Gardens Drive. Spoke about L-7 site and the need for Council to be responsible with their decision.
- Kathleen – Upset with all the different uses that have been proposed for the L-7 site.
- Glen J - Stated that L-7 and Ecther properties are not appropriate sites. Consider Sunshine Gardens site and sites across from CVS.
- Helmet – Resident. Focus on accessory dwelling units and greenhouse sites.
- Damien M – Suggested the Council add sites for Cannon property owner.
- Ruben F – Sites should be distributed evenly across all communities.
- Peter S – Anyone who has a site proposed near them will be a "NIMBY". Santa Fe Plaza must be removed because it was mandated by the State.
- Bob E – Explained that his proposed agrihood would not build more than 250 units.
- Fox Point Resident – Supports the agrihood concept with conditions related to the surrounding neighborhood.
- Mike A – Expressed concern about the County burn site.
- Dennis C – Explained that BMW and Ford need the space leased at the County burn site.
- Sheila C – Look at other sites, tax credits, change NCTD routes if needed. She further went on to comment on all the other sites being considered.
- Sue R – Community Housing Works. Provided a presentation on the importance of affordable housing.

EXHIBIT "A"

PASCO LARET SUITER & ASSOCIATES PH. 858.259.8212 | PLSAENGINEERING.COM	SCALE = 1" = 150'	N W E S	EXHIBIT SHEET 1 OF 1

PASCO LARET SUITER
& ASSOCIATES
CIVIL ENGINEERING + LAND PLANNING + LAND SURVEYING

December 15, 2017

Diane Langager, Principal Planner
City of Encinitas
505 South Vulcan Avenue
Encinitas, CA 92024

RE: Housing Element Site Consideration for 105 South Rancho Santa Fe Road (APN 259-221-57)

Dear Diane,

I am writing on behalf of the owners of the above referenced 4.75 gross acre parcel (Exhibit A) to request that the parcel be included in the Housing Element Task Force analysis of "sites under consideration".

In addition to an owner who is interested in the development of their property, the site is currently 100% vacant, contains no protected biological resources and is characterized by gentle topography all of which are conducive to higher density development. We believe that these characteristics make it an ideal candidate for inclusion into the proposed Housing Element to help insure that the City can achieve State certification.

Although the parcel appears to have been omitted from the Kimley-Horn analysis of vacant parcels, below is a table with the relevant property information to assist you with your review:

Address	105 South Rancho Santa Fe Road
APN	259-221-57
Zoning	RR-2
Gross Size/Net Size*	4.75 AC/3.66 AC
Gross Unit Yield/Net Unit Yield	142 DU/110 DU
Notes	Interested Owner Not Included in EIR

- Net acreage was calculated using "0.77 method" described in Kimley-Horn study.

Thank you for your consideration and please do not hesitate to contact me with any questions or requests for additional information.

Sincerely,

W. Justin Suiter, PE
President

535 N Highway 101, Ste A Solana Beach, California 92075
27127 Calle Arroyo, Ste 1904 San Juan Capistrano, California 92675
plsaengineering.com

rec'd @ mtg 12/16/17

Parcel Descriptive Information					GROSS YIELD	
Parcel Name	APN	Zoning	City Neighborhood	Parcel Type	20 DU/AC	25 DU/AC
Manchester Ave Sites	2612003700	Residential 11	Cardiff	Underutilized	11	14
	2612003800	Residential 11	Cardiff	Underutilized	10	12
	2612003900	Residential 11	Cardiff	Underutilized	13	16
Greek Church Site	2611506100	Rural Residential 1	Cardiff	Underutilized	47	59
	2611506400	Rural Residential 1	Cardiff	Underutilized	50	62
Cannon Property (Piraeus Site)	2541440100	Rural Residential 2	Leucadia	Vacant	139	173
Highway 101 Sites	2540545500	Com/Res Mixed 1 (N101SP)	Leucadia	Developed	14	18
	2540546400	Com/Res Mixed 1 (N101SP)	Leucadia	Developed	12	15
	2540547600	Com/Res Mixed 1 (N101SP)	Leucadia	Developed	0	0
	2540547700	Com/Res Mixed 1 (N101SP)	Leucadia	Developed	17	21
	2540547800	Com/Res Mixed 1 (N101SP)	Leucadia	Developed	28	35
Echter Property	2546121200	ER-Agricultural	Leucadia	Underutilized	430	537
L-7 Site	2570111700	Rural Residential 1	Leucadia	Vacant	152	190
Armstrong Site	2574702400	General Commercial	New Encinitas	Vacant	38	48
County Burn Site	2591213600	Public/Semi-Public	New Encinitas	Underutilized	42	52
	2591213700	Public/Semi-Public	New Encinitas	Underutilized	208	260
Encinitas Blvd &	2581111600	Office Professional	Old Encinitas	Vacant	44	56
Quail Gardens Sites	2581303400	Office Professional	Old Encinitas	Underutilized	20	26
	2581304500	Office Professional	Old Encinitas	Vacant	8	9
	2581308100	Office Professional	Old Encinitas	Vacant	26	33
Sunshine Gardens Site	2581309700	Office Professional	Old Encinitas	Developed	41	51
	2581309800	Office Professional	Old Encinitas	Developed	27	34
7-11 Center and	2592311700	Local Commercial	Olivenhain	Developed	18	23
Surrounding Sites	2592315100	Local Commercial	Olivenhain	Developed	19	24
	2592316300	Local Commercial	Olivenhain	Developed	36	45
	2592316400	Local Commercial	Olivenhain	Developed	24	29
	2592317800	Local Commercial	Olivenhain	Developed	12	15
	2592317900	Local Commercial	Olivenhain	Developed	13	16
Rancho Santa Fe Sites	2592312800	Rural Residential 2	Olivenhain	Developed	78	97
(Gaffney/Goodsen)	2592313000	Rural Residential 2	Olivenhain	Developed	11	14
	2592313100	Rural Residential 2	Olivenhain	Developed	9	12
	2592313200	Rural Residential 2	Olivenhain	Vacant	35	44
Coassin/Lansing Site	2592002600	Rural Residential 1	Olivenhain	Vacant	209	261
ADDITIONAL PARCEL(S):						
Strawberry Fields Site	2612100100	Rural Residential 2	Cardiff	Vacant	338	423

Reed @ mtg 12/16/17

Melody Colombo

CITY OF ENCINITAS
CITY CLERK
2017 DEC 13 PM 3:06

From: Kathy Hollywood
Sent: Wednesday, December 13, 2017 2:08 PM
To: Melody Colombo
Subject: FW: encinitas.granicus.com/GeneratedAgendaViewer.php?view_id=7&event_id=1434

For Saturday's meeting

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Catherine Blakespear
Sent: Tuesday, December 12, 2017 11:59 AM
To: Eli Sanchez
Cc: Council Members; Kathy Hollywood
Subject: Re: encinitas.granicus.com/GeneratedAgendaViewer.php?view_id=7&event_id=1434

Dear Eli,

I don't think there is any convenient time for a City Council meeting. Certainly Saturday morning is as disruptive for the City Council members, staff, attorneys and consultants as it is for others because we all have families and holiday plans too. I periodically hear complaints about our standard 6 p.m. on Wednesday meeting time because it's during the commuting hour, or during dinner time for families or interferes with sports. Carlsbad has some City Council meetings during the morning hours and they are criticized for having it during the time citizens work.

I think in the larger scheme of things, fewer people work on the weekends and varying the times of meetings allows more people to participate, for example someone who can never make Wednesday evenings because of some standing commitment or childcare responsibility. The Saturday morning meeting will allow the City Council and the residents to focus exclusively on one topic for four hours, and to have the remainder of the day available. We have been having housing meetings routinely for many months in the evening hours and if this Saturday doesn't work for your schedule there will be other opportunities to participate. You can also submit comments online using our E-comment system or by writing directly to the City Councilmembers or by scheduling appointments. We make every effort to be available to receive citizen feedback.

Best regards,
Catherine Blakespear
Encinitas Mayor

Shelley Wecker

From: Dennis Cook <dcook@cookvw.com>
Sent: Monday, December 11, 2017 10:24 AM
To: Council Members

I would ask that the council NOT include the old dump site, where we store cars,in the housing plan. We would not be able to function and I believe Encinitas Ford is in the same position . The idea that we move to the old dump site off of Encinitas Blvd. makes no sense.It should be the other way around. Use the dump site for the housing plan and leave the burn site alone
Dennis Cook
Herman Cook Volkswagen

Shelley Wecker

From: Alec Jolly <alecjoll@pacbell.net>
Sent: Sunday, December 10, 2017 1:25 PM
To: Tony Kranz; Karen Brust
Cc: Council Members
Subject: About at grade crossings

Dear Tony Kranz, Karen Brust, and the Encinitas City council

As a citizen of Encinitas I'm writing to you in favor of support for at grade crossings. Since I lived here my whole life and always enjoyed going to either surf or just to swim in the water I have some ideas for maybe how you could push for at grade crossings.

This sounds like more of a last ditch sort of effort of an idea but maybe its possible to get more support for at grade crossings if there was some addition of low income housing in the housing plan for Encinitas that could convince some of the members of SANDAG to go along. I was just mostly surprised to hear about the building of an underground crosswalk at the south side of the lagoon, almost in Solana Beach, as well as the planned crossing for Chesterfield from an article in the Encinitas Advocate. I hope SANDAG hasn't forgotten that Encinitas, Carlsbad, Oceanside, and Del Mar are all facing access of beach problems because of the nature of the double tracking project. Both underground and overhead crossings are not ideal because of problems associated with the way the crossings would be vandalized by graffiti as well as the way, ironically, they would be a place for the homeless to sleep. Maybe then it would be better if SANDAG would position money for homelessness for Encinitas and in turn free up our own money within the city to focus for paying at grade crossings. Overall, I hope there is some future for Encinitas and the preservation of our community as well as expansion of the rail line through under grounding and the leasing of the above ground railroad property in the long term. Thank you for listening. Keep up all that your doing.

Sincerely,

Alec Jolly

HOUSING ELEMENT TASK FORCE/CITY COUNCIL MEETING

PUBLIC COMMENTS – JANUARY 10, 2017

PUBLIC COMMENTS:

- Glenn J. – Does not support sites on El Camino Real. Concern with loss of commercial amenities.
- Nikki C. – Requested Council keep the Greek Church site as a Housing Element site.
- Austin D. – Explained a number of reasons to support the Fox Point agri-hood site.
- Damien M. – Proposed use of L-7 site, has funding and Community Housing Works on board.
- Doug G. – Supports Damien M. proposal, which includes easement over Damien's site on Manchester Ave.
- Sue (Community Housing Works) – Explained the benefit of a project at L-7 site.
- Susan T. – Asked for an explanation for why 1600 units was being considered.
- Robert D. – Peppertree Ln. resident concerned with proposed sites above the 7-11 sites. Too much density.
- Barry – Wants to ensure if Bob E. site is selected, no cannabis cultivation would be permitted.
- Bob E. – Recommended his site and project be included in the Housing Element.
- Steven – Olivenhain resident that does not support the proposed density in Olivenhain.
- Greg Lansing – Requested his clients site be reconsidered for inclusion in the Housing Element.
- Carris R. – Stated reasons for supporting the Fox Point site as Housing Element site.
- Tosh – Supporter of the Fox Point site.
- Sandra H. – No show to speak.
- Molina – Supporter of the Fox Point site.
- Brian G. – Explained the rationale and support for the Fox Point site. Stated it meets HCD requirements.
- Shelia C. – Support Fox Point site and suggested all long lease sites should be off the table.
- Angelica – Does not support Fox Point site. Concerned about impacts and cannabis
- Christina – Not in support of Fox Point site.
- Jackie – Asked what is perpetuity? No access to Sidona for Fox Point agri-hood project.

Item #10 B 1/10/18
City Council Mtg

DRAMM& ECHTER™

Robert J. Echter
1150 Quail Gardens Drive, Encinitas, CA 92023
(760) 436-0188, ext. 208 bechter@drammechter.com

Good evening Mayor, Council members, and Task Force members,

My name is Bob Echter and I am the owner of the Fox Point Farms property at 1150 Quail Gardens Drive. I am here asking that you reconsider my property for inclusion in your Housing Element Update.

I would like to take this opportunity to reinforce my commitment to the agrihood concept that I presented to you at your November meeting, and again at your December meeting. I have a development team that is focused on maintaining the integrity of that vision, a team consisting of local residents who care deeply about our City and its history. I am not just an interested owner, I am a COMMITTED owner who is committed to making this project a reality. I am committed to providing affordable and workforce housing in our community, and we have proposed a project that achieves that goal in a unique and innovative way. In a way that resonates with members of our community, some of whom you'll be hearing from tonight. There are over 100 agrihoods throughout the country. We have the opportunity to bring one to Encinitas.

Tonight you are considering which sites to move forward with as part of a Housing Element Update. Sites that are expected to produce real, true, affordable and workforce housing – not just upzoning. As you review those other sites, please consider the possibility that some of those sites may not redevelop any time soon, or may redevelop but not to their expected unit yields due to constraints such as steep slopes. We are proposing a project with a realistic unit yield, no site constraints, and a

concept plan that has been vetted by the local community. We are ready to go. If you decide to include us, my team will be the first to call your Development Services Department and submit a project application.

Lastly, I want to reiterate that we have no intention of developing more than 250 units at Fox Point Farms, and we ask that the City enter into an agreement with us to that effect. As I stated back in December, we believe it is important that the City give accurate, realistic unit counts to the State for all of these Housing Element sites, and the unit count for our site should be 250 maximum.

Thank you for considering the vision that we have for the Fox Point Farms site.

Sincerely,

Bob Echter

Item 10B Comments

Melody Colombo

From: Kathy Hollywood
Sent: Wednesday, January 10, 2018 1:42 PM
To: Melody Colombo
Subject: FW: 10B Housing Element Task Force Discussion
Attachments: Housing Task Force.doc

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: donhcameron [mailto:donhcameron@cox.net]
Sent: Wednesday, January 10, 2018 1:35 PM
To: Council Members
Cc: Karen Brust; Kathy Hollywood
Subject: 10B Housing Element Task Force Discussion

I hope you all have the opportunity to review this e-mail and my comments and questions before tonight's meeting. I know that you have along day today.

Kathy, please make sure Glenn and Bruce; Barbara Kautz'' and the Consultant all receive a copy of this. I have Ehlers e-mail but not Glenn Grossclose or the others.

Thank you, Sheila

Housing Task Force – Meeting January 10, 2018

For the Record:

Mayor Blakespear
Deputy Mayor Kranz
City Council Members Muir, Boerner-Horvath, Mosca

As most of you are aware, I have attended many of the Housing Task Force and Joint Task Force and City Council meetings and I was part of organizing this Task Force so that citizens have a true voice in the Housing Element update. Since the December 16th meeting, I have given a lot of thought to where we are and where we seem to be going in this Housing Element quandary. In light of recent and new laws, AB 1397 and SB 166 – how do they reflect on the City's plans and process?

I am asking you to consider the following: AB1397, requires that housing element sites have a "realistic and demonstrated potential" for development within the planning period which is by 2021. Of the sites selected, three of them are already developed sites – The Highway 101 Sites, the Sunshine Gardens site, and the 7/ll Site in Olivenhain.

There are businesses operating within those sites that have long-term leases, for example On Highway 101 – Scott's Automotive and the Roadway Inn among others; in Sunshine Gardens – Betty's Pie Whole (a favorite of many locals); and at least 10 or more businesses in the 7/11 property in Olivenhain.

Do these businesses on these sites have Long Term Leases and how does "realistic and demonstrated potential" fit with absolute certainty with the AB1397 Law requirements? I think it is in our City's interest to determine what, if any, long term leases exist on those sites and the complications involved in extricating owners from those long term leases. I'm not sure what is legally involved. Can you please answer that?

Please consider the implications of rezoning these commercial uses and displacing the associated businesses. There may be a real inability to materialize into affordable housing within our planning period. If that isn't likely – will the HCD accept these sites in light of AB1397? It seems unrealistic to assume these sites have development potential to convert to housing in the next few years of this Housing Element cycle.
In the Staff report, several Measure T sites are being reconsidered for inclusion as Housing Element sites (Ralph's, Sprouts Sites, and LA Fitness site. These are some of the anchors of our commercial land in Encinitas. Are they going to upend their long term Leases for housing?

Are we going back to using Measure T again? Because mixed use is no longer the model for achieving low or very low income housing opportunities. I think your legal Counsel, Barbara Kautz, has stated that the City cannot rezone commercial centers for mixed use development anymore in light of the new State housing law. And in that same Coast

News article, Mayor Blakespear you were quoted as saying, "It's not just about zoning anymore…its about the production of affordable housing."

These commercial sites will not yield the necessary housing stock any time soon. Many of the other sites – the Armstrong Nursery site, the San Diego Credit Union – there is no indication of owner interest in selling their sites for housing; the Temple site and Sage site are almost entirely on steep slopes – hardly easy areas for development.

It would be too bad to lose so many economic generating sources when there are other sites much more suitable and readily available for housing. That's what left me scratching my head when I left the December 16th meeting.

This City has at least 3-5 sites readily available for development of low income and affordable housing, and for some a bit unclear reasons, the Council has chosen to dismiss them.

We own the empty 9.5 acres on Quail Gardens drive. Empty and we own it! What could be a better candidate? What are you thinking that our own land gets taken off the table? You don't have to decide to develop all of it. You can develop a portion of it for affordable and/or senior housing and make the rest of it a park – the reason a prior Council purchased the land in the first place.

The large empty parcel on the corner of Rancho Santa Fe Road and Encinitas Blvd. in Olivenhain – currently used for launching balloons; for pumpkin and Christmas tree sales. Isn't there is a willing seller there?

The property on the corner of Leucadia and Vulcan – last I knew it was for sale. It is a big piece of property. That whole corner connection is going to have to be reworked anyway, if the City puts the proposed Rail Trail on Vulcan Avenue, and at some point there will be houses built there. So, please consider that site.

And last but not least, the proposed Foxpoint site on the Bob Eckter property is a gift! I've looked over this proposed project very carefully. It is well planned and will be developed by a local citizen on property owned by a life long local nursery grower and resident. The map, the buffers, the "AgriHood" concept are visionary and doable. It offers 15% low/very low income housing and smaller affordable units between 800 and 1100 s.f. The location has easy access to a major crossroad, sidewalks, and a bus stop on the corner and most of all with 250 units it takes a big bite out of our commitment to build the 1600 target houses for our Housing element.

Please do the hard thing and make the obvious, expedient choices so that this Housing Element becomes a reality and not just constant planning.

I'd appreciate having my questions answered. I sent this to all of you earlier today, I hope you have taken the time to read it.

Sheila S. Cameron

Melody Colombo

From: Kathy Hollywood
Sent: Wednesday, January 10, 2018 3:49 PM
To: Melody Colombo; Diane Langager
Subject: FW: Regarding Fox Point Farms Agrihood Project

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Caitlin MacMillen [mailto:clcmacmillen@gmail.com]
Sent: Wednesday, January 10, 2018 3:27 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: Regarding Fox Point Farms Agrihood Project

Dear Mayor Blakespear and City Council,

I was raised in Encinitas and returned in 2016 as a resident physician with my husband and we plan to stay, raise our children here, and I intend to care for the community members of Encinitas as a full time Family Medicine physician. However, despite my husband working in consulting and I am as a physician there is no way we can afford to live here – we can barely afford the rent given high cost of living and burdens of student debt we carry from pursuing and self funding high education in the early 2000's. We currently are living with my parents weighing our options of staying vs moving to a more financially feasible city in California.

Once we moved to Encinitas for my job from the Bay Area we were immediately blow away at the access to a healthy lifestyle with easy walking and biking routes around town, incredible fresh food options provided at our Farmer's Markets, and the great sense of community we felt here. These are just a few of the many reasons that we support the Fox Point Farms Agrihood project. It would be progressive and incredible to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends and colleagues who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we want to invest in, and a project like Fox Point Farms Agrihood might actually be affordable enough to buy a home in.

An project like the Agrihood could solidify Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Please do not hesitate to contact me with any further questions

Best Regards,

Caitlin MacMillen

Melody Colombo

From: Kathy Hollywood
Sent: Wednesday, January 10, 2018 1:43 PM
To: Melody Colombo
Subject: FW: Item # (Fox Point Farms)

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: zach arreola [mailto:zacharreola@gmail.com]
Sent: Wednesday, January 10, 2018 12:13 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: RE: Item # (Fox Point Farms)

Dear Mayor Blakespear and City Council,

I'm a longtime Encinitas resident who also is privileged to work in Encinitas as a freelance graphic designer. I hope to one day raise my children here. However, I am very concerned about rising rents, and I have never been able to afford a home in my hometown. Housing prices are becoming even more unaffordable due to constrained supply and overwhelming demand to live in our beautiful city.

I love living in Encinitas because of the healthy lifestyle, food options like Farmer's Markets and amazing restaurants, and the ability to walk and bike comfortably around town. It's for all these reasons that I support the Fox Point Farms Agrihood project. It would be so great to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we would love to live in, and it might actually be affordable enough to buy a home there.

An agrihood could cement Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Sincerely,

Zach Arreola

--

Zach J. Arreola
M: 808.639.4590
E: zacharreola@gmail.com

@zacharreola

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Please consider the environment before printing this email.

Melody Colombo

From: Kathy Hollywood
Sent: Wednesday, January 10, 2018 11:38 AM
To: Melody Colombo
Subject: FW: Fox Point Farms

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Annika Walden [mailto:annikaw90@gmail.com]
Sent: Wednesday, January 10, 2018 11:37 AM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: Fox Point Farms

January 9, 2018

RE: Item # (Fox Point Farms)

Dear Mayor Blakespear and City Council,

I'm a longtime Encinitas resident who also is privileged to work in Encinitas as a Business Development Manager. I grew up here, went to school here, and hope to one day raise my children here. However, I am very concerned about rising rents, and I have never been able to afford a home in my hometown. Housing prices are becoming even more unaffordable due to constrained supply and overwhelming demand to live in our beautiful city.

I love living in Encinitas because of the healthy lifestyle, food options like Farmer's Markets and amazing restaurants, and the ability to walk and bike comfortably around town. It's for all these reasons that I support the

Fox Point Farms Agrihood project. It would be so great to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we would love to live in, and it might actually be affordable enough to buy a home there.

An agrihood could cement Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Sincerely,

Annika Walden

Shelley Wecker

From: Elena Thompson <elenathompson@cox.net>
Sent: Wednesday, January 10, 2018 10:44 AM
To: Council Members
Subject: 1-10-17 Item 10B. Housing Update Comment

Hello City Council, Mayor Blakespear and Staff,

I am not in favor of up-zoning beautiful and coveted Encinitas to meet the requirements of out of area politicians with socialist agendas; but since we have to, and in order to comply with State Law, matters of over-population, and get nasty lawsuits off our plate, I support your good faith efforts to get this important business done tonight.

Please know:
-I support the Dramm Echter Fox Point Farms project in your Housing Element update. This is a practical, far better option than a Cannabis farm in our town and will be an award-winning agricultural community, once finished.
-I support maps that will put housing near bus lines and major roads versus tucked inside quiet neighborhoods far from transit corridors without bike and ped infrastructure.
-I support stacking housing on top of existing commercial centers along El Camino Real. This is where the jobs are.
-I support traffic impact fees to be properly collected and spent for sufficient infrastructure to be built as on off-set for higher densities, as our town is sorely lacking proper infrastructure for safe mobility today.
-I do not support any up-zoning/densification of the Highway 101/Vulcan corridor until which time the North Coast Highway 101 Streetscape is completed. This area is a long neglected former Highway/train zone without proper and safe infrastructure (sidewalks, bike lanes, parking, roads) and makes no sense to be adding any more development and people here, until which time all can be safely accommodated and the Streetscape is completed.

The City's budget is dependent on property taxes, so we need to get this right in order to protect what people cherish about Encinitas or they will re-locate. Thank you.

Regards,

Elena Thompson, "E.T.", Realtor

Seabreeze
COASTAL PROPERTIES

Phone: 760.822.3873
Cal BRE #01316803

Shelley Wecker

From: Dadla <dadla@cox.net>
Sent: Tuesday, January 09, 2018 4:20 PM
To: Council Members
Subject: PS on my AgriHood concept letter

Forgot to say, that the AgriHood development conceived at Fox Point Farms would be a wonderful way to put these ideas into action. Please pursue this and any such projects post haste.
Thank you.

****

Dadla Ponizil
Volunteer, Citizens' Climate Lobby
www.citizensclimatelobby.org
dadla@cox.net
760-815-1545
"Hope, in this deep and powerful sense, is not the same as joy that things are going well,
or willingness to invest in enterprises that are obviously heading for success,
but rather an ability to work for something because it is good."
-- Czech President Vaclav Havel
****

Shelley Wecker

From: WDavidson <wdavidson@davidsoncommunities.com>
Sent: Wednesday, January 10, 2018 9:35 AM
To: Council Members
Subject: Letter: Fox Point Farms
Attachments: Davidson Suppport Letter Fox Farms_180103.pdf

To whom it may concern,

Please find attached our letter regarding Fox Point Farms for your attention.

Thank you.

Sarah Bancroft for
William Davidson
President
Davidson Communities

DAVIDSON
COMMUNITIES

1302 CAMINO DEL MAR
DEL MAR, CALIFORNIA 92014
(858) 259-8500 FAX (858) 259-4644
www.davidsoncommunities.com

January 3, 2018

Encinitas City Council
505 S Vulcan Ave
Encinitas, CA 92024

Dear Mayor and Council,

As Davidson Communities begins our 40th year as a leader in building homes across Southern California, I wanted to take a minute to reflect on a truly unique and inspired plan recently presented to you and your Housing Element Task Force.

The Fox Point Farms "Agrihood" is exactly the type of project that homebuyers are yearning for. By integrating a unique design focused on sustainable food production combined with smaller homes affordable to teachers, young couples, and down-sizing seniors on fixed incomes, we believe the Agrihood will appeal across many markets currently underserved in coastal North County, especially Encinitas.

While we've earned a reputation as a premium home builder, Davidson Communities is proud of our history of building attached and detached multi-family homes. We believe this project integrates progressive product types that would yield an exceptional, attractive blend of homes. We would be excited to build a project like this, and we know that in Encinitas, it will be a tremendous success.

Our experience in development and construction has led us to understand that the economics of providing housing in Southern California almost entirely precludes projects like the Fox Point Farms Agrihood. However, we understand that by working with the current property owner, innovative site design and early communication with the neighboring community, the team behind the Agrihood has laid a solid foundation. The plan integrates agriculture, provides for employee housing at affordable levels to farm workers, and would assist the City with achieving a compliant Housing Element.

Davidson Communities has seen similar types of successful projects built throughout the country, and we believe this is an exciting proposal that respects the agricultural history of the property and the City of Encinitas, while also providing much needed (and State-mandated) housing. I urge you to please reconsider the Fox Point Farms Agrihood as part of the Housing Element Update.

Respectfully Submitted,

William A. Davidson
President

Shelley Wecker

From: Sandy Irwin <Irwins@cox.net>
Sent: Wednesday, January 10, 2018 7:51 AM
To: Council Members
Subject: Starlight Drive Update

January 9, 2018

Dear Mayor Blakespear and City Council Members,

As you know, your January 10 Consent Calendar includes a Mobility Update. One of the projects listed in the Update is the Starlight Drive path and gate to Encinitas Community Park that you approved on October 11, 2017. As part of that approval, you instructed staff to consult the neighbors regarding their preferences, including paving the road as an option ("design coordination with the residents"). At this point, only two of the seven households have been approached, but the project seems to be moving forward.

The Capital Improvements Projects List included with your Agenda Report states that the project's status is "reviewing the design to address field constraints." They are already reviewing the design, yet the majority of Starlight's residents' concerns have been ignored.

All other projects on the Capital Improvements Projects List that involve sidewalks, pedestrian ramps, bike lanes, etc., are on paved roads. Starlight's composition is unique, and it can't be addressed in the same way as more standard paved roads in the community. Starlight is not paved, not stable, and has no curbs. How long can a decomposed granite path last on this surface?

Clearly, we have a number of related concerns, some of which we include here:

- **Drainage and runoff** – Starlight's surface is not paved, and it has a history of muddy pooling and drainage issues during storms. Presumably, a walking path could add to these problems and should be addressed. Does your $66,000 budget include this type of drainage work?
- **Traffic** – A small, dead-end road like Starlight cannot handle the traffic that will be generated by parents dropping off their children for events at the park. Weekend traffic on Starlight has already increased dramatically, caused by people who think there is a park entrance there. Each car creates noise and many damage the already fragile road surface. How will the City prevent the inevitable traffic that comes with a park gate?

- **Safety** – Will the City assume responsibility if someone is injured while traveling on the path to the park?

- **Maintenance –** The IOD's that the City has decided to accept are for the road itself, which, it would seem, must include maintenance of the road. Starlight residents have not been assured that the City will follow through with this responsibility. Does the City's budget include this?

Moving forward with plans for the Starlight walking path and gate without addressing these and other concerns could cause problems for both the City and the residents of Starlight Drive. Please give them your consideration. Thank you.

Sincerely,

Sandy and Bob Irwin

1585 Starlight Drive

Cardiff, CA 92007

Shelley Wecker

From: Raylene Rhodes <raylenerhodes@aol.com>
Sent: Tuesday, January 09, 2018 5:57 PM
To: Council Members
Subject: Fox Point Farms agrihood

Dear Mayor Blakespear and Council Members,

I am writing to you today to give my support to a proposed plan by Brian Grover to create what is called an Agrihood and I hope it will gain your support as well.

Although I am not a native and have only lived here since 1980, I have seen this seaside village boom!
As a single mother I was never able to buy a house for myself in Encinitas but I would love to see my daughter and her husband have the opportunity to buy property in her hometown and raise a family here.

By approving the plan of Fox Point Farms it would place the city of Encinitas as a vanguard of new, creative housing and community planning. Do we really need more MacMansions or unimaginative tract developments?

The times they are a changing and we need to be at the forefront of that change. Old ways and outdated systems are on the way out. We need to think ahead for future generations and we can do this while preserving our unique heritage and character with functionality and style!

Encinitas is truly a magical and special place. Let's give her the ability to stay viable in this new and alternative future by including Fox Point Farms in your Housing Element update.

With Utmost Sincerity,
Raylene Rhodes
01/09/2018

Kathy Hollywood

From: Austin DeLana <delana.austin@gmail.com>
Sent: Tuesday, January 09, 2018 4:52 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: RE: Item #10B (Housing Element Update - Fox Point Farms)

Dear Mayor Blakespear and City Council Members,

This is a personal note in support of the proposed Fox Point Farms project that will be discussed during the City Council meeting on Wednesday, January 10, 2018.

I have been a resident and a renter in Encinitas for over 6 years. Fortunate enough to move here after graduating from college, I have built my life in this community and hope to continue doing so. Accomplishing this for any extended period of time in a feasible way requires me to purchase a home. Many of the single family homes in Encinitas require a higher price point than I can currently afford (the median home price for listed homes in Encinitas is approximately $1.4 million according to Zillow). The Fox Point Farms project provides a more affordable option to for me to pursue home ownership in two ways: 1) Increasing the supply of housing, therefore fundamentally lowering pricing. 2) Creating smaller housing options that would naturally require a lower price point for purchase.

Additionally, this project has the capacity to be an exemplary development that is innovative, intentional, and responsible. I studied urban planning and development in college, and I currently work in the real estate investment industry. The Fox Point Farms proposal is representative of a project that I always hoped to either work on or live in. This is not just a passive development that follows the traditional suburban development pattern. It will be an advantageous development that successfully revitalizes the space, takes into account surrounding uses, and honors the site's agricultural heritage. This represents a chance for Encinitas to incorporate an innovative site into its borders. It also affords our city the chance to be an example for the rest of San Diego County on how to responsibly and creatively develop real estate. I will be proud to have it be part of my community.

I strongly recommend that you include Fox Point Farms in the Housing Element update. It represents an innovative, responsible, and needed addition to the City of Encinitas.

Sincerely,

Austin DeLana
e: delana.austin@gmail.com
c: (310) 941-0655

Kathy Hollywood

From: Jackie Hall <hall.jackie@gmail.com>
Sent: Tuesday, January 09, 2018 4:01 PM
To: Council Members
Cc: Brenda Wisneski; Kathy Hollywood
Subject: RE: Item # (Fox Point Farms)

Dear Mayor Blakespear and City Council,

I am a lifelong Encinitas resident. I have been very fortunate to grow up in this beautiful place, go to school here and I hope to one day raise children here. My husband and I were recently married after 9+ years together. Despite the joy of this exciting time in our lives though, we have been struggling with very unsettling feelings. As we look to our future together it's becoming increasingly difficult to envision it in Encinitas. We have been living in a small, historic building from the 1920's in downtown Encinitas for the past 8 years. Sadly, the property is being developed and we are searching for a new home. Finding a new home is proving to be a very difficult and sobering experience. The rental market is extremely shallow and rental costs are ballooning to absurd rates. We are being gentrified right out of my own hometown and realize we may never be able to afford to buy a home in this city where we have so much history. Housing prices are continuing to become even more unaffordable due to constrained supply and an overwhelming demand to live in our beautiful city.

I recently learned about the Fox Point Farms project and became very excited. I am an extremely loyal farmers market customer. I walk to both the Encinitas and Leucadia markets each week, purchasing the majority of our food directly from local farmers and businesses. This routine helps us to eat healthier and allows us to have a more human, tangible and personal connection to our food and community. I also appreciate that this routine helps limit our contribution to the environmental impact of large scale farming and food transportation. Projects like Fox Point Farms are a great opportunity for fostering healthier relationships between people, food and the community.

I urge you to include Fox Point Farms in your Housing Element update. I believe it would honor our community's history of agriculture and is a smarter approach to urban development. It's exactly the kind of housing and progressive thinking that Encinitas needs.

Sincerely,

Jackie Hall

Kathy Hollywood

From: Carris Rhodes <carrisrhodes@gmail.com>
Sent: Tuesday, January 09, 2018 5:20 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: Support Letter- Fox Point Farms

Dear Mayor Blakespear and City Council,

I am writing to express my strong support for the Fox Point Farm projectl.

I'm a lifelong Encinitas resident who has had the privileged of working in Encinitas for 11 years in various roles and for various organizations. I currently work remotely in Encinitas but I had the distinct honor of working at the Encinitas Main Street Association and the Leucadia 101 Main Street association on various economic development initiatives, community events and on a variety of city advisory groups.

I grew up here, went to school here and hope to one day raise my children here and retire my mother here (fingers crossed!). My mother is a 35 year resident of Encinitas as well and if you do not own your home we have slim pickings for retirement.

We all know this, but housing prices are becoming even more unaffordable due to constrained supply and overwhelming demand to live in our beautiful city.

I have heard various council members over the last 5 years talk about their desire to see housing that fits in our community and I have specifically heard the term Agrihood discussed at council meetings as a gold standard for development in Encinitas. There is no better way than an agrihood to accommodate more affordable units and preserve our agricultural heritage.

As a former farmers market manager and the executive director of the organization responsible for the Leucadia Farmers Market I know that there is a thirst for connection to food and agriculture in our community.

I am extremely proud and protective of our agricultural heritage here in Encinitas and I think that there is no better way to preserve it than to incorporate agriculture into the way we design our public spaces and housing developments.

Although change is tough this project is perfect for our community. From what I have seen this project is thoughtful, inclusive and extremely well designed. It incorporates current facade elements of the property and will be cherished for years to come.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Thank you for your time in reading this and your careful consideration.

--
Carris Rhodes

Kathy Hollywood

From: Joshua Sherman <sherman.jms@gmail.com>
Sent: Tuesday, January 09, 2018 10:18 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: Fox Point Farm

Dear Mayor Blakespear and City Council,

I am writing to express my strong support for the Fox Point Farm project.

This is absolutely the right kind of project for our community. It's a great location for additional housing, and its vision aligns with our community character. Let Encinitas be a leader in mixing urban agriculture with additional housing.

I urge you to include Fox Point Farms in your Housing Element update.

Thank you for your time in reading this and your careful consideration.

-Joshua Sherman
166 Melrose Ave, Apt B
Encinitas CA 92024

Kathy Hollywood

From: Leslie Cruz <lfbc712@yahoo.com>
Sent: Tuesday, January 09, 2018 10:08 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: RE: Item # (Fox Point Farms)

Dear Mayor Blakespear and City Council,

I'm a longtime Encinitas resident who also is privileged to work in Encinitas as a Physical Therapist. I am very concerned about rising rents, and I have never been able to afford a home in this town. Housing prices are becoming even more unaffordable due to constrained supply and overwhelming demand to live in our beautiful city.

I love living in Encinitas because of the healthy lifestyle, food options like Farmer's Markets and amazing restaurants, and the ability to walk and bike comfortably around town. It's for all these reasons that I support the Fox Point Farms Agrihood project. It would be so great to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we would love to live in, and it might actually be affordable enough to buy a home there.

An agrihood could cement Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Sincerely,
Leslie Cruz

FOX POINT FARMS LETTERS OF SUPPORT

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, January 09, 2018 2:17 PM
To: Melody Colombo
Subject: FW: Item # (Fox Point Farms)

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Zanni [mailto:zannidavis@gmail.com]
Sent: Tuesday, January 09, 2018 2:14 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: RE: Item # (Fox Point Farms)

Dear Mayor Blakespear & City Council Members,

I love living in Encinitas because of the healthy lifestyle, food options like Farmer's Markets and amazing restaurants, and the ability to walk and bike comfortably around town. It's for all these reasons that I support the Fox Point Farms Agrihood project. It would be so great to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we would love to live in, and it might actually be affordable enough to buy a home there.

An agrihood could cement Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Sincerely,

Alexandra Miranda

448 Tzena Way, Encinitas, CA 92024

Shelley Wecker

From: Dadla <dadla@cox.net>
Sent: Tuesday, January 09, 2018 4:00 PM
To: Council Members
Cc: Judy Berlfein (Kocicka)
Subject: Agrihoods, an idea with merit

Importance: High

Dear Encinitas City Council members.
I'm taking your precious time (and mine) on this one: it's a powerful idea I've been advocating for since I became a green building contractor. The details need to be worked out, for sure, but here are my perceived benefits:

- affordable housing (not make believe, upper middle class housing, but places where our kids could afford to live.
- local food security--the green space to recreate and grow food locally is both joyful, smart, and healthy. There are also numerous green building benefits to this (lower heat island, less pollution into our waterways, etc.)
- Jobs--our designers, contractors and developers, as well as all the trades needed to keep this maintained are a job creation engine in a growing industry.
- and of course my favorite: the potential to build homes that are both beautiful on the outside and on the inside. (think comfort, indoor air quality, lower utility bills because of quality envelopes, passive solar design, etc.)

The risk areas to look at:

- how to make sure that this zoning does not become a developer's free-for-all. Seems to me that we could have a AgriHood Zone definition. Not that hard in concept.
- Things I have not thought of yet.

I could write a whole book about this idea. I've seen such developments in other countries, and some here. Check out these in the US:

http://www.villagehomesdavis.org/about This is my favorite because it incorporates energy saving and comfort promoting passive solar design from ground up. In a nutshell, it means the homes help to heat and cool themselves. Period. No moving parts. So mechanical heating and cooling is much smaller and more affordable. Think lower carbon emissions for our Climate Action Plan. In our climate, this should be our building standard 101.

http://www.gologic.us/architecture/residential-design/belfast-cohousing-ecovilliage-maine/ Judy and I visited this ecovillage in Maine. The great thing here is that the homes are all built to PassiveHaus standards (not same as Passive Solar). This is the best, most effective, most comprehensive building system in the world today.

Let me know if I can offer more guidance. This topic and its potential realization are dear to my heart.

Thank you for all your hard work keep our city moving in the best direction,
Dadla.

****
Dadla Ponizil

Volunteer, Citizens' Climate Lobby
www.citizensclimatelobby.org
dadla@cox.net
760-815-1545
"Hope, in this deep and powerful sense, is not the same as joy that things are going well,
or willingness to invest in enterprises that are obviously heading for success,
but rather an ability to work for something because it is good."
-- Czech President Vaclav Havel
****

Shelley Wecker

From: Nancy Hall <hall7331@roadrunner.com>
Sent: Tuesday, January 09, 2018 2:00 PM
To: Council Members
Subject: FoxPoint Farms

Hello, I have been very fortunate to live in Solana Beach 20 years then Cardiff 40 years. I raised three children in Cardiff. I was barely able to afford rent in the 1970's and 80's. I was able to buy a town home with help from family, but I had to give up the gardening that I had room for in the tiny old house I used to rent in Cardiff. That house was torn down and a Mansion was built on the lot, takes up the entire lot, no longer any food being grown there. I have read the Fox Point Farms Agrihood Concept Plan and I think it is a great idea . I feel it would be a responsible use of the land as long as the homes are affordable.

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, January 09, 2018 3:34 PM
To: Melody Colombo
Subject: FW: Fox Point Farms

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Philip Foster [mailto:pjofoster@gmail.com]
Sent: Tuesday, January 09, 2018 3:06 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: Fox Point Farms

RE: Item # (Fox Point Farms)

Dear Mayor Blakespear and City Council,

When we are asked the question these days, "Where is home?" or "Where would you like to call home?" – for me and so many other people that is an answer that I can not get out of my mouth fast enough - ENCINITAS!!!

I have lived in this community for 8 years, 8 very important and shaping years of my life. Of the 150,000 miles I used to travel for many of the years I called Encinitas home every single one of those times I had to leave was tougher than nails across a chalkboard. The bonus was that I knew that I was going to be coming home in a few days and time spent downtown, in the local restaurants, retail spaces – including the beach would recharge me. Not one of the thousands of places I visited both domestically and globally would even come close to comparing to this amazing slice of heaven, ENCINITAS!!!

Coming home knowing that my car is parked and I now have anything and everything I really need to live, at my fingertips is something so priceless that one can only experience by living here and not only living here, but putting roots in the ground – I am talking about a foundation, one that goes so much farther than just living here, one that is about investing in a community of people, businesses and everything this little gem has to offer.

Selfishly I want all of this for me, but more importantly, I want this so that I can provide a place for a family, one that will also be exposed the magical aspects that this little town has, ones that can not be duplicated nor replicated anywhere else.

Food is on the forefront of so many conversations and is the one of the main things we as humans need to survive. While the continued education of how precious our ocean is, in the same conversation we talk about the food we eat. Look at the rise in attendance both on the vendor and consumer side of the Farmers Market boom in the recent years in Encinitas and the neighboring towns – this is something we can not shy away from because as human beings we are designed to survive and will seek out what it is we need and want.

It's for all these reasons that I support the Fox Point Farms Agrihood project. It would be so great to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we would love to live in, and it might actually be affordable enough to buy a home there.

An agrihood could cement Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I BOLDLY urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Sincerely,

Philip Foster
pjofoster@gmail.com
419-680-1980
1019 Third Street
Encinitas, CA

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, January 09, 2018 1:54 PM
To: Melody Colombo
Subject: FW: January 9, 2018 RE: Item # (Fox Point Farms)

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Nicholas Cole Johnston [mailto:ncjohnst@calpoly.edu]
Sent: Tuesday, January 09, 2018 12:49 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: January 9, 2018 RE: Item # (Fox Point Farms)

In support of: The Fox Point Farms Re-Development Proposal
Dear Mayor Blakespear and City Council,

I am a recent graduate of San Dieguito Academy (2016) and have made most of my memories here in Encinitas. Studying City and Regional Planning at Cal Poly San Luis Obispo, and having held an internship position with the City of Encinitas Development Services last summer, this project initiative is of great interest to me. The proposal itself exemplifies *many* fundamental good-practices my peers and I are studying in current urban design curriculum. I assume the development team and other interest groups have explained all of the functional & social benefits to the design and how they pertain to the immediate needs of Encinitas; so I will focus on my personal involvement.

Having the discussion with friends from home about where we want to settle down after college, it is clear that my generation does not see Encinitas as a viable option to return to. Those raised in Encinitas find it difficult to afford home prices that come along with the ever-evolving recreational, social, and commercial developments within the city. In fact, I have supported a friend from my SDA graduating class who was forced to find a new place to live after completing high school. While working two minimum-wage jobs and attending part-time community college, I helped her research living options in our hometown. We could not find her a single place within her price range even with the maximum allowed flatmates and the affordable housing waitlist was absurd in length. Eventually, she quite literally bought a train-ticket to New York where her only extended family lived in a nearby state, her jobs offered to transfer her, and affordable housing was available. While my friend's recent endeavors are quite dramatic, the point is clear: the young citizens you have been elected to create a better home for simply do not have the resources to stay. Supporting this project will be a

definite step in showing the Encinitas locals that the City wants a strong and *lasting* relationship with all of its community and desires to make Encinitas a place worth returning to.

Sincerely,

Nicholas Johnston

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, January 09, 2018 1:53 PM
To: Melody Colombo
Subject: FW: Fox Point Farms
Attachments: Fox Point Farms letter.pdf

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: David Grosher [mailto:davidcgrosher@gmail.com]
Sent: Tuesday, January 09, 2018 1:41 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: Fox Point Farms

Dear Sir or Madam,

I wanted to communicate my support for the Fox Point Farms Agrihood and have attached my letter of support for consideration.

Thank you for your time,

David Grosher

FOX POINT FARMS LETTERS OF SUPPORT

January 9, 2018

RE: Fox Point Farms

Dear Mayor Blakespear and City Council,

I'm a longtime Encinitas resident who also is privileged to work in Encinitas as an engineer and product manager. I have lived here for almost 20 years and am currently raising a young family here. I am very concerned about rising rents and housing prices as it is changing the demographics and unique community that drew me here in the first place. Housing prices are becoming more and more unaffordable due to constrained supply and overwhelming demand to live in our beautiful city.

I love living in Encinitas because of the healthy lifestyle, food options like Farmer's Markets and amazing restaurants, and the ability to walk and bike comfortably around town. It's for all these reasons that I support the Fox Point Farms Agrihood project. It would be amazing to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we would love to live in, and it might actually be affordable enough to buy a home there.

An agrihood could cement Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Sincerely,

David Grosher

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, January 09, 2018 1:53 PM
To: Melody Colombo
Subject: FW: In Support of Fox Point Farms

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Kellie Shay Hinze [mailto:kellieshayhinze@gmail.com]
Sent: Tuesday, January 09, 2018 1:43 PM
To: Council Members
Cc: Kathy Hollywood
Subject: In Support of Fox Point Farms

Dear Mayor Blakespear and City Council,

Thank you for your tireless work to produce a compliant housing element that will balance our community's roots and heritage with a creative and sustainable vision for our future. I am writing today in support of the agrihood concept and location at Fox Point Farms to be included in the Housing Element update because I feel that this project is an extremely innovative answer to an exceedingly complex matter.

As a 32 year resident of Encinitas, I grapple daily with the desire to live here and to be able to someday afford a home in the City where I grew up and hope to someday raise my own family. The only reason I can even afford to rent in this area is because I live adjacent to a family member, in a home owned by my grandmother since 1979. It is certainly a privilege I don't take for granted and is part of the reason I am invested in continuing to care for and participate in community development. I consider the Fox Point Farms Agrihood project part of the vision I hold for my community because it it low-impact development, more affordable than current inventory and centers around sustainable agriculture and healthy living principles.

I am confident after speaking with many of my Encinitas peers that this project will flourish and be an incredible example of what is possible when community members with a strong vision and a capable team put their heads together.

Thank you again for your careful consideration and dedication to our city.

Kind Regards,

Kellie Shay Hinze

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, January 09, 2018 12:26 PM
To: Melody Colombo
Subject: FW: Item # (Fox Point Farms)

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Natalie Suggs [mailto:nataliesuggs1@gmail.com]
Sent: Tuesday, January 09, 2018 11:04 AM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: RE: Item # (Fox Point Farms)

Dear Mayor Blakespear and City Council,

I love living in Encinitas because of the healthy lifestyle, food options like Farmer's Markets and amazing restaurants, and the ability to walk and bike comfortably around town. It's for all these reasons that I support the Fox Point Farms Agrihood project. It would be so great to have a sustainable and affordable place to live. The concept of growing my own food onsite in the community that I love is beyond exciting and appealing. I can tell you that all of my friends who visit the local Farmer's Market on a weekly basis would agree – this is the type of agricultural community we would love to live in, and it might actually be affordable enough to buy a home there.

An agrihood could cement Encinitas' growing reputation as one of the coolest and most progressive cities in San Diego, and even in California. We take pride in our heritage here, and this project gives us a chance to do something great with housing while still maintaining our community character and sense of style and place.

I urge you to include Fox Point Farms in your Housing Element update. It's exactly the kind of housing and out of the box thinking that Encinitas needs.

Sincerely,

Natalie Suggs

Natalie E. Suggs
+1 808.357.1087

Melody Colombo

From: Kathy Hollywood
Sent: Monday, January 08, 2018 8:39 AM
To: Melody Colombo
Subject: FW: Fox Point Farms

For Item 10B – lobby binder

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Sandy Irwin [mailto:Irwins@cox.net]
Sent: Saturday, January 06, 2018 11:06 AM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: Fox Point Farms

January 6, 2018

RE: Fox Point Farms

Dear Mayor Blakespear and City Council,

We moved to the region and married here in the 1960's. We have lived in Cardiff/Encinitas for more than 50 years and feel extremely fortunate that we were able to own a home and raise our sons here. Both of us were teachers in the San Dieguito High School District, and the purchase of a starter home was feasible for educators when we bought in the 1970's. We've always loved having an organic garden and fruit trees in our back yard, and every week we enjoy shopping at

local farmers' markets. The farming and flower-growing heritage of Encinitas has always been important to us.

Over the years the region became desirable to more people, the population increased dramatically, and housing prices skyrocketed. Many younger people (like our sons, nieces, and nephews who also grew up here) do not have the opportunity to buy property and settle here like so many of us did, and many cannot even afford to rent homes.

We know that the City has attempted to provide lower-cost housing by requiring builders to include a small number of "affordable" homes when they develop land in the city. These few lower-cost homes still are expensive, and meet the needs of very few residents.

Recently, we have read articles about a project called Fox Point Farms. The idea of an agrihood is very appealing. It could provide a sustainable and affordable neighborhood for local families, and it would allow many more residents to experience growing their own food. This project would give Encinitas a chance to do something progressive while still maintaining the community's character.

We urge you to consider Fox Point Farms in the City's Housing Element. It could be an innovative and forward-looking solution for Encinitas.

Sincerely,

Bob and Sandy Irwin

Melody Colombo

From: Kathy Hollywood
Sent: Tuesday, January 09, 2018 9:29 AM
To: Melody Colombo
Subject: FW: Item # (Fox Point Farms)

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Ruby Geisler [mailto:rubygeisler@gmail.com]
Sent: Monday, January 08, 2018 11:19 PM
To: Council Members
Cc: Kathy Hollywood; Brenda Wisneski
Subject: RE: Item # (Fox Point Farms)

Dear Mayor Blakespear and City Council,

I'm a longtime Encinitas resident. I am an artist and textile designer and 'moonlight' as a server to make ends meet. I was born here, grew up here, and hope to one day raise my children here. However, I am very concerned about rising rents, and I have never been able to afford a home in my hometown. Housing prices are becoming even more unaffordable due to constrained supply and overwhelming demand to live in our beautiful city.

I rent on Lake Dr in Cardiff, and I see agricultural land bulldozed for mega sized/priced homes all around my neighborhood. I remember flower fields, dirt roads, and dead end streets that existed before big box stores, luxury homes, or golf courses...I long for the Encinitas of my youth, but know that it's going to change no matter what. While I'm always sad to see part of our agricultural history and open space slip away, I am intrigued by the Fox Point Farms proposal.

We will inevitably need more affordable housing here, and I'd prefer to see something innovative like this plan. It's so different that I think it just might work and I was compelled to write in support of this type of development. After attending college in Santa Cruz I lived near the Tannery Arts Center, an affordable high density community for artists and their families that incorporates live/work space, community event and class spaces, and a coffee shop. It truly enlivened an industrial, slightly sketchy part of town and created a creative hub. I think an agrihood could be an even better mix of density, creativity, community and sustainable living. I have always sought to rent a home as opposed to an apartment because I really value outdoor personal space, but this plan seems to incorporate a lovely amount of nature into the mix. Also love the idea of garages and artist studios (essential for me!).

I am curious to see how truly "affordable" these units could be — is there a proposed price range for these units? I haven't come across that info yet.

I urge you to include Fox Point Farms in your Housing Element update.

Thank you,
Ruby

. . .

Ruby Geisler
www.sarahrubydesign.com

SPECIAL CITY COUNCIL MEETING – APRIL 4, 2018

Public Comments:

Susan T – Not happy that a Stakeholder meeting was held on February 28th and was not public.

Glenn – Stated that when he sat in on the Stakeholder meeting, something seemed funny.

Jack – Concerned about L-7 site and potential traffic impacts.

Richard – Representing 519 community members in Quail Gardens area. Concerned about all the sites proposed along Quail Gardens area.

Bill – Concern with L-7. Look at Strawberry Fields. Changing from one type of litigation to another. Remove L-7.

Rob – Concern with L-7 as a site.

Community Member – L-7 is not a suitable site. It's not close to transit or other amenities.

Community Member – L-7 is not a smart way to achieve affordable housing.

Kay – Concerned that her life will be affected. Traffic. No on L-7.

Adam – Explained all the issues along Quail Gardens Drive. No on L-7 and remove from map.

Sherill – Presented video on surrounding area of L-7 site.

Jean – Longtime resident of Quail Gardens. Concern about L-7 site.

Alec – Talked about the negative change that high density could do to Quail Gardens area.

Kevin – L-7 is not appropriate for the type of traffic that would occur from 198 units.

Jim – Lives adjacent to L-7. Provided graphic to Council showing the number of units per community area. How is that fair?

Wife of Jim – Adjacent to L-7. Wants City to sell L-7 and build affordable somewhere else.

Pam – Seacrest Village. Advocating for seniors and consider for affordable housing.

John – Concerned about safety on Quail Gardens Drive and crossing street.

Hugh – Favors affordable housing; however, placing all on QGD is a big impact. Traffic impacts are high already.

Bob – Supports all points that have been made. Concerned with distance to services.

Pat – L-7 is a bad fit for affordable housing.

Glen – L-7 was rejected by the EIR. We do need affordable, but plan is short-sighted. Consider mixed use.

Kathleen – Don't sell city owned land. Add Vons shopping center and the burn site. City and County can work to make it happen this cycle.

Trisha – Thanked Council for their work. But must make smart decisions around smart growth.

QGD is not appropriate as well as L-7.

Joan – Provided an example of a good affordable housing project. Must provide transit close by.

Shared the book of joy. Not have L-7.

Justin – Understands the concerns. Wants to be able to safely walk to parks. Concerned with traffic.

Reed – L-7 is a poor choice and there are better solutions.

Lois – Introduced the audience to people who cannot afford to live in Encinitas. Need diversity and should keep L-7 on the list.

Rebecca – Demystify who needs affordable housing. Does not need to be all or nothing. Balance.

Community Member – Disturbed by what he sees. Discussed Baldwin site and said many reasons why not good. We need more service too and will need to retain them. Why 50% of traffic on QGD?

Mark – Greystar – wants Strawberry Fields removed from the map. Building a senior housing project.

Steve – Traffic on QGD and Encinitas Blvd is very bad.

Keith – Seacoast Community Church would like to help support affordable housing on a site on Regal Road.
Leslie – Need to look at infrastructure. L-7 would bring too many cars. Cars speeding. Not appropriate site on this street.

Carol – Report on affordable housing – place in low income areas. Over-polluting our one street.

Patricia – Provided a definition for what affordable housing can be. Should be throughout the City. Legally, we need to do this now. L-7 is a winner.

Sander – Supports Foxpoint Farm project.

Charleen – Leichtag supports L-7. Traffic and safety is a concern. Consider their traffic plan as part of L-7 as a site.

Community Member – Supports Foxpoint Farms.

Sue – Community Housing Works – Explained the importance of affordable housing.

Ron – Traffic concerns in Quail Gardens area. Think about the character that we want. Development should have been along El Camino Real.

Cheryl – Does not think 190 units are possible. Fire hazards?

Patty – L-7 supporter. How about half the number of units?

Damien – Proposing affordable housing project on L-7.

Community Member – Need to understand the traffic concerns on QGD.

Brian – Rep for Foxpoint Farms, justified the project and site location.

Community Member – L-7 needs to be addressed. Traffic is bad on QGD, but if you put in the right transportation, it can be done.

A.3 Stakeholder Workshop Notes

This section contains summaries of the two stakeholder workshops held as a part of the Housing Element Update process. Stakeholder workshops were open to the public and attendees included members of the local development community, low-income housing experts, members of local educational institutions, and non-profit organizations.

Stakeholder Meeting #1

Date: February 28, 2018
Time: 3:30 pm – 5:00pm

Attendees:

City of Encinitas
Brenda Wisneski
Diane Langager
Laurie Winter
Nicole Piano

Consultants
Dave Barquist
Nick Chen
Barbara Kautz

Stakeholders
Adam Gutteridge – Chelsea Investment Corporation
Keith Harrison
Moyria Miller – Baldwin & Sons
Norm Miller – USD BMC Real Estate Center
Michael McSweeney – Building Industry Association (BIA)
Sarah Morrell – Shea Homes
Laura Nunn – San Diego Housing Federation
Lori Pfeiler – Habitat for Humanity
Sue Reynolds – Community Housing Works

Meeting Notes

Meeting Overview

The City of Encinitas held the first Stakeholder Meeting as a part of the community outreach effort associated with the current Housing Element Update on Wednesday, February 28, 2018 from 3:30 – 5:00pm in the Poinsettia Room at City Hall. The purpose of the meeting was to gather feedback from people who understand the current development environment in Encinitas on what types of policy and programmatic changes could help encourage development, specifically of low-income housing, within the city.

The meeting consisted of a short presentation by Kimley-Horn, followed by a facilitated discussion amongst all meeting attendees. Major topics discussed at the meeting included development standards, entitlement processing, and fees and exactions. The following is a detailed summary of the information provided by meeting attendees throughout the discussion.

Development Standards

- Reference the City of San Diego Affordable Housing Parking Study
  - Focus on the proximity of sites to transit
  - Occupancy guidelines
  - Study shows that affordable housing can require less cars than market-rate housing
- Planning for autonomous vehicles
- Should explore different standards for affordable housing vs. market rate
- Two stories is extremely limiting to potential development
- Senior living includes additional costs (EG elevators) that make development harder
- Rental versus for sale development

- It is not possible for the affordable units of a development to be the same size as the market-rate
    - Can this be changed?
    - Potentially mesh with tax credit unit size
- Grouping of low-income units as opposed to interspersed – Iris example
    - Private management is a potential option for low-income developments
- What gets in the way of developing more units?
    - Zoning density
    - Height
        - Differences in how it is calculated make a big difference
    - The type of product (detached/attached/mixed-use)
- Minimum of three stories needed to accommodate parking on affordable units
    - Ideal height is 37' measure from the pad level
- Common and private usable open space
    - Limiting factor
- Density bonus numbers for parking
    - Can encourage smaller units through parking requirement changes

Entitlement Processing

- "Not late hits" policy – both by the City and the developer
    - Increases efficiency
    - Counter-level approval for by-right
- Implement a phased submittal process with a first phase that doesn't require as much detail
    - Custom lot process
    - Pre-application mandatory meeting
- What processes can be done concurrently?
- Add flexibility to mitigate influencing factors
- "Cities are afraid of design" – too many constraints

Fees and Exactions

- Fees are comparable to other cities
- Not as important as the type of product (look at S.F. v Per Unit fees)
- Need to look at all fees and ask, "Do current fees encourage development of affordable units?"
- Fee structure limits
- Fee is the same amount regardless of the size of the project, which can create high fees for smaller projects
- Difference between an incentive and an offset
    - Incentives need to give the developer something of value
    - Setback example given
    - Avoid creating penalties that can limit development
- Gap financing
    - Low Income tax credit needed
    - Gap (amount of time) is growing

    - Fee waivers
    - Land donation often needed
    - Deferral of fees until occupancy (current City protocol) is extremely helpful
- Impact fees paid over time instead of front loading
- Potential to create a mechanism to allow developers the ability to transfer low-income units from one development to another
    - Require more low-income units if done

Conclusion

Meeting attendees expressed that the three most important factors that influence the ability to develop low-income housing in Encinitas are height restrictions, parking requirements, and open space requirements. Attendees also emphasized that a high level of certainty and time are more important than a lowering of the fees associated with development.

Stakeholder Meeting #2

Date: April 4, 2018
Time: 3:30pm – 5:00pm

Attendees:

City of Encinitas

- Brenda Wisneski, City of Encinitas
- Diane Langager, City of Encinitas
- Nicole Piano-Jones, City of Encinitas
- Laurie Winter, City of Encinitas

Consultants

- Barbara Kautz, Goldfarb & Lipman
- Dave Barquist, Kimley-Horn
- Nick Chen, Kimley-Horn

Stakeholders

- Ron Brockhoff, Development Manager – Chelsea Investment Corporation
- Nick Lee, Baldwin @ Sons/Heritage Building
- Michael McSweeney, BIA San Diego
- Lori Pfeiler, San Diego Habitat for Humanity

Stakeholder Comments on Proposed Development Standards:

Development Standards Table

- Difference between offset (city pays for increased costs) vs incentive (city lowers costs)
- Proposed 25 – 30 du/ac
    - Potential impact of density bonus after 11% affordability
    - Could potentially apply for a waiver for additional height
- Lot Area
    - 10,000 SF allows for potential subdivision of a portion of the site (sometimes financing requires separate lots and different owners)
    - Noted that at least 16 units must be achieved on every site
    - Comfortable with keeping 10,000 sf minimum lot sizes
- Lot width and depth (75' min for both)
    - OK if for exterior site dimensions only
    - Building separation standards can govern internal lot lines
    - Financing and other reasons could impact the actual development and how subdivision of parcels impacts lot lines
- Setbacks
    - Along Highway 101 – move front setbacks closer to the lot line
    - Existing standards and policies regarding irregular lots or other situations should still apply

    - Interior lot setbacks at 10' with a subdivision project creates a potential 20' setback between buildings
        - Consider reducing interior lot setbacks and require a larger project perimeter (exterior boundaries) setback similar to how PRDs are handled (20' or 25')
- Lot coverage
    - 80% lot coverage probably OK; 60 – 65% would be a problem
        - Assumes uncovered parking is not counted in lot coverage calculation (current policy)
        - Specific plan area sites may permit > 80%
    - Setbacks, amenity space, and undulation will dictate building size, so may not need lot coverage
    - Nick Lee noted he would provide example projects he has seen in Long Beach
- Parking
    - Reduced parking is critical to achieve 30 du/ac in non-structured parking with three-story height limit.
    - 3 stories, non-structured parking generally can yield 25 du/ac assuming 1.8 spaces/unit average across all units
    - Tough to structure parking for 30 DU/AC unless project is large enough to spread costs
    - Affordable housing parking standards (City of San Diego example) – lowered parking standards to fit the actual need
    - Otay Ranch (Chula Vista) parking example
        - Smaller standards that are inclusive of guest parking
    - City's existing parking rates are too high
        - Don't work for an affordable project
        - Density bonus law will limit parking that can be required
    - The market will tell how much parking is needed
    - Typical costs for structured parking is $35,000/stall with $15,000/stall for surface parking
    - Example jurisdictions for parking
        - City of San Diego (Affordable standard)
            - Provides different standards for affordable housing (reduced parking ordinance)
            - Below are sample standards that attendees offered as examples they have seen in other jurisdictions
                - Studio: 1 space (inclusive of guest)
                - 1 bdrm: between 1.5 spaces (inclusive of guest)
                - 2 bdrm: 2 spaces (inclusive of guest)
                - 3+ bdrm: 2.25 spaces (inclusive of guest)
    - Reduced parking standards are an incentive to do more inclusionary housing units
    - Location (proximity to transit facilities) should factor into standards
    - Require that people park in garages, can't be used for storage only
        - Parking is more likely to be used for parking if it is uncovered (can only be used for one thing – parking)

        - Open parking is most cost effective for maximum flexibility
        - City of San Diego requires 240 cubic feet of storage per unit
- Height standard
    - Existing point of measure – Prop A
        - Lower of natural or finished grade
        - Prop A took away standard allowing measurement from pad
    - Want to be able to measure from post-grading pad
        - Fill is often required to achieve adequate drainage
        - Some properties are much lower than street level, and this would have little impact
    - Almost all sites will likely lose at least a couple feet due to existing methodology, 37 feet is a necessity from finish grade
    - Note that the 37-foot limit will not allow pitched roofs
    - Note that density bonus law would allow greater height
- Private space and onsite amenity space
    - Apartment balconies should count as private open space
    - Only specify per unit total open space – 300 sf
    - Provide flexibility when site is in close proximity to open space, parks, beaches
    - Have incentives for creating internal (usable) amenity spaces – give some sort of credit for higher quality spaces
    - Depending on the project, it may be beneficial to have a mix of on-site and off-site open space
- Wall plane and Stepback standards
    - How far does remaining 25% of wall not on single wall plane need to be set back?
    - Step back – be clear on language of where the line is drawn for outdoor space
    - Focus on alleviating the impacts of a third story
    - Simplify step back text
- Private storage
    - With uncovered parking, storage is provided as a closet on the balcony

Fees and Exactions

- Compression of approval time is more important than the fees
- Incentive: Certain timeline (exact timeline) for inclusionary projects
- Quality of the plan check is an important factor
- Ideally would like fees to be paid even after issuance of certificate of occupancy; recognized security problems

A.4 Workshop/Open House Summary Notes

This section contains the meeting minutes and public comments from the February 1, 2017 Housing Element Workshop. A Housing Element Open House is tentatively scheduled for May 2018. Materials for that meeting will be added upon completion of the Open House.

MINUTES OF THE ENCINITAS CITY COUNCIL SPECIAL MEETING
FEBRUARY 1, 2017, 6:00 P.M., 1140 OAKCREST PARK DRIVE

CALL TO ORDER/ROLL CALL

Mayor Blakespear called the meeting to order at 6:08 p.m.

Present: Mayor Catherine S. Blakespear, Deputy Mayor Tony Kranz, Council Members Tasha Boerner Horvath, Joe Mosca and Mark Muir

Absent: None

Also present: City Manager Brust, City Attorney Sabine, Special Counsel Barbara Kautz, City Clerk Hollywood, and Principal Planner Langager.

There being a quorum present, the meeting was in order.

PLEDGE OF ALLEGIANCE

AGENDA ITEMS

1. **City Council discussion with the community regarding the development of a legally compliant Housing Element Update.**

   RECOMMENDED ACTION: Discuss the development of a legally compliant Housing Element Update and provide direction to staff as needed.

Mayor Blakespear welcomed everyone to the meeting and introduced Jerry Harmon who was selected by the No on T Committee to serve as the moderator for tonight's meeting.

Mayor Blakespear stated that the purpose of the meeting was to allow the Council and the community to discuss the key components for developing a legally compliant Housing Element that was acceptable to the community.

Sheila Cameron and Bruce Ehlers, representing the No on T Committee, presented their plan for "A Better Plan for Encinitas' Housing Element Update."

Public Speakers:
John Carlson, Bob Bonde, Glen Johnson, Maria Lindley, Steve Boyette, Olivier Canler, John Elmore, Brian Burke, Victoria Balentine, Peter Stern, Peter Zovanyi, Bill Butler, Marco Gonzalez, Erika Chamberlin, Torgen Johnson, Gene Chappo, Nancy DeGhionno, Andrew Matuszeski, Marie Latif, Susan Turney, Kathleen Lindemann, Heather Creider, David Hovis, Jennifer Hewitson, Kurt Groseclose, Damien Mavis, Kathy Roth, Mike Andreen, Eric Gilmer, Kathleen Lees, Dean Turney, Andrew Yancey, Dennis Holtz, Kevin Doyle and Linda Newbert.

The Mayor, Council, Special Counsel and staff responded to questions and comments from the public. Themes discussed and identified by the public are included as Attachment 1 to these minutes.

ADJOURNMENT

Mayor Blakespear thanked everyone for attending and adjourned the meeting at 9:10 p.m.

Kathy Hollywood, City Clerk

Catherine S. Blakespear, Mayor

Housing Element
Special City Council Workshop
City of Encinitas – Community Center
February 1, 2017

THEMES

- UNIT TYPE
- STATE – COUNCIL – COMMUNITY
- MAXIMIZE USE OF ACCESSORY UNITS
- FIND COMMON GROUND
- DENSITY 20-25 DU/AC
- INCREASE INCLUSIONARY REQUIREMENT
- TRAFFIC MINIMIZE IMPACTS
- CITY PARTICIPATION – FUNDING AND CITY SITES
- STAFF LIAISON – MORE OPPORTUNITIES FOR PUBLIC INPUT COALITION TASK FORCE
- PARKING STANDARDS – MAINTAIN
- TWO STORIES VS. THREE STORIES / MAXIMUM HEIGHT 30 FT. VS. ?

SHEET NO. 1

- CONTEST RHNA NUMBERS
- MAXIMIZE ACCESSORY UNITS
- DEFINE "AFFORDABILITY"
- FLOOR AREA LIMITATION
- "TINY HOUSES" / COTTAGES OPPORTUNITIES √√√
- TIME FRAME FOR ALTERNATE PLAN?

SHEET NO.1A

- CONTEST RHNA
- PLAN NAME (NO AT HOME IN ENCINITAS)
- ZONE WITH CONSENT OF OWNERS
- NO INFILL DEVELOPMENT
- NEW ACCESSORY UNITS BY-RIGHT
    - DO MORE IN THIS AREA
- SANTA BARBARA EXAMPLE: BEDROOMS PER ACRE VS. UNITS
- PARTNER WITH NON-PROFIT AFFORDABLE DEVELOPERS

SHEET NO. 2

- WHAT IS THE TRANSIENT OCCUPANCY TAX?
- BAN IN-LIEU FEES - BUILD THE AFFORDABLE UNITS
- MAINTAIN 30 FOOT HEIGHT LIMIT

- "50%" OF ALL HOMES IN ENCINITAS RESTRICTED AT 'LOW'/'MODERATE' AFFORDABILITY LEVELS
- CITY TO PURCHASE LAND AND BUILD AFFORDABLE HOUSING - PARTNER WITH PRIVATE DEVELOPER

SHEET NO.2A

- HOME DEPOT AREA?
- TINY HOMES = SHIPPING CONTAINER
- MORE FREQUENT COMMUNITY MEETINGS (QUARTERLY)?
- THOUGHTFUL PLACEMENT OF DENSITY
- DEDICATED STAFF LIAISON
- RENEWABLE ENERGY/SUSTAINABLE DEVELOPMENT
- AFFORDABLE BY DESIGN

SHEET NO.3

- CHARGE MORE IN-LIEU FEES
- 50% AFFORDABILITY NOT FEASIBLE
- START WITH COMMUNITY-BASED IDEAS (I.E. ACCESSORY UNITS)
- "LOW IMPACT" PLAN
- DO NOT EXACERBATE EXISTING PARKING PROBLEMS
- CREATE A LANDMARK/HISTORIC COMMITTEE
- 1,900-UNIT BUFFER IN MEASURE "T" NOT CONSISTENT WITH RHNA NUMBER

SHEET NO.3A

- ACCESSORY UNIT OWNERS: HELP TO WORK WITH THEM
- VONS SHOPPING CENTER A GOOD SITE
- LA FITNESS CENTER A GOOD SITE
- MORE AUTHORITY FOR PLANNING COMMISSION
- ACCESSORY UNITS A PRIVACY ISSUE
- WHAT COMES AFTER COMPLIANCE?
- PREFERENCE TO OWNERS WHO WILL EXCEED MINIMUM AFFORDABILITY
- NOT CONCENTRATE ALL REDEVELOPMENT IN SHOPPING CENTERS

SHEET NO.4

- SPROUTS CENTER NOT A GOOD SITE
- NO. 3 OR 4 STORIES
- TOWNCENTER SITE HAS POTENTIAL
- IN FAVOR OF TRANSIT ORIENTED DEVELOPMENT
- RE-DEVELOP EL CAMINO REAL CORRIDOR WITH CONSIDERATION GIVEN TO TRAFFIC CALMING
- PRESERVATION OF QUALITY LIFE AND OPEN SPACE
- CONSIDER TINY HOUSES ON THE PACIFIC VIEW SITE
- MAINTAIN TWO-STORY LIMIT

NO.4A

- AFFORDABLE HOUSING FOR SPECIAL NEEDS POPULATIONS

- 33 FT AND 3 STORIES: SOME DEVELOPMENTS DONE WELL
- REACH OUT AND ENGAGE MORE OF THE COMMUNITY
- PUBLIC TRANSIT NOT THERE YET
- MORE AFFORDABLE HOUSING MONITORING
- PRESERVE TRAILER PARKS
- NO MIXED USE EVERYWHERE: EL CAMINO REAL A GOOD LOCATION
- DEVELOPER HELP PAY FOR TRAFFIC AND INFRASTRUCTURE ON EL CAMINO REAL
- ISSUES WITH MIXED USE: TYPE OF USE CAN CAUSE CONFLICT WITH RESIDENTS

SHEET NO.5

- START WITH COMMONALITIES
- TASKFORCE TO REVIEW MEASURE T AND IDENTIFY AGREEABLE POSITIVE ELEMENTS AND MODIFY CONTROVERSIAL ELEMENTS
- CONSIDER GREENHOUSE GAS EMISSION DURING THE REVIEW PROCESS
- "CREATIVE LIVING" CONCEPT
- DO NOT REDUCE PARKING STANDARDS
- LOW INCOME UNITS SHOULD NOT BE FOR SALE

SHEET NO.5A

- EXISTING ZONING DOES NOT SUPPORT TINY HOMES
- BUILDING HEIGHT MAXIMUM OF 30 FEET

SHEET NO.6

- PRESERVE EXISTING TRAILER PARKS
- INVITE HCD TO PARTICIPATE IN PUBLIC FORUMS

Encinitas **Comments & Questions**

Name: Lisa Nava

Phone: 760 213-1267 Email:

How will the city specifically target registered voters under the age of 30 to have input in this plan?

Encinitas **Comments & Questions**

Name: Laura Beutke

Phone: 7609949216 Email: laura@vertical printing.com

How will the city work to allow middle class families w/ dual incomes afford to live here.

Encinitas **Comments & Questions**

Name: Elaine Hartleb

Phone: Email:

1) No higher than zoned buildings regs. now
2) No density more than zoned now
3) Reserve units for low income not to go for fair market
4) Maintain unique character of Encinitas

Encinitas **Comments & Questions**

Name: Karen von Dessonneck

Phone: 7607530952 Email: jgkvd@sbcglobal.net

I do not think paying fee in lieu of providing parking space is good. The money is not used for parking

Encinitas **Comments & Questions**

Name: DAVID SOBEL

Phone: 646 372 4498 Email: DAVEBEACH01@YAHOO.COM

Any Plans will result in over 2,000 (more like 4,000) KIDS FLOODING our Schools - Any PLANS?

Encinitas **Comments & Questions**

Name: MR. ANGEL FONTANEZ

Phone: 760-942-9579 Email: AGFONTANEZ@YAHOO.COM

PLEASE DISCLOSE THE FINANCIAL DOWNSIDE OF INACTION/NON-COMPLIANCE IN $$. I DO NOT WANT GENERAL STATEMENT OF WHAT MAY HAPPEN. BE FRANK AND HONEST!!

Encinitas **Comments & Questions**

Name: Kathleen Lees

Phone: 760-635-7997 Email: mcmillenlees@cox.net

Do not loosen parking requirements. Find a way to get Moderate & low income units on Properties that has been upzoned. Guarantee we

Encinitas **Comments & Questions**

Name: Pat O'Connor

Phone: 740 413 47 24 Email: POCONNOR2@AOL.com

COMMENTS REGARDING TONIGHT'S FOLLOW UP PRESENTATION & ANTICIPATED FUTURE SETTINGS BY W/TOWN OTHER PUBLIC HANDLING BY COMMUNITIES

Encinitas Comments & Questions

Name: Rick Tverdoch

Phone: 760-942-2748 Email:

When will we approve/modify The new State Accessory Unit Ordinance (50% of main Structure/1200' max.)

Encinitas Comments & Questions

Name: Pam Ferris

Phone: 7605358556 Email: pferris@saracrestvillage.org

If the City did make exceptions to the 30ft height requirement, would this still need Coastal Commission approval as well?

Encinitas Comments & Questions

Name:

Phone: Email:

how do we see long-term residential leases fitting into the plan? Are they considered part of affordable housing option, or not?

Encinitas Comments & Questions

Name: An Arteaga

Phone: 619-993-8154 Email: elemental.therapies@gmail.com

Encinitas **Comments & Questions**

Name: Sarah Breding

Phone: _____ Email: Sbreding@cox.net

I would like a plan to supports economic diversity ~~that~~ so that Encinitas is made up of all income levels. Not like La Jolla or Delmar

Encinitas **Comments & Questions**

Name: WARREN SCOTT

Phone: 760.943.8180 Email: wscott@ws2a12.com

- we should change zoning to allow 3 story projects!
- we should build low-income housing in places that are less valued properties and give incentives: along freeway, railroad, - we could eliminate the freeway view corridor.

Encinitas **Comments & Questions**

Name: Jennifer Hewitson

Phone: 760 943 0920 Email: Jhewitson@cox.net

Why should the state tell us how many of any type houses to build?

Quality of Life decreases daily. Not everyone can live in Encinitas! and have it be a livable place. We must fight for our city & quality of life!

Encinitas **Comments & Questions**

Name: Kathy Tom

Phone: 760-452-7308 Email: kathywtom@gmail.com

Housing plan needs to include requirement for low-cost housing. Can this be put into zoning changes?

Encinitas **Comments & Questions**

Name: Dave Billings

Phone: (760) 753-7925 Email: daveandkathy@cox.net

Can we limit the number of so-called "affordable" projects to the minimum required by the state?

Encinitas **Comments & Questions**

Name: Denise Martin

Phone: 7609425941 Email:

Also stop putting bike in new excavation

HONOR the tenets of PROP A.

Don't do anything above + beyond what State is asking for. NO padding and escalated numbers so that developers can benefit.

Encinitas **Comments & Questions**

Name: OLIVIER CANLER

Phone: 760 522 8892 Email: OCANLER@ROADRUNNER.COM

1) Honor Prop A
2) Tiny houses ~~and~~ on tiny lots
3) Think about traffic First and Foremark.
4) 30ft height max - 2 stories No exception.

Encinitas **Comments & Questions**

Name: Jeanne Jones

Phone: 760-634-847[illegible] Email: jjones@miracosta.edu

Keep Encinitas free of 3-story buildings. Stucture plan so developers MUST put only 100% low income. Please accuse these buildings

Encinitas Comments & Questions

Name: Nasmeh Tanha

Phone: _____ Email: NasmehTegnud.affordable.com

wish to see housing for

- Seniors
- Artists
- low income families

Encinitas Comments & Questions

Name: Charles Hodge

Phone: 760-634-2097 Email: canodge@sbcglobal.net

(1) Affordability
(2) More Density
(3) Smaller lot sizes
(4) Reduce setbacks

Encinitas Comments & Questions

Name: John Gjata

Phone: _____ Email: _____

- Share housing (Hi-Den) among 5 Communities
- Work to legislate affordable hsg in State
- Work on 'alt' types of high-density hsg like Senior/Assisted living, even in O'hain
-

Encinitas Comments & Questions

Name: Raylene Rhodes

Phone: 760-415-5779 Email: raylenerhodes@aol.com

I would like to see affordable senior housing with solar and spaces for gardens.

Encinitas **Comments & Questions**

Name: Scott Cooter Leucadia

Phone: _____ Email: _____

Do not include Commerical in the Housing element!

Encinitas **Comments & Questions**

Name: Mary Lou Schultz

Phone: 7607533502 Email: schltzfnlg@cox.net

Accessory units generate cars, traffic, & are often a blight in a neighborhood.

Encinitas **Comments & Questions**

Name: Carris Rhodes

Phone: Carrisrhodes@gmail.com Email: (760)688-8275

- More senior ~~rating~~ housing that is rent controlled
- Smaller tiny home units are best
- Consider Neighborhoods that center smaller homes around a central Forum
- I think Rent control is a good thing for affordability

Encinitas **Comments & Questions**

Name: Maria Lindley - Leucadia

Phone: 760-944-3683 Email: mariaslindley@gmail.com

Thanks for opening this from the ground up so that the character of Encinitas can be preserved, the citizens can support the Housing Element & affordable housing - not developer profits.

Encinitas Comments & Questions

Name: ERIKA CHAMBERLIN

Phone: (212) 475 6547 Email: LADYRAINBOWNEWYORK@gmail.com

My concerns revolve around water conservation + Renewable energy. The plan disregards energy generation + consumption - so out of date and out of step with expanding population. A TINY HOMES ALSO A GOOD IDEA.

WETLANDS, FARMLAND, FOOD

Encinitas Comments & Questions

Name: Dad

Phone: (858) 761-1301 Email:

Reduce All set backs to 10' for accessory units only. Not new homes

Encinitas Comments & Questions

Name: Richard Solomon

Phone: Email: RICHARDES6LW4AW.com

Use Pacific View property, owned by City, for housing & low income units - partner w/ a NON-Profit to do so

Encinitas Comments & Questions

Name: Nancy Bensimon

Phone: 760-809-7787 Email: sevenrayznancy@me.com

Low-income housing needed, build them on public land, with non-profit guidance; I would like to see 20% of new units be low-income, mandated - no exception.

Encinitas **Comments & Questions**

Name: Michael Murphy

Phone: 760-405-3695 Email: murphyart@sbcglobal.net

Please look into zoning some public land for Micro Houses

Encinitas **Comments & Questions**

Name: CLIFF Keller

Phone: 760-213-9606 Email: cliffkellermusic@gmail.com

Preserve the "Historic downtown corridor" of 101 in Encinitas, Cardiff & Leucadia

ie: DO NOT Raise height Limits

Do not block Ocean view of ENC Library

DO NOT allow builder loopholes that result in McMansions, w/ negligible affordable condos housing

Encinitas **Comments & Questions**

Name: Blaze Newman

Phone: 7604361140 Email: blazenewman@gmail.com

Is there any way to partially subsidize individual homeowners to build new accesory units? Many property owners might not be able to afford constructing accesory units upfront, even if they want to build them.

Encinitas **Comments & Questions**

Name: GLEN JOHNSON

Phone: 760 943 8102 Email: GLEN_J_J@PACBELL.NET

GOOD START. STARTING IS EASY.

FINISHING IS DIFFICULT.

City of Encinitas

Comments & Questions

Name: David Hovis

Phone: 760-815-1224 Email: drhovis@cox.net

Need to grasp the opportunity to renew and modernize El Camino Corridor. Specifically the roads and infrastructure for the next generation Please discuss:

Encinitas **Comments & Questions**

Name: Lainie Carter

Phone: 9084471333 Email: lainiecarter@me.com

- build low income units that are small (200 - 600 sq ft) and low ≤ 30 feet
- Only focus on low income housing - designed/built by city/people/non-profits
- Stop allowing developers to →

Encinitas **Comments & Questions**

Name: RICK LESAN

Phone: 760.815.3045 Email: rick@spiraloptions.com

- REBALANCE NEW DEVELOPMENTS PROPORTIONALLY TO THE 5 COMMUNITIES
- THE TWO DEVELOPMENTS @ EL CAMINO & ENCINITAS ARE TOO HIGH A PERCETAGE OF TOTAL PLAN.

GOOD

Encinitas **Comments & Questions**

Name: Deb Emma

Phone: 7606327170 Email: debemma@

What I would like to see is NO ~~building~~ building on main corridors - Enc Blvd, 101, El Camino Real. Already traffic is miserable. Also when building apt ~~units~~ units, provide

Parking for 2 per apt - not one -

Encinitas **Comments & Questions**

Name: Jesse Giessow

Phone: 760 277 3270 Email: jessgiess@cox.net

My main concerns are:

1) Preserve community character, especially along 101. Wherever possible limit buildings to 2 stories ~~se~~ 30 ft heights. Higher density on El Camino / Encinitas Blvd.
2) Truly create housing that is affordable for low & moderate incomes. Can we limit square

gain huge profits as the character of our city change.

- Research/develop ideas regarding accessory units.

1

THIS WAS DONE IN LAST IN THE LAST MODIFICATION TO MAKE THE "ENVIRONMETAL SUPERIOR" PLAN. I BELIEVE THIS WAS NOT SUBJECT TO REAL COMMUNITY INPUT. UNTIL AFTER MASS MAILING. AT THIS POINT. THE PLAN WAS ALREADY ESTABLISHED.

because renters usually have 2 cars (couple) or have roomiates - so 1 parking space per apt is not adequate.

Also NO MIXED USE

↘ large, luxury homes. If we can require the building of smaller homes we automatically increase the density.

Encinitas **Comments & Questions**

Name: Sarah Lifton

Phone: 310-876-2767 Email: sarah@lifton.biz

Many good suggestions tonight. You Can't infill high density where there is already gridlock, as at RSFR.d. & Encinitas Blvd. A low rise bldg can be done nicely where there is more elbow room. My former hometown →

Encinitas **Comments & Questions**

Name: ELI SANCHEZ

Phone: _____ Email: byeli@cox.net

(1) NOONT stated an objective of ours is to implement HE that provides affordable housing Accessory units will not facilitate achieving that objective

(2) Sliding scale density bonus usually are based on a scale related to

Encinitas **Comments & Questions**

Name: KARIN KELLER

Phone: 802-355-7529 Email: KarinKeller@ ~~earthlink~~ inlc.net

NOTHING over 2 stories in Cardiff

PRESERVE HEIGHT LIMITS in Beach communities - ALONG 101 - Cardiff - Encinitas & Leucadia.

Place Development (25% affordable) above commercial areas on bus route ie: Sprouts / TraderJoes / LA Fitness on Santa Fe

Build Small 800 Sq. feet or less & dense → over

Encinitas **Comments & Questions**

Name: Nancy DeGhionno

Phone: 760-632-9467 Email: dogs92024@yahoo.com

MORE parking in Leucadia not less. If parking ever becomes legal along the NCTD ROW both sides it will have to be parallel parking because of bike lanes, which will REDUCE the amount of cars that would be able to park there.

of Culver City built a really attractive (for its time) low-income building that's still there & didn't impact traffic or neighbors significantly. Fewer sites, higher density where we can reasonably place them. (Tiny homes are a great idea!)

2

② (cont.) lower affordability levels generally 30% AMI to receive maximum density

③ Support Affordable Housing Program for City to participate with affordable housing developers thru:
- a) Bond issues re: COLAC & TCAC
- b) City owned property
- c) Realty based inclusionary developer impact fees.

Create "smart" development on Bus/Train Lines with very small units & walkable/workable. Build them above "strip malls" like Sprouts — Trader Joes — LA Fitness on Santa Fe & make it livable & landscaped like the Whole Foods in Encinitas

more parking

affordable by design - 200 - 800 ☒ tiny houses

~~encourage new accessory units~~

Encinitas **Comments & Questions**

Name: KATHY ROTH

Phone: 760-436-8205 Email: KRR-FRANCO@ATT.NET

WHAT IS YOUR PLAN FOR AFFORDABLE HOUSING FOR LOW INCOME RESIDENTS?? LIKE MY SON WHO HAS LIVED IN ENC. AT OUR HOME FOR 29 YRS. - SPECIAL NEEDS

Encinitas **Comments & Questions**

Name: John Gjata

Phone: Email:

Encinitas **Comments & Questions**

Name: John Gjata

Phone: Email:

- Look into a "Tiny House' area/village
- Revisit initial GPAC feedback & apply w/ more recent efforts
- (- Revisit RHNA calculations method (GANDAG))
- Please ≤ 2 stories unless out of sight / tucked away

HE WOULD LIKE TO LIVE IN AN AREA HE'S FAMILIAR WITH

3

- Min. density per State Law = 30/acre
- Try to wrap ~~$~~ density bonus into final density
- Clear max. height
- Why is restriction to affordable levels (100% inclusionary) not acceptable?
- Can 'right' to build accessory units be used ~~=~~ the same as upzoning ~~does~~ for St. requirements?

→ Why are access. units rent-restricted but other units (≥30/acre) are not?

* - Please include some income/price limits on at least a portion of new housing.
→ Increase inclusionary % of 'affordable' units.
Some of the new density requirements can be mitigated with some F.A.R & Landscaping (ie: Trees) requirements
* More equitable sharing of new housing.
+ It will go a long way to show that SVC is part of effort to fight this law.
(?) Why not try 100% inclusionary 'affordable' units ???

1. **Comments - back of cards from previous page**
2. **Comments - back of cards from previous page**
3. **Comments - back of cards from previous page**

2017-02-01 Special Mtg.

In the community outreach information, New Encinitas was given the number of 308 units to meet our share of the goal to meet state requirement. In New Encinitas there were 3 sites to be on the sustainable use maps, Site 7 at Town Center, if developed could have 160 to 249 units, Site 11 at the intersection of El Camino Real and Encinitas Blvd could have 181 to 270 units and Site 24 also at intersection of El Camino Real and Encinitas Blvd could have 290 to 436 units. That totals 630 to 955 units, a far cry from the 308. The City's current General Plan has capacity to accommodate the RHNA allocations for the moderate and above moderate income levels without the need for rezoning. So why are we adding all the market rate units? I know it is to encourage property owners and developers to provide affordable units but there has to be a better way. I would like to see plans that will provide the low and very low income property required by the state and that is all.

I think the best way would be small developments that will actually benefit low income and very low income families and individuals. Properties that are senior apartments and apartments for adults with disabilities will provide low income units with minimal effect on traffic and city infrastructures. Small developments of low income rentals, in several places throughout each of the 5 communities will add required units without burdening the infrastructure of one particular neighborhood. Small housing developments that are deed restricted to provide home ownership and investment opportunities for those work in Encinitas but can't afford to live here would be great.

I am hoping one way of getting these properties built would be for the town to acquire the necessary land, zone it for the types of the low income properties appropriate for the lot sizes and locations and give the land to developers who will build those types of low income properties needed. I know this requires a lot of funds, zoning changes, and planning but we've have seen the time, money and planning that has gone into the failed Measure T and I am sure that this type of plan can be accomplished if the same energy, planning and dedication is given to it.

Nancy L Nelson
273 Rodney Avenue
Nelson92024@yahoo.com
760-419-4225

Bob's Hypothesis #5

2017-02-01 Special Mtg COMMENTS

Melody Colombo

From: Brandi Lewis
Sent: Thursday, February 02, 2017 10:10 AM
To: Melody Colombo
Subject: FW: Housing Workshop Thoughts

Hi Melody – this came in after the meeting but there is a request to have it included in the record. Thanks!

Brandi L. Lewis
City Council's Office I City of Encinitas I 505 S. Vulcan Avenue I Encinitas, CA 92024
P. 760.633.2618 I F. 760.633.2627 I blewis@encinitasca.gov

Correspondents should be aware that all communications to or from this address are subject to public disclosure and may be reviewed by third parties.

From: Darius Degher [mailto:darius.degher@gmail.com]
Sent: Thursday, February 02, 2017 9:55 AM
To: Council Members
Subject: Housing Workshop Thoughts

Dear Council,
I was not able to make the workshop last night, and I was too late to submit comments online. So, I'm sending my ideas on the subject, pasted in below. Tony and Catherine: I sent these to you late last year, but here they are again, in case they need to go into the public record of last night's workshop.

Thanks to you all for your great work so far!

Darius Degher
Leucadia

Housing Plan Fixes, 4 Steps

1) **Increase the ratio of affordable housing.** All sides seem to agree that.this was a major flaw of Measure T.

2) **Remove the third story option.** This would keep the revised plan in line with the height limits of Measure A. This seems to have been the other major sticking point for the public, and likely the main reason Measure T failed.

3A) **Remove the "padding" for extra, future units to be built.** Instead, implement the program in 2 phases. Phase 1 includes only the number of new units required by state law at this time (2000 or whatever the exact number is). Phase 2, which would include potential plans for further sites, can be implemented later, if and when necessary. Phase 2 should be planned for and outlined generally, but the details of it can be worked out at a later time. The present goal, however, should be to come into compliance with CA state law at its minimum required number of units.

3B) When the 3rd floor units are eliminated, I'm not sure but I think the total number will still be above the immediate state-mandated number (2000). If so, remove these "extra" sites and place them in the Phase 2 plan. I suggest these removed sites are some of those currently planned for Cardiff and Leucadia. Please see Note 1 below for more on this. **

4) **Implement a set of *Encinitas Green Housing Requirements.*** Now is the time to do this, while the housing plan is being revised. See details below.

Encinitas Green Housing Requirements *(Draft of Ideas, Experts Needed)*

It is important that all future development in Encinitas abide by strict local environmental regulations. This includes a package of city building regulations that requires all new buildings to have photovoltaic systems, underground cisterns to catch and reuse rainwater, gray and black water recycling systems, commitments to smart and recycled materials, ultra-efficient insulation, and smart landscaping, among other things. (The actual list of requirements would need to be refined by experts on green building.)

Encinitas should welcome future developers as long as their projects conform to the Encinitas Green Housing Requirements. This would compel prospective developers to plan for quality-over-quantity square-footage and likely result in the construction of smaller, smarter homes with less of a negative environmental footprint.

** Note

I've heard the argument that the coastal strip is a future "transportation corridor," and that this is why it's a good place for future housing development. But this doesn't make much sense to me. Just because the train tracks run through there, and there's a bus that runs once an hour, hardly constitutes a transportation corridor. Our actual transportation corridor is along Interstate 5, whether we like it or not, and that's probably where it will remain, unless the city were to grow by a factor of 10. Yes, it would be great if more of the suburban working people of New Encinitas headed west to catch the Coaster each morning in order to get to San Diego. But even if they do that in the future, there will likely never be as many as those who take the freeway. And even if there were, it would have very little to do with transportation in Leucadia and Cardiff. We need to be accurate about the terms we use in our vision for the future. Yes, the Encinitas train station should be a transportation "hub," and we should plan for future east-west bus or tram lines, along Encinitas Blvd and Santa Fe Dr., to get commuters from inland Encinitas to the Coaster Station. But that's a very different thing from a transportation "corridor" along the coast, which seems an unrealistic dream at best. For this reason, when planning for potential future housing sites, Downtown Encinitas is a more appropriate locus of density increase than are Leucadia and Cardiff.

Kathy Hollywood

From: S. Graydon Carter <pbilliege@msn.com>
Sent: Tuesday, January 31, 2017 10:41 AM
To: Karen Brust; Planning; Council Members; Samantha Morrow; Kathy Hollywood; Brandi Lewis
Subject: Feburary 1 city presintation of "At Home in Encinitas" or Measrue T

Am responding to the upcoming special meeting regarding "At Home in Encinitas" or Measure T.

Will express my interest and view in bullet points.

1) Prop A was prepared and presented to our citizens by citizens and was passed by citizens popular vote.

2) Measure T or "At Home in Encinitas" was prepared by city staff put to vote by city staff and failed to pass or be accepted by our City citizens by popular vote.

3) Is anyone in our city staff or elected officials licensing?

4) Thousands if not tens of thousands have been spent preparing, presenting and selling "At Home In Encintas" or Measure T to our citizens, who do not support it. Not to mention the city man hours being wasted on a subject not supported by its citizens.

5) Funds and man hours that have been used to present and back "At Home in Encinitas" could and should be used to defend our citizens wishes to "preserve and protect" our citizens life style and city personalities. Not create some city staff and investors self perception of citizens life style and personalities. Yes on Prop A No on Measure T.

6) What does increasing commercial density and use have to do with our self imposed and created affordable housing element? Why is the city staff supporting and creating morphing on the tail of affording housing?

7) Why is incoming residents and business more important than long established residents and business? No on Measure T Yes on Prop A.

8) Why is our city staff not using long proven and established basic planning infrastructure guidelines when allowing new infill business developments? This gravely affects surrounding citizens residents and families peaceful and quite enjoyment of their homes.

9) Increasing business density, in the heart of long established residential neighborhoods, does not support a pedestrian community environment. It increases the demand for transportation corridors at the demise of long established residential neighborhoods long enjoyed way of life. Cars and people do not make for a park like setting nor protects or promote the residents current life style or enhance the livability of our long established residential environment.

Thank You
Scott Carter

Melody Colombo

From: Kathy Hollywood
Sent: Thursday, February 02, 2017 12:29 PM
To: Melody Colombo
Subject: FW: Follow-up from Housing Element comments

To go with last night's item.

Kathy Hollywood, CMC
City Clerk, City of Encinitas
760-633-2603

Correspondents should be aware that all communications to and from this address are subject to public disclosure and may be reviewed by third parties.

From: Karen Brust
Sent: Thursday, February 02, 2017 12:28 PM
To: Kathy Hollywood
Cc: Steve Chase; Diane Langager; Pauline Colvin
Subject: FW: Follow-up from Housing Element comments

From: andrew matuszeski [mailto:jandrewmat@yahoo.com]
Sent: Thursday, February 02, 2017 10:35 AM
To: Council Members
Subject: Follow-up from Housing Element comments

Hello.

Just a brief note of thanks for the productive meeting last night, and a brief expansion/follow-up on the comments I made.

I'm the guy who brought up (1.) subdividing lots to create a very small R-30 lot for accessory units, and (2.) establishing a Historic Preservation or Landmarks Commission.

Mark, in your closing comments, you said your neighbors in Olivenhain would reject the concept of an R-30 micro-lot. I wanted to clarify that such a subdivision would not represent any material change to what's already allowed. Your neighbors already have the right to build an accessory unit if they wish. The concept is simply to allow that same by-right accessory unit to be counted as affordable housing, by putting it on a tiny, subdivided R-30 parcel. Subdividing a micro-lot could also be part of the process of daylighting existing accessory units so they can also be counted immediately without deed restrictions or rent studies.

I admit, this isn't yet a baked idea. I didn't bring it to the meeting--it just occurred to me in the room. I recognize there are many reasons this might not work, and it certainly would never solve the whole housing problem, but if it could offset 10-20% of the RHNA, it may be worth exploring.

On the subject of a Historic Preservation or Landmarks Commission, I did a little reading this morning. It's basically a quid pro quo, where a property owner agrees to protect and preserve a culturally or historically important asset in exchange for benefits from the city. As mentioned last night, some cities establish a grant pool for restoration projects as an incentive. There is also something called the Mills Act that can reduce property taxes on locally designated historic landmarks. In the city of San Diego, the tax savings range from 20-70%! (https://www.sandiego.gov/development-services/historical/faq/millsact). Due to resource constraints, the City of San Diego restricts application processing for historic landmarks to four per month (48 per year). The demand is actually higher than that, so the program is clearly attractive to property owners. More here: https://www.sandiego.gov/development-services/historical

Finally, as a purely political matter, each of you has pledged to protect our community character. But residents are clearly uncomfortable and weary of all the talk about change embedded in the housing element debate. You have to have those debates, as uncomfortable as they might be. But you can also demonstrate a commitment to protect and preserve what's important. Wouldn't that be a good thing for everyone?

Thanks,

--Andrew.

Kathy Hollywood

From: Karen Brust
Sent: Wednesday, February 01, 2017 1:47 PM
To: Kathy Hollywood; Steve Chase
Subject: FW: Political Mixed Martial Arts at the Encinitas Community Center Tonight at 6:00 PM

-----Original Message-----
From: Catherine Blakespear
Sent: Wednesday, February 01, 2017 1:33 PM
To: New Encinitas Network; Council Members
Subject: RE: Political Mixed Martial Arts at the Encinitas Community Center Tonight at 6:00 PM

FYI ... Marco is not doing a presentation to my knowledge.

From: New Encinitas Network [newencinitasnetwork@gmail.com]
Sent: Wednesday, February 01, 2017 1:10 PM
To: Council Members
Subject: Political Mixed Martial Arts at the Encinitas Community Center Tonight at 6:00 PM

Dear Friends,

Please take a moment to read the attached: it concerns tonight's Open Forum at the Senior/Community Center at 6:00 PM hosted by the City Council with an eye toward hearing ideas and concerns about the failed Measure T/At Home In Encinitas and in addition, politicos Marco Gonzalez and Bruce Ehlers will be squaring off this evening over their 2 disparate perspectives for addressing the Housing Element and the fact that the City is still in violation.

On Nov. 16th, 2016 Mr. Gonzalez brought an 'opportunity' to the City Council which we have reported on in the attached word doc.

Mr. Gonzalez's idea has some merit; which we hope he will articulate this evening! As Laker-Great Chick Hearn used to say,"This should be a barn-burner!"

Thanks,

Mike

Kathy Hollywood

From: Karen Brust
Sent: Thursday, February 02, 2017 4:12 PM
To: Kathy Hollywood; Steve Chase
Subject: Fwd: Housing Workshop Thoughts

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: Darius Degher <darius.degher@gmail.com>
Date: 2/2/17 9:55 AM (GMT-08:00)
To: Council Members <council@encinitasca.gov>
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A.5 Housing Element Task Force Public Notice Mailing List

Chelsea Investment Corporation
6339 Paseo Del Lago
Carlsbad, CA 92011

Shea Homes
9990 Mesa Rim Rd
San Diego, CA 92121

Bridge Housing
2202 30th St
San Diego, CA 92104

Wakeland Housing
1230 Columbia Street, Suite 950
San Diego, CA 92101

Mercy Housing California
1500 South Grand Ave, Suite 100
Los Angeles, CA 90015

Hitzke Development Corporation
PO Box 1700
Temecula, CA 92953

Solutions for Change
722 West California Ave
Vista, CA 92083

Century Housing Corporation
1000 Corporate Pointe
Culver City, CA 90230

New Urban West Development
1733 Ocean Avenue, Suite 350
Santa Monica, CA 90401

Community Housing Works
2815 Camino del Rio South, Suite 350
San Diego, CA 92108

Corporation for Supportive Housing
328 Maple Street, 4th Floor
San Diego, CA 92103

Sun Country Builders
138 Civic Center Dr
Vista, CA 92084

Habitat for Humanity
8128 Mercury Rd.
San Diego, CA 92111

Encinitas Preservation Association
818 S. Coast Hwy. 101
Encinitas, CA 92024

San Diego Housing Federation
3939 Iowa Street, Suite 1
San Diego, CA 92104

Downtown Encinitas Mainstreet Association
818 S Coast Hwy 101
Encinitas, CA 92024

Cardiff 101 Main Street
PO Box 552
Cardiff, CA 92007

Encinitas Chamber of Commerce
535 Encinitas Blvd
Encinitas, CA 92024

Leucadia 101 Main Street Association
386 N Coast Highway 101
Encinitas, CA 92024

North County Lifeline
200 Michigan Ave
Vista, CA 92084

Fraternity House Inc
20702 Elfin Forest Rd
Escondido, CA 92029

San Dieguito Alliance
P.O. 2448
Del Mar, CA 92014

Community Resource Center
650 Second St
Encinitas, CA 92024

Meals on Wheels
930 Boardwalk Street, Unit C
San Marcos, CA 92078

YMCA Oz North County
215 Barnes Street
Oceanside, CA 92054

Casa de Amparo
325 Buena Creek Road
San Marcos, CA 92069

Catholic Charities-La Posada
2476 Impala Dr
Carlsbad, CA 92010

Bread of Life Rescue Mission
1919 Apple Street, Suite I
Oceanside, CA 92049

United Way of San Diego
4699 Murphy Canyon Road
San Diego, CA 92123

North County Community Services
1557 Grand Avenue, Ste. C
San Marcos, CA 92008

Easter Seals
1035 E. Valley Parkway
Escondido, CA 92025

Regional Task Force on the Homeless
4699 Murphy Canyon Road
San Diego, CA 92123

Alliance for Regional Solutions
1557-C Grand Ave
San Marcos, CA 92067

Interfaith Shelter Network
3530 Camino del Rio North, Suite 301
San Diego, CA 92108

Interfaith Community Services
4770 North River Road
Oceanside, CA 92057

TERI, Inc.
251 Airport Rd
Oceanside , CA 92058

101 Artists Colony
1106 Second St, Suite 125
Encinitas, CA 92024

Jonathan Tarr Foundation
560 North Highway 101 #1
Encinitas, CA 92024

Seacoast Community Church
1050 Regal Rd
Encinitas, CA 92024

St John's Catholic Church
1001 Encinitas Blvd
Encinitas, CA 92024

St. John's Catholic Church
Mexican American Apostolate
1001 Encinitas Blvd
Encinitas, CA 92024

Affirmed Housing Group
13520 Evening Creek Dr N, Suite 160
San Diego, CA 92128

San Dieguito United Methodist Church
170 Calle Magdalena
Encinitas, CA 92024

Jehovah's Witnesses-Kingdom
1821 S El Camino Real
Encinitas, CA 92024

North Coast Presbyterian Church
1831 S El Camino Real
Encinitas, CA 92024

The Vine Church
208 Camino De Las Flores
Encinitas, CA 92024

Self-Realization Fellowship: Hermitage
215 W K St
Encinitas, CA 92024

Jehovah's Witnesses
267 Quail Gardens Dr
Encinitas, CA 92024

Seaside Presbyterian Church
367 La Veta Ave
Encinitas, CA 92024

Ranch View Baptist Church
416 Rancho Santa Fe Rd
Encinitas, CA 92024

El Camino Christian Fellowship
510 S El Camino Real
Encinitas, CA 92024

House of Praise Evangelical Church
511 Encinitas Blvd
Encinitas, CA 92024

Christian Science Society of Encinitas
912 S. Coast Highway 101
Encinitas, CA 92024

Christian Science Churches & Reading Rooms
520 Balour Dr
Encinitas, CA 92024

St Mark Lutheran Church
552 S El Camino Real
Encinitas, CA 92024

Chapel of Awareness
560 3rd St
Encinitas, CA 92024

Coastal Christian Center
777 Santa Fe Dr
Encinitas, CA 92024

New Life Christian Fellowship
831 3rd St
Encinitas, CA 92024

Pacific View Baptist Church
845 Santa Fe Dr
Encinitas, CA 92024

St Andrew's Episcopal Church
890 Balour Dr
Encinitas, CA 92024

Bethlehem Lutheran Church
925 Balour Dr
Encinitas, CA 92024

Church of Christ
926 2nd St
Encinitas, CA 92024

Self-Realization Fellowship
939 2nd St
Encinitas, CA 92024

Encinitas Rotary Club
P.O. Box 230223
Encinitas, CA 92023

Encinitas Lions Club
168 Del Mar Shores Terrace
Solana Beach, CA 92075

Kiwanis Club
P.O. Box 230635
Encinitas, CA 92023

Jewish Family Service
8804 Balboa Ave
San Diego, CA 92123

Zephyr
700 Second St
Encinitas, CA 92024

Melia Homes
8951 Research Dr. #100
Irvine, CA 92618

Hallmark Communities
964 Urania Ave
Leucadia, CA 92024

City Ventures
3121 Michelson Dr Ste 150
Irvine, CA 92612

John DeWald & Associates
1855 Freda Lane
Cardiff, CA 92007

National Core
9421 Haven Ave
Rancho Cucamonga, CA 91730

CityMark Development
3818 Park Blvd
San Diego, CA 92103

Stefan LaCasse
364 Second Street, #5
Encinitas, CA 92024

Dianna Nunnez
399 Hillcrest Dr
Encinitas, CA 92024

Dave Meyer
DCM Properties
P.O.Box 232280
Encinitas, CA 92023

Michael McSweeney
Building Industry Association
9201 Spectrum Center Blvd., Suite 110
San Diego, CA 92123-1407

Lennar Homes
25 Enterprise Suite 300
Aliso Viejo, CA 92656

Nick Lee
Baldwin & Sons
610 West Ash, Suite 1500
San Diego, CA 92101

Keith Harrison
Harrison Properties
364 2nd St. #6
Encinitas, CA 92024

Norm Miller
5374 Linda Vista Rd.
San Diego, CA 92024

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APPENDIX B

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Appendix B: Housing Profile Report

The City strives to achieve a balanced housing stock that meets the varied needs of all income segments of the community. To understand the City's housing needs, the nature of the existing housing stock and the housing market are comprehensively evaluated. This section of the Housing Element discusses the major components of housing needs in Encinitas, including population, household, economic and housing stock characteristics. Each of these components is presented in a regional context, and, where relevant, in the context of other nearby communities. This assessment serves as the basis for identifying the appropriate goals, policies, and programs for the City to implement during the 2010-2021 Housing Element cycle (2013-2021 planning period).

1 Population Characteristics

Understanding the characteristics of a population is vital in the process of planning for the future needs of a community. Population characteristics affect the type and amount of housing need in a community. Issues such as population growth, race/ethnicity, age, and employment trends are factors that combine to influence the type of housing needed and the ability to afford housing. The following section describes and analyzes the various population characteristics and trends that affect housing need.

1.1 Population Growth

According to the U.S. Census the population in the region has steadily increased over time. In 1990, the San Diego regional population was 2,298,016. In 2000, the population of region was 2,813,833. This represents about a 2.2 percent annual change in the population growth rate. The U.S. Census reported a population count of 3,095,313 in 2010 showing that the growth rate increased 1.1 percent annually over the last ten-years. During this same ten-year time period, Encinitas' population grew at a slower rate than the region as a whole, increasing 0.3 percent annually, from 58,014 in 2000 to 59,518 in 2010. **Table B-1** shows the actual changes in population for North San Diego County coastal cities and the County, as well as projected population growth.

Table B-1: Actual and Projected Population Changes (2000-2050)

City	2010 Actual	2020 Projected	2035 Projected	2050 Projected
Carlsbad	105,185	118,241	123,634	123,942
Del Mar	4,161	4,412	4,668	4,784
Encinitas	59,518	62,829	64,718	66,178
Oceanside	167,344	177,929	188,865	190,129
Solana Beach	12,867	13,409	14,311	14,941
San Diego County	3,095,313	3,435,713	3,853,698	4,068,759

Source: Bureau of the Census (2000 and 2010) and SANDAG Series 13 Regional Growth Forecast Update (2013).

The purpose of regional growth forecasting is primarily to provide a starting point for regional planning. It is also one of the first steps in developing a Regional Transportation Plan. For this reason, a growth forecast is updated every four years. According to the most recently adopted SANDAG forecast (Series 13) the region will grow to approximately four million people by the year 2050, representing a

growth of approximately one million residents. This represents an average annual growth of approximately 0.7%. It is projected that the 2010-2050 population in the San Diego region will increase by 31.4 percent, while Encinitas' population is expected to increase by 11.2 percent.

It is important to note that the growth forecasts are not prescriptions for the future; rather they simply portray an estimate of potential outcomes. The U.S. Census plays a critical role in estimating future population and verifying past projections.

SANDAG's Series 13 forecast shows a growth of 6,660 persons between 2010 and 2050 in the City. This numeric change results in a citywide population growth of about 11.2 percent total, which is about 7 percent less than previously forecasted in the Series 12 forecast. However, since population growth is projected to continue and to outpace home construction, an imbalance could potentially influence an increase in household size (the number of persons per household), a decrease in vacancy rates, and an increase in the amount of interregional commuting.

1.2 Age Characteristics

Housing demand within the market is often determined by the preferences of certain age groups. Traditionally, both the young adult population (20 to 34 years of age) and the elderly population tend to favor apartments, low- to moderate-cost condominiums, and smaller single family units. Persons between 35- and 65-years old often provide the major market for moderate to high-cost apartments and condominiums and larger single family units because they tend to have higher incomes and larger sized households.

In 2000, the median age in Encinitas was 37.8, approximately four years older than the regional median age of 33.2. By 2010, the median age in Encinitas increased to 41.5, 6.9 years above the regional average of 34.6 years. **Table B-2** shows that in 2010, the largest proportion of the population in the City was aged 45 to 59 years, accounting for 25 percent of the population, and followed by those aged zero to 14 and 35 to 44. **Table B-2** also compares resident age in Encinitas to that of the region. San Diego County's age distribution shows a younger population. According to the 2010 Census, 21 percent of the population was under 18 years of age, similar to the 2000 Census profile.

Table B-2: Age Distribution Comparison (2010)

Area	0-14	15-19	20-24	25-34	35-44	45-59	60-64	65+
Encinitas	17%	5.4%	4.5%	13.4%	14.5%	25.3%	7.0%	12.8%
San Diego County	19.3%	7.3%	8.7%	15.2%	13.6%	19.7%	4.8%	11.4%

Source: Bureau of the Census (2010)

California is projected to be one of the fastest growing states in the nation. In 1990, California comprised 12 percent of the nation's population and is expected to have 14 percent of the nation's population by 2020. In California, those persons of retirement age (i.e. 65 years and older) is expected to grow more than twice as fast as the total population and this growth will vary by region. This means that people are

living longer, and the number of older persons is increasing. This trend is also evident in Encinitas, where the senior-aged section of the population is expected to double by the year 2035.

1.3 Race/Ethnicity Characteristics

Table B-3 shows that, according to the 2010 Census, the ethnic distribution of the Encinitas population was predominantly White (79 percent). Approximately 14 percent of the Encinitas population was of Hispanic origin and four percent were Asian. San Diego County exhibited more ethnic diversity, with 49 percent of the population being White, 32 percent of Hispanic or Latino origin and 11 percent Asian. The race/ethnic composition of City residents has remained stable in Encinitas compared to the 2000 Census, with the proportion of Asian residents increasing slightly and the proportion of Hispanic residents decreasing slightly. Countywide, the Hispanic population of Hispanic or Latino origin increased from 27 percent to 32 percent and the White population decreased from 55 percent to 49 percent.

Table B-3: Ethnic Distribution (2010)

Area	White Only	Black	Asian	Native American	Pacific Islander	Some Other Race	Two or More	Hispanic or Latino
% Encinitas Population	78.8%	0.50%	3.5%	0.30%	0.10%	0.30%	2.5%	13.7%
%San Diego County Population	48.5%	4.7%	10.6%	0.50%	0.40%	0.20%	3.1%	32%

Source: Bureau of the Census (2010)

The racial and ethnic composition of a population may affect housing needs because of cultural preferences associated with different racial/ethnic groups. Cultural influences may reflect preference for a specific type of housing. Research has shown that some cultures (e.g. Hispanic and Asian) tend to maintain extended families within a single household. This tendency can lead to overcrowding or an increased demand for larger housing units. Ethnicity also tends to correlate with other characteristics such as location choices, mobility, and income, as shown in **Table B-4**. In Encinitas, residents of American Indian, Black, Hispanic origin, and Asian and Pacific Islander have the highest levels of poverty. However, the overall Encinitas poverty level of 7 percent is lower than the San Diego regional total of 14 percent.

Table B-4: Poverty Status by Race/Ethnicity Encinitas and San Diego Count

Area	White Only	Black	Asian	Native American	Pacific Islander	Some Other Race	Two or More	Hispanic or Latino
% Encinitas Population	~~78.8%~~ 7.1%	~~0.50%~~ 38.3%	~~3.5%~~ 4.6%	~~0.30%~~ 0.0%	~~0.10%~~ 16.7%	~~0.30%~~ 13.8%	~~2.5%~~ 9.1%	~~13.7%~~ 18.4%
%San Diego County Population	~~48.5%~~ 13.2%	~~4.7%~~ 20.1%	~~10.6%~~ 10.7%	~~0.50%~~ 20.2%	~~0.40%~~ 15.6%	~~0.20%~~ 23.1%	~~3.1%~~ 14.3%	~~32%~~ 19.6%

Source: ACS 5-year estimates (2016)

Employment has an important impact on housing needs. Incomes associated with different jobs and the number of workers in a household determines the type and size of housing a household can afford. In some cases, the types of jobs themselves can affect housing needs and demand (such as in communities with military installations, college campuses, and large amounts of seasonal agriculture). Employment growth typically leads to strong housing demand, while the reverse is true when employment contracts.

1.4 Employment

To achieve a better balance between jobs and housing, it is important to consider the employment characteristics of a region. In the San Diego region, employment growth outpaced population growth between 1990 and 2000. The decade recorded a gain of more than 188,865 jobs, an increase of 16 percent, while population increased by 315,817 people, a growth rate of 13 percent.1

Table B-5 shows that in 2010 there were over 1.42 million jobs in the San Diego region. Regionwide, growth of 34% is expected between 2010 and 2050. **Table B-5** also shows that the number of jobs in Encinitas are expected to grow by 15% from 2010 to 2050.

Table B-5: Employment Growth (2010-2050)

Jurisdiction	2010	2020	2050	% Change 2010-2050	Numeric Change 2010-2050
Carlsbad	64,956	77,431	85,718	32%	20,762
Del Mar	4,431	4,542	4,725	6.6%	294
Encinitas	25,643	27,276	29,542	15.2%	3,899
Oceanside	41,142	48,208	54,091	31.5%	12,949
Solana Beach	7,417	8,156	8,802	18.7%	1,385
San Diego County	1,421,941	1,624,124	1,911,405	34.4%	489,464

Source: SANDAG Series 13 Subregional Growth Forecast (2013)

Table B-5 shows that between 2010 and 2050, Encinitas is projected to gain approximately 3,899 new employment opportunities (i.e. the number of workers with jobs), which represents an increase of 15 percent. This represents one of the lowest percentage increases in employment in the North County coastal cities. Regionwide, approximately 489,464 new employment opportunities will be generated, representing an increase of 34 percent. This projected change in employment is considerably less than previously forecasted.

Previous forecasts showed that the largest numerical gains in employment in Encinitas between 2000 and 2030 would occur in the services, retail trade, and government sectors. **Table B-6** shows the industries that Encinitas residents were employed in compared with County residents as a whole in 2006-2008, as well as the mean annual wage in the first quarter of 2010. Encinitas residents were employed by a variety of industries with 19 percent working in education services, health care and social assistance and 18 percent in professional, scientific, management and waste management services. Approximately ten percent also worked in the arts, entertainment, recreation, accommodations and food service industries, as well as ten percent in retail trade and finance. Together these industries account for 67 percent of the employment of Encinitas residents. Those working in the professional industries were earning between$72,840 and $113,870 and those in the education services category were earning between $30,480 and $86,425. These industries employed 38 percent of the labor pool.

Table B-6: Number of Workers by Industry (2000-2010)			
Industry	Encinitas	San Diego County	Mean Annual Wage in the Region (San Diego MSA)
Agriculture, Forestry, Fishing, Hunting and Mining	0.3%	0.6%	$27,777
Construction	7.2%	7.8%	$50,274
Manufacturing	8.4%	9.1%	$33,600
Wholesale Trade	3.5%	2.9%	$65,599
Retail Trade	9.5%	10.9%	$37,650
Transportation, Warehousing and Utilities	2.3%	3.7%	$31,976
Information	2.8%	2.7%	$79,899
Finance and Insurance, Real Estate, Rental and Leasing	9.5%	7.8%	$70,103
Professional, Scientific, Management and Waste Management Services	18.3%	14.1%	$72,840-$113,870
Education Services, Health Care and Social Assistance	19.3%	19.1%	$30,481-$86,425
Arts, Entertainment and Recreation, Accommodations and Food Service	10.5%	10.7%	$22,211-$55,851
Other Services, Except Public Administration	5.3%	5.3%	$26,030-$47,927
Public Administration	3.1%	5.3%	$94,926
Total Mean Annual Wage	100%	100%	$49,439
Source: American Community Survey (2005-2009) and California Employment Development Department (2010).			

Compared with County residents as a whole, Encinitas residents benefited from employment in higher income industries such as finance, professional and management, etc. However, the community has more employed residents than jobs and remains a bedroom community.

SANDAG's Series 13 shows a regionwide average of 1.2 workers per dwelling unit. In Encinitas this would result in 30,600 workers available for 25,600 jobs, a 1.19 worker-to-jobs ratio. The 2007-2011 ACS (Workers) survey similarly found 23,489 employed residents in the City, but only 19,791 jobs, also representing a 1.19 worker-to-jobs ratio. The 2011 ACS also reported an unemployment rate of 6.5 percent for all persons in the civilian workforce. Nearly 20 percent of all persons between the ages of 16 and 24 were unemployed. In terms of unemployment, Encinitas outperformed both the nation as a whole and the State of California. The City's unemployment rate was significantly lower than the 2011 national rate of 8.7 percent and state rate of 10 percent.

1.5 Commuting Patterns

Commuting patterns demonstrate the relation of housing to employment opportunities and are a component in the allocation of growth to localities.

Table B-7 shows that in 2010, 76 percent of Encinitas residents drove alone to work, about equal to the percent region-wide. Just over seven percent of Encinitas residents carpooled, and approximately two percent walked, and fewer than two percent used a form of public transportation. Eleven percent of Encinitas residents worked from home.

Table B-7: Means of Transportation To Work (208-2012)				
Industry	Encinitas		San Diego Region	
	#of Workers 16+	% of Total	#of Workers 16+	% of Total
Car, Truck, or Van – Drove Alone	21,781	75%	1,083,870	76%
Car, Truck, or Van – Carpooled	2,104	7.5%	141,733	10%
Public Transportation	421	1.5%	42,934	1.5%
Motorcycle	56	0%	4,443	0%
Bicycle	207	1%	7,591	1%
Walked	615	2%	38,116	3%
Other means	640	2%	13,954	1%
Worked at home	3,384	11%	87,862	6%
TOTAL	29,208	100%	1,380,578	100%
Source: 2010-2012 ACS and derived "other means" to include bike and motorcycle rates based on precedent data sources including the 2000 Census.				

Table B-8 shows the average travel time for workers age 16 and over in Encinitas and the San Diego region in 2000. Average travel times for Encinitas residents did not vary greatly from those in the region as a whole. Approximately 35 percent of Encinitas residents had travel times to work under 20 minutes while 40 percent of San Diego residents faced the same travel time. Please note that the average travel time segments were not recorded in the 2010 Census and is not available in the most recent three-year ACS estimates. However, based on the 2010-2012 ACS, the average commute time for Encinitas residents is a little over 24 minutes.

Table B-8: Travel Time to Work in Minutes (2010)							
Jurisdiction	Less than 10 minutes	10-19 Minutes	20-29 Minutes	30-44 Minutes	45-59 Minutes	60-89 Minutes	90+ Minutes
Encinitas	10.5%	24.6%	19.8%	24.3%	7%	3.4%	2.7%
San Diego County	10.l5%	29.4%	22.6%	20.6%	6.4%	3.9%	4.4%
Source: SANDAG Series 13 Subregional Growth Forecast (2013)							

Commuting can be more expensive than people anticipate. Not only do the true costs of commuting include the most recognized costs such as owning a car (finance payments, insurance, maintenance, etc.) and driving (gas, etc.), but there are also potential personal costs (i.e. mental and physical health, etc.), infrastructure improvements and roadway maintenance costs, environmental impacts (i.e. air quality, greenhouse gas emissions and noise), as well as community impacts (i.e. public safety, visual and aesthetic impacts, etc.).

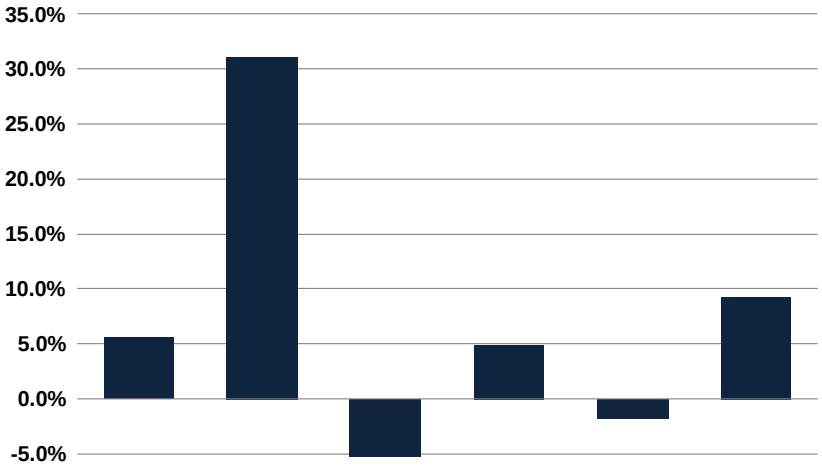
2 Household Characteristics

The Census defines a household as all persons who occupy a housing unit, which may include single persons living alone, families related through marriage or blood and unrelated individuals living together. Skilled nursing facilities, residential care facilities, dormitories, and other group living situations are not considered dwelling units, and persons living in them are not considered households; rather, these are group quarters. Information on household characteristics is important to understand the growth and changing needs of a community.

Many household characteristics may contribute to the diverse need for housing, some of which are described in this section: projected households, household type, household size, and household income. According to the 2010 Census, there were 1,086,865 households (equal to occupied housing units) in San Diego County. Of these, 24,062 households, or approximately two percent, were located in Encinitas. (Please note that the total number of households will vary depending on the source and when the data was captured.)

Figure B-1 shows that between 2000 and 2010, the number of households in the San Diego region grew by 92,188, a gain of approximately nine percent. During this time period, the number of households in Encinitas grew by about six percent. The City will continue to account for approximately two percent of the region's households. Based on Current Demographic and Socio-Economic Estimates published by SANDAG (2014), there are about 24,425 households in the City and 1,105,120 households in the region.

Figure B-1: Change in Number of Households (2000-2010)



-	Encinitas	Carlsbad	Del Mar	Oceanside	Solana Beach	San Diego
% Change from 2000-2010	5.5%	31.1%	-5.2%	4.9%	-1.8%	9.3%

Source: Bureau of the Census (2000 and 2010).

2.1 Household Type and Size

Different household types generally have different housing needs. Seniors or young adults usually comprise the majority of the single-person households and tend to reside in apartments, condominiums or smaller single-family homes. Families with children often prefer single-family homes.

Household size is a significant factor in housing demand. Often, household size can be used to predict the unit size that a household will select. For example, small households (one and two persons per household) traditionally can find suitable housing in units with zero to two bedrooms while larger households (three or more persons per household) can usually find suitable housing in units with two to four bedrooms.

People's choices, however, also reflect preference and economics. Thus, many small households prefer, and obtain, large units.

Table B-9 shows that Encinitas households mostly consist of families (63 percent). Approximately one-third of the City's family-households had children, according to the 2010 Census. The greatest change from 2000 to 2010 was the 21-percent decrease in other non-families (unrelated persons living together), and a 16-percent increase in married couples without children.

Table B-9: Changes in Household Types (2000–2010)

Household Types	2000		2010		Change	
	#	%	#	%	#	%
Families	14,283	62.6%	15,044	62.5%	+761	+5.3%
Married with Children	5,450	23.9%	5,172	21.5%	-278	-5.1%
Married without Children	5,982	26.2%	6,941	28.8%	+959	+16.0%
Other Families	2,851	12.5%	2,931	12.2%	+80	+2.8%
Non-Families	8,547	37.4%	9,038	37.5%	+491	+5.7%
Single	5,864	25.7%	6,303	26.2%	+439	+7.5%
Other Non-Families	2,683	11.8%	2,118	8.8%	-565	-21.1%
Total Households	**22,830**	**100.0%**	**24,082**	**100.0%**	**+1,252**	**+5.5%**

Source: Bureau of the Census (2000 and 2010).

In 2017, the average number of persons per household in the San Diego region ranged from 2.1 to 3.5, with a region-wide average of 2.9 persons per household. Encinitas had an average of 2.5 persons per household, representing a small decrease from 2010, when 2.6 persons per household was reported. **Table B-10** compares household size in Encinitas to household size in the surrounding North County coastal cities. Household size varied among the cities, with Del Mar having the lowest in the County. SANDAG estimates that average household size in the region will increase slightly over the next 20 years.

Table B-10: Average Persons per Household North County Coastal Cities and San Diego Region (2017)

Jurisdiction	Average Household Size (2017)	Projected Average Household Size
Carlsbad	2.60	2.67
Del Mar	2.07	2.24
Encinitas	2.52	2.72
Oceanside	2.88	3.04
Solana Beach	2.34	2.44
San Diego Region	2.95	2.81

Source: Department of Finance (2017)

2.2 Household Income

Income levels influence the range of housing prices within a community and the ability of the population to afford housing. As household income increases, the more likely that household is to be a homeowner. As household income decreases, households tend to pay a disproportionate amount of their income for housing and the number of persons occupying unsound and overcrowded housing increases.

Household incomes in Encinitas have consistently been higher than those in the region as a whole. In 1990, the Encinitas median household income was $46,614 - and the regional median income was $35,028. The reported median income for the City was approximately 33 percent higher than the region. In 2000, the City's median household income was $64,821, and the San Diego County median household income was $47,268. The reported median income was approximately 37 percent higher than the regional average. The 2010 median household income in Encinitas was $85,350, compared to $44,772 in the County. This represents a difference of about 90 percent. However, as shown in **Table B-11**, in 2016 median income in Encinitas was again estimated to be approximately 34 percent higher than the regional median ($100,698 v. $66,529), consistent with long-term data and suggesting that the 2010 figure was an anomaly.

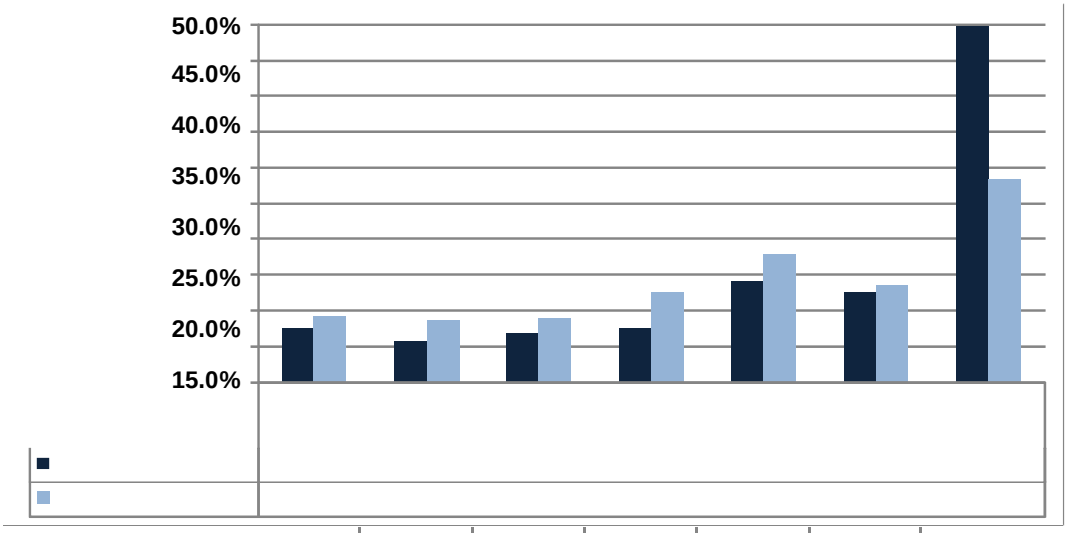
Table B-11: Median Household Income Estimates (2016)

Jurisdiction	Median Household Income Adjusted Inflation $ 2016	Percent Above/Below Regional Median
Carlsbad	$97,145	+31.7%
Del Mar	$108,556	+38.9%
Encinitas	$100,698	+34.1%
Oceanside	$58,949	-12.4%
Solana Beach	$100,352	+33.9%
San Diego Region	$66,529	0%

Note: All figures in 2016 inflation-adjusted dollars.
Source: American Community Survey 2012-2016 5-year estimates (2016)

Figure B-2 compares household income in Encinitas and in the San Diego region between 2012 and 2016. Approximately 61 percent of Encinitas households had incomes over $75,000, about 16 percentage points more than region-wide. The biggest discrepancy occurred within the highest-income bracket ($100,000 or more). Approximately 50 percent of Encinitas households earned $100,000 or more, compared to 32 percent region-wide.

Figure B-2: Household Income (2012-2016)



	<= $14,999	$15,000-$24,999	$25,000 $34,999	$35,000-$49,999	$50,000-$74,999	$75,000-$99,999	$100,000 +
Encinitas	6.8%	6.5%	5.7%	6.3%	13.2%	11.1%	50.3%
San Diego County	9.5%	8.1%	8.4%	11.9%	17.0%	12.8%	32.2%

Source: Bureau of the Census, American Community Survey(2012-2016).

The state and federal government classify household income into several groupings based upon the relationship to the San Diego Region Area Median Income (AMI), adjusted for household size. The State of California utilizes the following income groups:

- Extremely Low: 0-30% AMI
- Very Low: 31-50% AMI
- Low: 51-80% AMI
- Moderate: 81-120% AMI
- Above Moderate: 120%+ AMI

In 2014, a majority of Encinitas households earned moderate or above moderate incomes (**Table B-12**) while just under one-third (29 percent) of Encinitas households earned low, very low or extremely low incomes.

Table B-12: Household Income Levels (2014)

Income Level	Renter-Households	Owner-Households	Total Households	Percent of Households
Extremely Low Income (0-30% AMI)	1,440	1,025	2,465	10.6%
Very Low Income (31-50% AMI)	945	890	1,835	7.9%
Low Income (51-80% AMI)	1,265	1,195	2,460	10.7%
Moderate and Above Moderate (>80% AMI)1	4,370	12,075	16,445	70.8%
Total	8,025	15,185	23,210	100.0%

Source: CHAS, based on 2010-2014 ACS (5-year estimates).
Note 1: HUD programs are available only to households with incomes at or below 80% AMI. Therefore, the CHAS data groups all households above that income threshold (both moderate and above moderate income) into one incomegroup. HUD CHAS 2010-2014

3 Housing Problems

The Comprehensive Housing Affordability Strategy (CHAS) developed by the Census for HUD provides detailed information on housing needs by income level for different types of households in Encinitas. Detailed CHAS data based on the 2010-2014 ACS is displayed in **Table B-13**. Housing problems considered by CHAS include:

- Units with physical defects (lacking complete kitchen or bathroom);
- Overcrowded conditions (housing units with more than one person per room);
- Housing cost burden, including utilities, exceeding 30 percent of gross income; or
- Severe housing cost burden, including utilities, exceeding 50 percent of gross income.

The types of problems vary according to household income, type, and tenure. Some highlights include:

- In general, renter-households had a higher level of housing problems (48 percent) compared to owner-households (41 percent).
- Large renter-families had the highest level of housing problems regardless of income level (78 percent).
- Very low income (82 percent) and low income households (77 percent) had the highest incidence of housing problems.

Table B-13: Median Household Income Estimates (2016)								
Household by Type, Income, and Housing Problem	Renter				Owner			
	Elderly	Small Families	Large Families	Total Renters	Elderly	Large Families	Total Owners	Total Households
Extremely Low Income (0-30% AMI)	**200**	**445**	**0**	**1,305**	**405**	**25**	**1,060**	**2,365**
% with any housing problem	82.5%	65.2%	--	65.9%	67.9%	100.0%	77.4%	71.0%
% with cost burden >30%	82.5%	65.2%	--	65.9%	66.7%	80.0%	76.3%	70.6%
% with cost burden > 50%	82.5%	65.2%	--	60.5%	51.9%	80.0%	70.3%	64.9%
Very Low Income (31-50% AMI)	165	370	60	985	375	0	850	1,835
% with any housing problem	81.8%	100.0%	100.0%	93.4%	44.0%	--	67.6%	81.5%
% with cost burden >30%	78.8%	98.6%	100.0%	92.4%	44.0%	--	67.1%	80.7%
% with cost burden >50%	69.7%	63.5%	58.3%	70.1%	28.0%	--	51.8%	61.6%
Low Income (51-80% AMI)	245	535	15	1,415	625	155	1,735	3,150
% with any housing problem	91.8%	86.9%	100.0%	87.3%	44.8%	80.6%	68.0%	76.7%
% with cost burden >30%	85.7%	86.9%	100.0%	86.2%	44.8%	80.0%	68.0%	76.2%
% with cost burden > 50%	65.3%	33.6%	0.0%	36.0%	24.8%	77.4%	47.3%	42.2%
Total Households	**1,020**	**3,305**	**180**	**8,025**	**4,070**	**1,035**	**15,025**	**23,050**

Source: CHAS, based on 2010-2014 ACS (5-year estimates

3.1 Overcrowding

The combination of low incomes and high housing costs has forced many households to live in overcrowded housing conditions. "Overcrowding" is generally defined as a housing unit occupied by more than one person per room in house (including living room and dining rooms, but excluding hallways, kitchen, and bathrooms). Under State law a housing unit is considered overcrowded if there is less than 120 square feet of livable space (all space except the bath, kitchen and hallways) for the first two people and less than an additional 50 square feet for each additional person. Overcrowding can indicate that a community does not have an adequate supply of affordable housing, especially for large families.

According to the Census, between 1990 and 2000, overall overcrowding remained the same in Encinitas; however, severe overcrowding slightly increased from 2.3 percent to 2.8 percent. As **Table B-14** shows,

nearly five percent of the households in Encinitas were overcrowded in 2000, inclusive of the three percent that were severely overcrowded. Overcrowding was more prevalent among renter-households than owner-households, as rental units are typically smaller in size and renter-households typically have lower incomes. The greatest increases were among renter-households from nine percent overcrowding in 1990 to nearly ten percent in 2000 and five percent severe overcrowding to six percent. However, the 2010 census showed that overcrowding had decreased significantly. In 2010, 494 households in Encinitas had overcrowded conditions. Only 2.1 percent of households had more than one occupant per room and only 0.4 percent had more than 1.5 occupants per room. Persons per household have decreased further since 2010, from 2.6 to 2.5 persons per household, suggesting that overcrowding has also been reduced.

Table B-14: Overcrowded Housing Units (1990-2010)

Overcrowding	Owner Households		Renter Households		Total Households	
	Number	% of Owners	Number	% of Renters	Number	% of Total
1990						
Total Overcrowded (>1.0 persons/room)	252	2.0%	710	9.0%	962	4.6%
Severely Overcrowded **(>1.5 persons/room)**	81	0.6%	398	5.0%	479	2.3%
2000						
Total Overcrowded (>1.0 persons/room)	297	2.0%	783	9.6%	1,080	4.7%
Severely Overcrowded **(>1.5 persons/room)**	164	1.1%	483	5.9%	647	2.8%
2010						
Total Overcrowded (>1.0 persons/room)	126	0.8%	368	4.5%	494	2.1%
Severely Overcrowded **(>1.5 persons/room)**	44	0.3%	51	0.6%	95	0.4%

Source: Bureau of the Census (1990, 2000, 2010).

3.2 Overpayment (Cost Burden)

Measuring the portion of a household's gross income that is spent for housing is an indicator of the dynamics of demand and supply. This measurement is often expressed in terms of "over payers": households paying an excessive amount of their income for housing, therefore decreasing the amount of disposable income available for other needs. This indicator is an important measurement of local housing market conditions as it reflects the affordability of housing in the community. Federal and state agencies use overpayment indicators to determine the extent and level of funding and support that should be allocated to a community. State and federal programs typically define over-payers as those lower income households paying over 30 percent of household income for housing costs. A household is considered experiencing a severe cost burden if it spends more than 50 percent of its gross income on housing.

Table B-15 shows that in the 2012-2016 American Community Survey, 5-Year Estimates, 42 percent of households in the San Diego region were paying over 30 percent of their income toward monthly owner housing costs. Similarly in Encinitas, nearly 38.9 percent of all households were overpaying monthly owner

costs. Renters were more likely to overpay than owners; in the region 57.0 percent of renters overpaid, compared to 51.8 percent in Encinitas.

Table B-15: Overpayment (2012-2016)						
	Renters			Owners		
	Paying 30%+	Paying 30%+	% Paying 30%+	Paying 30%+	Paying 30%+	% Paying 30%+
Carlsbad	14,642	7,364	50.3%	20,531	7633	37.2%
Del Mar	1,040	441	42.4%	768	385	50.1%
Encinitas	8,105	4,195	51.8%	10,939	4251	38.9%
Oceanside	24,675	15,247	61.8%	24,176	10600	43.8%
Solana Beach	2,332	1,204	51.6%	2,121	832	39.2%
San Diego Region	494,272	281,913	57.0%	420,723	178,840	42.5%

Note: Households do not equal total presented in other tables because housing costs were not computed for all households.
Source: Fact Finder: 2012-2016 American Community Survey

In the region monthly owner costs were $2,341 and the gross rent was $1,395. In Encinitas, the total cost of housing was higher. Monthly costs were $2,400 for housing units with a mortgage, requiring an annual income of $96,000 to avoid overpayment. Gross rent was $1,791, requiring an annual income of $71,640. (Note that this data reflects those occupying homes between 2012 and 2016 and not current costs and rents.)

The prevalence of overpayment varies significantly by income, tenure, household type, and household size. **Table B-16** provides more overpayment detail by income group for Encinitas. Over 78 percent of the lower income households were overpaying versus 26 percent for the moderate and above moderate households.

Table B-16: Overpayment by Tenure and Income Level, Encinitas (2014)			
Household Income Group	**Total Renters**	**Total Owners**	**Total**
Extremely Low (<=30% MFI)	**1,440**	**1,025**	**2,465**
Cost Burden >30%	*930*	*665*	*1595*
%Cost Burden >30%	*64.6%*	*64.9%*	*64.7%*
Very Low (>30% to <=50% MFI)	**945**	**890**	**1,835**
Cost Burden >30%	*880*	*615*	*1495*
%Cost Burden >30%	*93.1%*	*69.1%*	*81.5%*
Low (>50% to <=80% MFI)	**1,265**	**1,195**	**2,460**
Cost Burden >30%	*1,075*	*840*	*1915*
%Cost Burden >30%	*85.0%*	*70.3%*	*77.8%*
Moderate & Above Moderate (>80% MFI)	**4,370**	**12,075**	**16,445**

Table B-16: Overpayment by Tenure and Income Level, Encinitas (2014)			
Household Income Group	**Total Renters**	**Total Owners**	**Total**
Cost Burden >30%	*885*	*3,415*	*4300*
%Cost Burden >30%	*20.3%*	*28.3%*	*26.1%*
Total	**8,025**	**15,180**	**23,210**
Cost Burden >30%	*3,770*	*5,535*	*9305*
%Cost Burden >30%	*47.0%*	*36.5%*	*40.1%*

Note: Totals may not be exact due to rounding. Please note the Census Bureau uses a special rounding scheme for special tabulations such as these. Therefore, totals may not match other census datasets.
Source: CHAS, based on 2010-2014 ACS.

According to the ACS data, between 2010 and 2014, 47 percent of renter-occupied households in Encinitas spent more than 30 percent of their household income on housing. By contrast, a slightly lower percentage of owner-households (36.5 percent) overpaid for housing.

Housing costs are indicative of housing accessibility. Typically, if housing demand exceeds housing supply, housing costs will rise. As documented earlier, housing costs in Encinitas tend to be higher than those in the San Diego region as a whole. Even higher income families in Encinitas spend a higher proportion of their earnings on housing costs and have proportionally less disposable income for goods and services. In 1990, the City's median household value was $285,891. At the same time, the household median income was $46,614. As of 2016, the median value of a home in Encinitas was $820,400 and the median income of a household was $100,698. This change corresponds to a 187 percent increase in home values and a 116 percent increase in household income. The median price had increased to $1,008,500 by 2018. Depending on the interest rate and/or down-payment and non- mortgage debt, it is reasonably expected that a household would need to earn between $175,000 and $200,000 in order to purchase a home at the City's listed median price.

The Center for Policy Initiatives published a 2014 year-end report, "Making Ends Meet" quantifying the reality that many San Diegans live on incomes above the official poverty measure, but below self-sufficiency. The analysis is based on the Self- Sufficiency Standard rather than the Federal Poverty Threshold because it includes county-specific costs such as housing, transportation, child care, food and taxes, etc. The study found that the cost of a basic lifestyle without public or private assistance is beyond the reach of 38 percent of all working-age households in San Diego County. While costs vary substantially by place, in general housing costs put a tremendous strain on a household's most basic expenses.

4 Special Needs Groups

Certain segments of the population may have more difficulty in finding decent, affordable housing due to their special needs. Special circumstances may be related to one's employment and income, family characteristics, disability and household characteristics, among other factors. Consequently, certain residents in Encinitas may experience higher incidences of housing cost burden, overcrowding or other housing problems. The special needs groups analyzed include the elderly, people with disabilities,

homeless people, single parents, farm workers, large households, and students (**Table B-17**). Many of these groups overlap, for example, single parents may have large households, and many elderly people have a disability of some type. The majority of these special needs groups would be assisted by an increase in affordable housing, especially housing located near public transportation and services. **Table B-18** provides a list of services and facilities available to assist households/persons with special needs. Several of these agencies routinely receive funding from the City of Encinitas Community Development Block Grant (CDBG) program.

Table B-17: Special Needs Groups in Encinitas (2010)

Special Needs Group	# of People or Households	Number of Owners	% of Owners	Number of Renters	% of Renters	% of Total Households or Population
Households with Seniors	5,501	-	-	-	-	22.8%
Senior Headed Households	4,902	3,616	73.8%	1,286	26.2%	20.4%
Seniors Living Alone	2,118	1,190	56.2%	928	43.8%	8.8%
Persons with Disabilities[1]	7,497	-	-	-	-	12.9%
Large Households	1,740	1,153	66.3%	587	33.7%	7.2%
Single-Parent	1,440	-	-	-	-	6.0%
Female Headed Households	5,503	-	-	-	-	22.9%
Female Headed Households with children	974	-	-	-	-	4.0%
People Living in Poverty[1]	4,220	-	-	-	-	7.3%
Farmworkers[1]	103	-	-	-	-	0.2%
Homeless	184	-	-	-	-	0.3%

1. 2010 Census does not contain updates to these variables; 2000 Census data is used.
Source: Bureau of the Census (2000 and 2010) and Regional Housing Task Force on the Homeless (2010)

Table B-18: Services for Special Needs Populations (2016)

Special Needs Services	Program	Details	Location
Emergency Shelters	Catholic Charities, La Posada de Guadalupe	50 beds for homeless men	Carlsbad
	Community Resource Center Libre!	**36 beds for women with children, victims of domestic violence; motel vouchers**	Encinitas
	Encinitas Social Services	General Population	Encinitas
	Brother Benno's Foundation, Good Samaritan Shelter	**12 beds for homeless men**	Oceanside
	Brother Benno's Foundation, House of Martha Ann Mary	**6 beds for women with children, victims of domestic violence**	Oceanside

Table B-18: Services for Special Needs Populations (2016)			
Special Needs Services	**Program**	**Details**	**Location**
	M.I.T.E. North County Detox	**6 beds for adults, substance abuse treatment**	Oceanside
	Women's Resource Center	**26 beds for women with children, victims of domestic violence**	Oceanside
Permanent Supportive Housing	CHW – Marisol Apartments	21 beds for HIV/AIDS patients	Undisclosed
	CHW-Old Grove	4 beds for HIV/AIDS patients	Undisclosed
	CHW-Old Grove	40 beds for farm/day laborers	Undisclosed
	Fraternity House, Inc. – Michelle's House	12 HIV/AIDS patients	Vista
	North County Solutions for Change – Solutions Family Center	40 homeless families with children	Vista
Transitional Housing/Shelters	MHS – Family Recovery Center	90 Women with children and substance abuse treatment	Oceanside
	Women's Resource Center, Transition House	61 Women with children	Oceanside
	Women's Resource Center	26 Women with children, victims of domestic violence	Oceanside
	YMCA Oz North Coast	10 Homeless Youth	Oceanside
Services for the Homeless and At-Risk Families	North Coastal Mental Health	Homeless severely mentally ill	Regional
	North County Lifeline – Hotel Vouchers	General homeless	Oceanside
	North County Community Services Food Bank	Food distribution	San Marcos
	Interfaith Community Services (Winter Shelter)	100 General homeless	Escondido
	Salvation Army Adult Rehab Center	Drug/alcohol abuse	San Diego
	Second Chance	Drug/alcohol abuse	San Diego
	Stepping Stone	Drug/alcohol abuse	San Diego
Senior/Disabled Services	Access Center, Inc.	Independent living assistance	Vista
	Serving Seniors-Senior Community Centers	Meals, health and wellness	Regional

Source: City of Encinitas

4.1 Elderly

Many senior-headed households have special needs due to their relatively low incomes, disabilities or limitations, and dependency needs. Specifically, people aged 65 years and older often have four main concerns:

- *Housing:* Many seniors live alone and may have difficulty maintaining their homes.
- *Income:* People aged 65 and over are usually retired and living on a limited income.
- *Healthcare:* Seniors are more likely to have high health care costs.
- *Transportation:* Many of the elderly rely on public transportation; especially those with disabilities.

In 1990, there were 5,074 persons in this age category (9.1 percent of citywide total). In 2000, there were 6,064 persons (10.4 percent). **Table B-19** shows that 8,393 persons were age 65 and over in Encinitas in 2010. This accounted for about 14 percent of the City's total residents, higher than the percentage share in the region as a whole. By the Year 2035, the senior-aged population will be 16,810, which is expected to be about 22.6 percent of the citywide total. This forecast represents a 200 percent increase from 2010, and a 2.9 percent annual growth rate. While many in this "age wave" have the financial resources they need, many do not. For those who have only small pensions, social security and a few assets, the limited income of many elderly persons often makes it difficult for them to find affordable housing. In the San Diego region, the elderly spend a higher percentage of their income for food, housing, medical care, and personal care than non-elderly families. Many single elderly persons need some form of housing assistance. In 2010, nine percent of the San Diego region's residents aged 65 and over were living in poverty. At the same time, approximately 6.5 percent of the City's elderly population was living in poverty.

Table B-19: Persons Age 65 and Over (2010)

Jurisdiction	Total	Age 65+	Percent Age 65+
Carlsbad	105,328	14,798	14.0%
Del Mar	4,161	866	20.8%
Encinitas	59,518	8,393	14.1%
Oceanside	167,086	21,501	12.9%
Solana Beach	12,867	2,404	18.7%
San Diego Region	3,095,313	351,425	11.4%

Source: Bureau of the Census (2010).

Table B-20: Elderly Households by Tenure and Income Level Encinitas(2011)					
Household by Type, Income and Housing Problem	Renters		Owners		
	Elderly Renters	Total Renters	Elderly Owners	Total Owners	Total Households
Household Income <=30% AMI	**200**	**1440**	**405**	**1025**	**2,465**
% with any housing problems	82.5%	64.6%	67.9%	65.9%	65.1%
% Cost Burden >30%	82.5%	64.6%	66.7%	64.9%	64.5%
% Cost Burden >50%	82.5%	63.2%	51.9%	49.8%	57.4%
Household Income >30 to <=50% AMI	**165**	**945**	**375**	**890**	**1,835**
% with any housing problems	81.8%	93.1%	44.0%	69.7%	81.7%
% Cost Burden >30%	78.8%	93.1%	44.0%	69.1%	81.7%
% Cost Burden >50%	69.7%	70.9%	28.0%	49.4%	60.8%
Household Income >50 to <=80% AMI	**245**	**1265**	**625**	**1195**	**2,460**
% with any housing problems	91.8%	86.6%	44.8%	70.3%	78.6%
% Cost Burden >30%	85.7%	85.0%	44.8%	70.3%	77.8%
% Cost Burden >50%	65.3%	43.5%	24.8%	49.0%	46.1%
Household Income >80% AMI	**410**	**4370**	**2,665**	**12075**	**16,445**
% with any housing problems	36.6%	24.8%	24.6%	29.6%	28.3%
% Cost Burden >30%	30.5%	20.3%	24.4%	28.3%	26.2%
% Cost Burden >50%	12.2%	1.4%	7.7%	10.6%	8.2%
Total Households	**1,020**	**8,025**	**4,070**	**15,180**	**23,210**
% with any housing problems	66.2%	49.8%	33.8%	37.6%	41.8%
% Cost Burden >30	61.8%	47.0%	33.5%	36.5%	40.1%
% Cost Burden >50	48.0%	27.3%	16.6%	18.6%	21.6%

Notes:
Any housing problems: cost burden greater than 30% of income and/or overcrowding and/or without complete kitchen or plumbing facilities.
Other housing problems: overcrowding (1.01 or more persons per room) and/or without complete kitchen or plumbing facilities.
Elderly households: 1 or 2 person household, either person 62 years old or older. Source: CHAS, based on 2010-2014 ACS.

Table B-20 shows elderly households in Encinitas broken down by tenure and income level. A higher proportion of elderly renter-occupied households had housing problems (66 percent) than all renter-occupied households (50 percent). Housing problems are defined as overpayment (cost burden) greater

than 30 percent of income and/or overcrowding and/or without complete kitchen or plumbing facilities. Additionally, 62 percent of elderly renter-occupied households were paying more than 30 percent of their income for housing compared with 47 percent of all renter households. Elderly owner-occupied households, on the other hand, tend to be better off than all owner-occupied households as a group. Just over one-third (34 percent) had any housing problem compared with 38 percent of all owner-occupied households. Likewise, just over one- third (34 percent) were paying more than 30 percent of their income towards housing versus 37percent of all owner-occupied households. Persons with Disabilities

4.2 Persons with Disabilities

According to the Census, a person is considered to have a disability if he or she has difficulty performing certain functions (seeing, hearing, talking, walking, climbing stairs, and lifting and carrying), or has difficulty with certain social roles (for example, doing school work for children, working at a job, and around the house for adults). A person, who is unable to perform one or more activities, uses an assistive device to get around, or who needs assistance from another person to perform basic activities is considered to have a severe disability.

According to the 2012-2016 ACS, approximately 8.5 percent of Encinitas residents over five years of age had a disability. Whereas only 3.2 percent of the population under 18 years of age had a disability, 30.9 percent of the population 65 years and over had a disability – demonstrating that the likelihood of having a disability increases with age. And among persons with a disability, the likelihood that the disability will be severe also increases with age.

Among the difficulties tallied, ambulatory difficulties were the most prevalent (52 percent), followed by independent living difficulties (40 percent), and then hearing and cognitive difficulties (37 percent each) (**Table B-21**). Ambulatory difficulties (60 percent) and hearing and independent living difficulties (46 percent each) were most prevalent among residents 65 years and over.

Table B-21: Disabilities Tallied by Age and Type (2016)

Disability Type	Age 5 to 17	Age 18 to 64	Age 65+	Total
With a hearing difficulty	51	327	1,425	1,803
With a vision difficulty	62	217	436	715
With a cognitive difficulty	239	713	875	1,827
With an ambulatory difficulty	47	651	1,844	2,542
With a self-care difficulty	91	236	1,077	1,404
With an independent living difficulty	--	569	1,410	1,979
Total	295	1,557	3,067	4,919

Notes:
Persons under 5 years of age are not included in this table. Persons may have multiple disabilities.
Source: 2012-2016 American Community Survey

Four factors—affordability, design, location, and discrimination—significantly limit the supply of housing available to households of persons with disabilities. The most obvious housing need for persons with

disabilities is housing that is adapted to their needs. Most single-family homes are inaccessible to people with mobility and sensory limitations. Housing may not be adaptable to widened doorways and hallways, access ramps, larger bathrooms, lowered countertops, and other features necessary for accessibility. Location of housing is also an important factor for many persons with disabilities, as they often rely upon public transportation to travel to necessary services and shops. "Barrier free design" housing, accessibility modifications, proximity to services and transit, and group living opportunities are important in serving this group.

Incorporating barrier-free design in all new multi-family housing is especially important to provide the widest range of choices for the disabled. (Please see the section on Constraints for an expanded discussion.)

Housing advocacy groups report that people with disabilities are often the victims of discrimination in the home buying market. People with disabilities, whether they work or receive disability income are often perceived to be a greater financial risk than persons without disabilities with identical income amounts. The 2000 Census reported that 10.7 percent of persons with disabilities in Encinitas were living below the poverty level. It also estimated that 48 percent of people with disabilities between the ages of 16 and 64 years in the City were not employed.

The Housing Element is required to discuss the housing needs of persons with developmental disabilities. As defined by federal law, "developmental disability" means a severe, chronic disability of an individual that:

- Is attributable to a mental or physical impairment or combination of mental and physical impairments;
- Is manifested before the individual attains age 18 (Note: State of California has a manifestation age of 18 years of age, Federal is 22 years);
- Is likely to continue indefinitely;
- Results in substantial functional limitations in three or more of the following areas of major life activity: a) self-care; b) receptive and expressive language; c) learning; d) mobility; e) self-direction; f) capacity for independent living; or g) economic self- sufficiency;
- Reflects the individual's need for a combination and sequence of special, interdisciplinary, or generic services, individualized supports, or other forms of assistance that are of lifelong or extended duration and are individually planned and coordinated.

The Census does not record developmental disabilities. According to the U.S. Administration on Developmental Disabilities, an accepted estimate of the percentage of the population that can be defined as developmentally disabled is 1.5 percent. This equates to 893 persons in the City of Encinitas with developmental disabilities based on the 2010 Census population. The San Diego Regional Center, which provides services for persons with developmental disabilities, publishes client statistics for its area offices. The City of Encinitas is served by the North County office in Carlsbad. As of February 2017, the North County office served 5,614 persons. The Encinitas population represents about seven percent of the North County population. Therefore, it can be generally estimated that about 393 clients served by the North County area office of the Regional Center are Encinitas residents.

Many developmentally disabled persons can live and work independently within a conventional housing environment. More severely disabled individuals require a group living environment where supervision is provided. The most severely affected individuals may require an institutional environment where medical attention and physical therapy are provided. Because developmental disabilities exist before adulthood, the first issue in supportive housing for the developmentally disabled is the transition from the person's living situation as a child to an appropriate level of independence as an adult.

4.3 Large Households

Large households are identified as a group with special housing needs because of the limited availability of adequately sized, affordable housing units. Large households often have lower incomes and frequently live in overcrowded smaller dwelling units, which can result in accelerated unit deterioration. **Table B-22** compares the number of large households in Encinitas to that in the county as a whole. In 2010, 7.2 percent of households in Encinitas consisted of five or more persons, compared to almost 14 percent region-wide.

Table B-22: Large Households Encinitas and San Diego Region (2010)

Jurisdiction	Persons in Household			Total Households
	5	6	7+	
Encinitas	1,111	357	272	1,740
Percent of Total	4.6%	1.5%	1.1%	7.2%
San Diego County	80185	36149	32447	148,781
Percent of Total	7.4%	3.3%	3.0%	13.7%

Source: Bureau of the Census (2010).

As shown in **Table B-23**, a greater percentage of larger households had housing problems (55 percent) than all households (42 percent) in 2014. Housing problems can be defined as cost burden (overpayment) greater than 30 percent of income and/or overcrowding and/or without complete kitchen or plumbing facilities. Renter-occupied large households (as a group) tend to have more housing problems than owner-occupied large households. The majority of renter-occupied large households (78 percent) had one or more housing problems, while just over half of the larger owner-occupied households (51 percent) had one or more housing problem

Table B-23: Large Households by Tenure and Income Level, Encinitas (2014)

Household by Type, Income, & Housing Problem	Renters		Owners		Total Households
	Large Related (5 or more members)	Total Renters	Large Related (5 or more members)	Total Owners	
Household Income <=30% AMI	**0**	**1,440**	**25**	**1,025**	**2,465**
% with any housing problems	--	64.6%	100.0%	65.9%	65.1%
% Cost Burden >30%	--	64.6%	80.0%	64.9%	64.5%
% Cost Burden >50%	--	63.2%	80.0%	49.8%	57.4%
Household Income >30 to	**60**	**945**	**0**	**890**	**1,835**

Table B-23: Large Households by Tenure and Income Level, Encinitas (2014)					
Household by Type, Income, & Housing Problem	Renters		Owners		Total Households
	Large Related (5 or more members)	Total Renters	Large Related (5 or more members)	Total Owners	
<=50% AMI					
% with any housing problems	100.0%	93.1%	--	69.7%	81.7%
% Cost Burden >30%	100.0%	93.1%	--	69.1%	81.7%
% Cost Burden >50%	58.3%	70.9%	--	49.4%	60.8%
Household Income >50 to 80% AMI	15	1,265	155	1,195	2,460
% with any housing problems	100.0%	86.6%	80.6%	70.3%	78.6%
% Cost Burden >30%	100.0%	85.0%	80.0%	70.3%	77.8%
% Cost Burden >50%	0.0%	43.5%	77.4%	49.0%	46.1%
Household Income >80% AMI	105	4,370	855	12,075	16,445
% with any housing problems	61.9%	24.8%	44.4%	29.6%	28.3%
% Cost Burden >30%	47.6%	20.3%	41.5%	28.3%	26.2%
% Cost Burden >50%	0.0%	1.4%	10.5%	10.6%	8.2%
Total Households	**180**	**8,025**	**1,035**	**15,180**	**23,210**

Note: Any housing problems: cost burden greater than 30% of income and/or overcrowding and/or without complete kitchen or plumbing facilities.
Source: CHAS, based on 2010-2014 ACS

4.4 Single-Parent Households

Single parents with dependent children represent another important group with special housing needs. Single-parent households often require special consideration and assistance because they tend to have lower incomes and a greater need for daycare, and related facilities. **Table B-24** shows that in 2016, Encinitas had 1,292 single-parent households. Of these, the majority (70 percent) were female-headed households

Table B-24: Single-Parent Households Encinitas and San Diego Region (2016)					
	Total HHs	Single- Parent HHs	Percent Total HHs	Female-Headed HHs with Children	Percent Female Headed HHs
Encinitas	23,695	1,292	5.4%	908	70.3%
San Diego Region	1,103,128	94,202	8.5%	68,465	72.7%

HHs = Households
Source: Bureau of the Census (2016

4.5 Residents Living in Poverty

Families, particularly female-headed families, are disproportionately affected by poverty. In 2000, seven percent of the City's total residents (4,220 persons) were living in poverty. Approximately 14 percent of female-headed families with children, however, had incomes below the poverty level. The 2011-2013 ACS reports also reports 8.4 percent of the city population and almost 17.6 percent of the female-headed families living below the poverty line. Based on the 2011-2013 ACS, 11,416 households were at 200 percent of the poverty level.

4.6 Homeless

Throughout the country and the San Diego region, homelessness has become an increasingly important issue. Factors contributing to the rise in homelessness include a lack of housing affordable to low and moderate income persons, increases in the number of persons whose incomes fall below the poverty level, reductions in public subsidies to the poor, and the de-institutionalization of the mentally ill.

State law mandates that municipalities address the special needs of homeless persons within their jurisdictional boundaries. "Homelessness" as defined by the U.S. Department of Housing and Urban Development, describes an individual (not imprisoned or otherwise detained) who:

- Lacks a fixed, regular, and adequate nighttime residence; and
- Has a primary nighttime residence that is:
    - A supervised publicly or privately operated shelter designed to provide temporary living accommodations (including welfare hotels, congregate shelters, and transitional housing for the mentally ill);
    - An institution that provides a temporary residence for individuals intended to be institutionalized; or
    - A public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings.

This definition does not include persons living in substandard housing, (unless it has been officially condemned); persons living in overcrowded housing (for example, doubled up with others), persons being discharged from mental health facilities (unless the person was homeless when entering and is considered to be homeless at discharge), or persons who may be at risk of homelessness (for example, living temporarily with family or friends.)

The Regional Task Force on the Homeless (RTFH) is San Diego County's leading resource for information on issues of homelessness. Established in 1985, the Task Force promotes a regional approach as the best solution to ending homelessness in San Diego County. The Task Force is a public/private effort to build a base of understanding about the multiple causes and conditions of homelessness. According to the Task Force, the San Diego region's homeless population can be divided into two general groups: (1) urban homeless, and (2) rural homeless, including farm workers and day laborers who primarily occupy the hillsides, canyons and fields of the northern regions of the county. It is important to recognize that homeless individuals may fall into more than one category (for example, a homeless individual may be a veteran and a substance abuser), making it difficult to accurately quantify and categorize the homeless.

Since the homeless population is very difficult to quantify, Census information on homeless populations is often unreliable, due to the difficulty of efficiently counting a population without permanent residences. The Task Force compiles data from a physical Point-In-Time (PIT) count of sheltered (emergency and transitional) and street homeless persons. The 2011, 2015, and 2017 counts were conducted in January of each respective calendar year and the results are shown in **Table B-25**. Counts for 2018 were conducted in January 2018, however, the data is not yet available. Oceanside, Carlsbad, and Encinitas had the largest homeless populations of the North County Coastal cities. In 2011, of the 184 homeless persons in Encinitas, 50 were sheltered and 134 were unsheltered. In 2017, 33 were sheltered and 84 were unsheltered; meaning however, that an overall reduction was achieved in Encinitas, although fewer were sheltered.

There is no data presently available documenting the increased level of demand for shelter in Encinitas during particular times of year. Due to the mild climate, the only time of year when increased demand may be a factor is during the winter months (November to March), when homeless persons may be attracted to the City's mild climate. The biennial homeless count always takes place in the last week of January, a period when demand for shelter typically is at the highest. Since the year-round need described in this section is based on that annual count, the need for emergency shelter either year-round or seasonally is not likely to be greater than that found during the biennial homeless count.

Table B-25: Homelessness in North County Coastal Cities and the San Diego Region (2011 – 2017)

Jurisdiction	2011 Total	2015 Total	2017 Total
Carlsbad	83	88	160
Del Mar	11	0	3
Encinitas	184	123	117
Oceanside	452	420	531
Solana Beach	7	3	3
San Diego Region	9,020	8,529	9,116

Source: Regional Housing Task Force on the Homeless (2011, 2015 and 2017).

4.7 Agricultural Workers

Due to the high cost of housing and low wages, a significant number of migrant farm workers have difficulty finding affordable, safe and sanitary housing. According to the State Employment Development Department, the average farm worker earned between $22,000 and $35,000 annually.2 This limited income is exacerbated by their tenuous and/or seasonal employment status. It is estimated that there are between 100 and 150 farm worker camps located throughout the San Diego region, primarily in rural areas. These encampments range in size from a few people to a few hundred and are frequently found in fields, hillsides, canyons, ravines, and riverbeds, often on the edge of their employer's property. Some workers reside in severely overcrowded dwellings, in packing buildings, or in storage sheds.

Farmworkers needs also are difficult to quantify due to the fear of job loss and the fear of authority. Thus, migrant farm workers, in particular, are given low priority when addressing housing needs, and often receive the least hospitable housing. The San Diego County Regional Task Force on the Homeless

estimates that there are at least 2,300 farm workers and migrant day laborers who currently experience homelessness in the San Diego region.

Table B-26 shows that approximately 368 Encinitas residents were employed in agriculture, accounting for less than three percent of the region's agricultural workforce and less than two percent of the City's employment base.

Table B-26: Agricultural Workers (2012-2016)			
Jurisdiction	**Agriculturaland Mining Workers**	**Percent of Total Employment**	**Percent of Regional Ag. Employment**
Carlsbad	407	0.8%	2.9%
Del Mar	0	0	0
Encinitas	368	1.2%	2.7%
Oceanside	1,061	1.3%	7.6%
Solana Beach	84	1.2%	0.6%
San Diego Region	13,855	0.9%	100%
Source: Fact Finder: 2012-2016 American Community Survey			

Farm employment in Encinitas is almost exclusively related to horticultural operations, and in particular, the flower growing industry. In general, the employees in the City's horticultural industry are reported to be skilled to highly skilled, long-term workers with established roots in the community. The City's flower-growing operations report that they employ a stable, year-round labor force.

For low-income agricultural works who desire to live in Encinitas, their need for affordable housing would be similar to that of other lower income persons, and affordable housing in the City would serve farmworkers as well as others employed in low-wage jobs. Provisions required by State law regarding employee housing and emergency shelters may also assist farmworkers.

4.8 Migrant Day Laborers

In Encinitas and other North County locales, numerous Hispanic immigrants seek work as day laborers. Because of the City's proximity to the Mexican border and its location along a major transportation route, Encinitas provides a convenient temporary place to seek work before moving on to industrial or agricultural jobs further north. The availability of jobs, including temporary day-jobs, and the number of open spaces which can be utilized as transient campsites, make Encinitas attractive to these workers.

A particular problem in providing funds to farm workers and day laborers is that U.S. Department of Housing and Urban and Development (HUD) funds cannot be used to assist persons who are not legally in the United States. While state law does not allow questions of renters regarding legal residency, federal programs, including Section 8 vouchers, require legal residency.

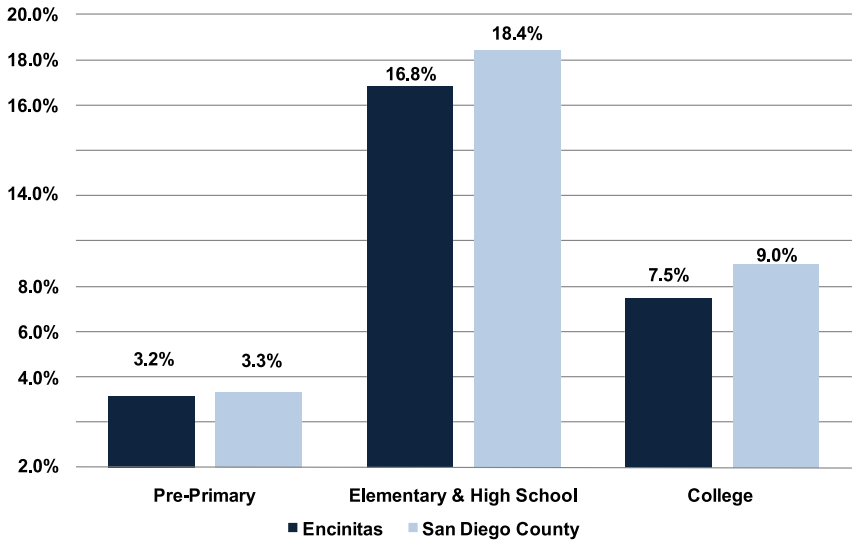
4.9 Students

The need for student housing is another significant factor affecting housing demand. Although students may produce only a temporary housing need (but the need is ongoing as long as the educational

institution is in session), the impact upon housing demand is critical in areas that surround universities and colleges. Typically, students are low income and are, therefore, affected by a lack of affordable housing, especially within easy commuting distance from campus. They often seek shared housing situations to decrease expenses, and can be assisted through roommate referral services offered on and off campus. The lack of affordable housing also influences choices students make after graduation, often with a detrimental effect upon the region's economy. College graduates provide a specialized pool of skilled labor that is vital to the economy; however, the lack of affordable housing often leads to their departure from the region.

Figure B-3 shows that in 2000, approximately eight percent of Encinitas residents were enrolled in college, a lower percentage than the region as a whole. Although Mira Costa Community College is located in Encinitas, no housing is designated for students on campus. Community colleges typically do not provide housing because they are colleges that serve the educational needs of students already residing in the local community.

Figure B-3: Percent of Residents Enrolled in School (2000)



Based on the 2008-2012 American Community Survey, 5 Year Estimates, the percent of residents enrolled in college dropped from 7.5 percent to 6.2 percent. The percent of elementary and high school students dropped quite considerably during this same time period, moving from 16.8 percent in 2000 to 8.0 percent.

Since 2010 the population of those under 18 has stabilized, perhaps due to the excellent local schools. In 2010, there were 12,120 persons in the City that were of school age (i.e. under the age of 18 years). This represented about 20.3 percent of the total City population. The 2016 estimated school-age population 20.8 percent of the total population.

5 Housing Stock Characteristics

A community's housing stock is defined as the collection of all housing units located within the jurisdiction. The characteristics of the housing stock, including growth, type, age and condition, tenure, vacancy rates, housing costs, and affordability are important in determining the housing needs for the community. This section details the housing stock characteristics of Encinitas to identify how well the current housing stock meets the needs of current and future residents of the City.

5.1 Housing Growth

Table B-27 shows that between 2000 and 2010, Encinitas' housing stock increased by four and a half percent. In comparison, the adjacent Carlsbad had the greatest amount of growth with a 29.6 percent increase in units.

Table B-27: Housing Unit Growth (2000 and 2010)			
Jurisdiction	**2000**	**2010**	**Percent Change 2000-2010**
Carlsbad	33,812	43,844	29.6%
Del Mar	2,557	2,542	0.6%
Encinitas	23,829	24,877	4.4%
Oceanside	59,583	64,758	8.6%
Solana Beach	6,456	6,521	1.0%
San Diego Region	1,040,149	1,149,426	10.5%
Source: Bureau of the Census (2000 and 2010			

5.2 Projected Housing Units

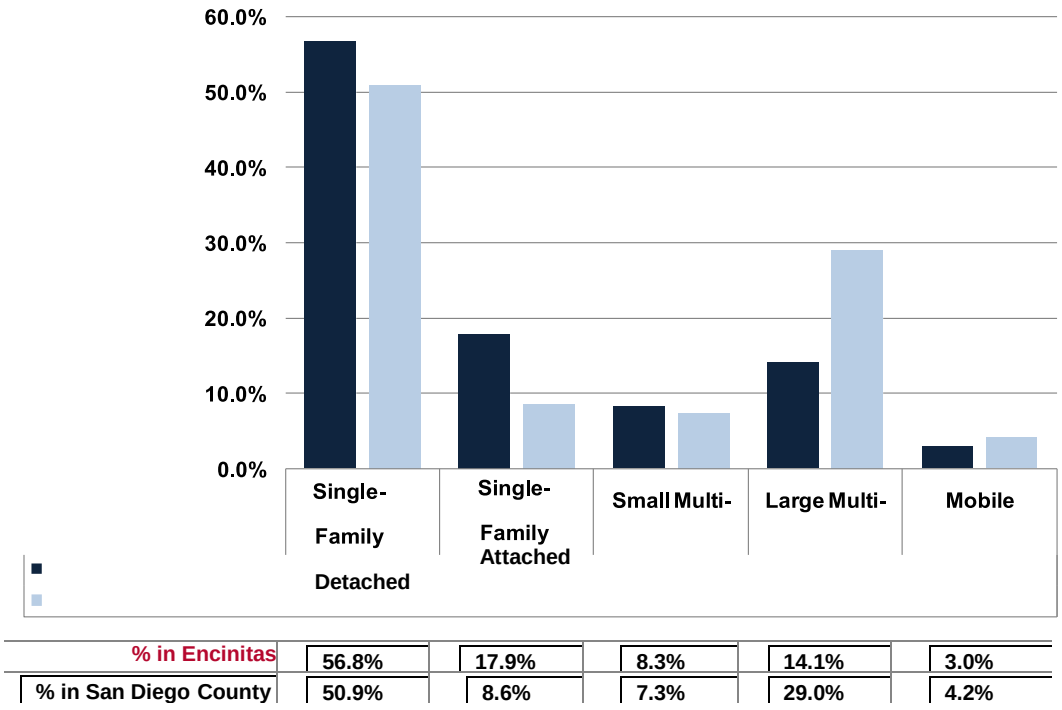
Table B-28 shows that, between 2010 and 2050, Encinitas will experience an increase of 8.6 percent in housing stock and approximately 29 percent more units will be added in the region. All of the North County coastal cities are projected to have slower rates of housing growth compared to the region between 2010 and 2050.

Table B-28: Housing Unit Growth (Forecasted to 2050)			
Jurisdiction	**2010**	**2050**	**Percent Change 2010-2050**
Carlsbad	44,422	50,212	13%
Del Mar	2,606	2,667	2.3%
Encinitas	25,481	27,667	8.6%
Oceanside	65,014	71,248	9.6%
Solana Beach	6,521	7,118	9.2%
San Diego Region	1,158,076	1,494,804	28.8%
Source: Bureau of the Census (2010) and SANDAG Series 13 Subregional Growth Projections.			

5.3 Housing Type

Figure B-4 shows that in 2010, the largest percentage (57 percent) of housing units in Encinitas was single-family detached units. Approximately 18 percent were single- family attached units, eight percent were small multi-family developments with two to four units, 14 percent were large multi-family developments with five or more units, and three percent were mobile homes/trailers.

Figure B-4: Type of Housing Unit (2010)



Source: California Department of Finance (2010).

Table B-29 shows that the percentage of both single- and multi-family housing units in Encinitas is projected to fluctuate slightly, while the percentage of mobile homes slightly decreases. This figure may be misleading because SANDAG forecasts mobile homes by determining the region's mobile home growth rate and applying it to each jurisdiction. Also, as noted previously, SANDAG prepared a 2013 update (Series 13) to its regional forecasting model. The numbers presented in this section rely on data available through the Series 13 forecast and Department of Finance estimates for 2010.

Table B-29: Projected Housing Unit by Type (2010-2030)

Housing Type	% of 2010 Total	% of 2020 Total	% of 2030 Total
Single-Family	74.6%	74.6%	73.6%
Multi-Family	22.4%	22.4%	23.5%
Mobile Homes	3.0%	3.0%	2.9%
Total Housing	100%	100%	100%

Note: The number of 2010 housing units estimated by the Department of Finance deviates from the 2010 Census slightly. However, the 2010 Census does not contain information on housing type.

Table B-29: Projected Housing Unit by Type (2010-2030)			
Housing Type	**% of 2010 Total**	**% of 2020 Total**	**% of 2030 Total**
Source: California Department of Finance (2010) and SANDAG Regionwide Forecast (2030).			

5.4 Housing Availability and Tenure

Housing tenure and vacancy rates are important indicators of the supply and cost of housing. Housing tenure refers to whether a unit is owned or rented. Tenure is an important market characteristic because it is directly related to housing types and turnover rates. The tenure distribution of a community's housing stock can be an indicator of several aspects of the housing market, including the affordability of units, household stability and residential mobility among others. In most communities, tenure distribution generally correlates with household income, composition and age of the householder.

In 2010, 59 percent of the housing units in Encinitas were owner-occupied, while 35 percent were renter-occupied (**Table B-30**). This represents a decrease in the homeownership rate from 2000. As shown in the following **Table B-30**, owner-occupied households had a slightly higher average household size than renters. Approximately

69 percent of the rental units were occupied by one- and two-person households compared to 58 percent of owner households.

Please note that in some of these tables, 2010 estimates were utilized, which are consequentially higher than 2010 U.S. Census counts. The numbers presented in this section rely on Department of Finance estimates for 2010 (as the best planning data available).

Table B-30: Housing Unit Tenure (2000-2010)				
Tenure	**2000**		**2010 DOF**	
	Number	**Percent**	**Number**	**Percent**
Owner-Occupied	14,644	61.4%	15,187	59.0%
Renter -Occupied	8,190	34.3%	8,895	34.6%
Vacant	1,033	4.3%	1,658	6.4%
Total	23,867	100.0%	25,740	100.0%
Source: Bureau of the Census (2000 and 2010) and Department of Finance (DOF) 2018.				

Table B-31: Tenure by Household Size (2010)		
Tenure	**% of Total Owner-Occupied Units**	**% of Total Renter-Occupied Units**
1-Person	20.3%	36.3%
2-Person	38.0%	32.9%
3-Person	17.6%	14.7%
4-Person	16.6%	9.5%
5 or more Person	7.5%	6.6%

Table B-31: Tenure by Household Size (2010)		
Tenure	**% of Total Owner-Occupied Units**	**% of Total Renter-Occupied Units**
Total	100.0%	100.0%
Source: Bureau of the Census (2010).		

Persons per household in 2017, based on the 2010 Census as the benchmark, are estimated to be 2.52 persons per household according to the State Department of Finance.

Vacancy rates are an important housing indicator because they indicate the degree of choice available. High vacancy rates usually indicate low demand and/or high supply conditions in the housing market. Too high of a vacancy rate can be difficult for owners trying to sell or rent. Low vacancy rates usually indicate high demand and/or low supply conditions in the housing market. Too low of a vacancy rate can force prices up making it more difficult for low and moderate income households to find housing. Vacancy rates between two to three percent are usually considered healthy for single-family housing; and five to six percent for multi-family housing. However, vacancy rates are not the sole indicator of market conditions. They must be viewed in the context of all the characteristics of the local and regional market.

According to the 2010 Census, the overall vacancy rate in Encinitas was 6.0 percent (**Table B-32**). However, almost 40 percent of the vacant units were vacation homes that were seasonally occupied. Vacant rental units represented about 1.9 percent of all units in the City (or 5.3 percent of all rental units) and vacant ownership units represented about 0.6 percent of all units (or one percent of all ownership units). Overall, the vacancy rates reflected a relatively healthy housing market.

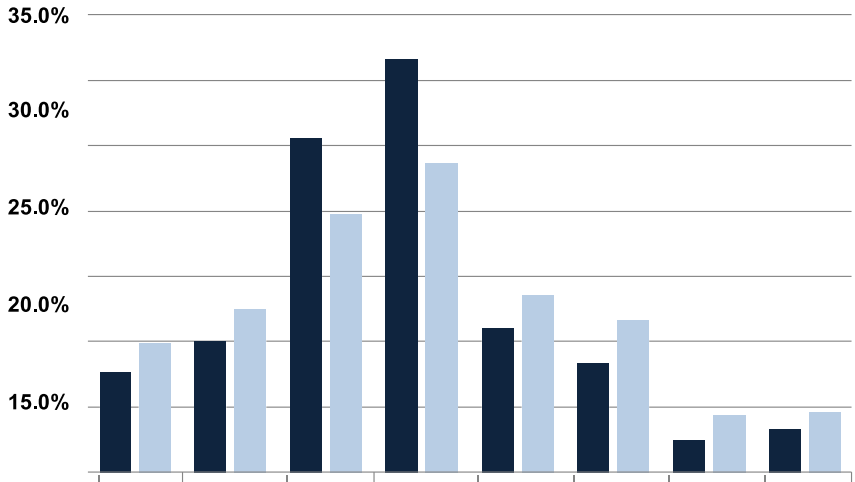
Table B-32: Vacancy Rates in Encinitas (2010)				
	Number	**Percent of Total**	**Percent of Vacant**	**Number**
Total Housing Units	24,877	100.0%	--	24,877
Total Occupied Units	23,295	93.6%	--	23,295
Total Vacant Units	1,582	6.0%	--	1,582
Vacant (Available)				
For Rent	498	1.9%	30.0%	498
For Sale	161	0.6%	9.7%	161
Vacant (Unavailable)				
Rented or Sold	77	0.3%	4.6%	77
Seasonal	661	2.6%	39.9%	661
Other	261	1.0%	15.7%	261
Source: Bureau of the Census (2010).				

According to the State Department of Finance, the 2017 vacancy rate was estimated to be 6.9 percent for all housing units in the City. The increase in vacancies may well represent additional vacation homes that are only seasonally occupied.

5.5 Housing Age and Condition

Housing age can be an important indicator of housing condition within a community. Like any other tangible asset, housing is subject to gradual physical or technological deterioration over time. If not properly and regularly maintained, housing can deteriorate and discourage reinvestment, depress neighboring property values, and eventually impact the quality of life in a neighborhood. Many federal and state programs also use the age of housing as one factor in determining housing rehabilitation needs. Typically, housing over 30 years of age is more likely to have rehabilitation needs that may include new plumbing, roof repairs, foundation work and other repairs. In Encinitas, approximately 57 percent of the housing stock may potentially require some improvements based on the age of the structures, as shown in **Figure B-5**. Approximately 25 percent of the housing stock is approaching 50 years of age or older and are more likely to require major rehabilitation. Housing that is not maintained can discourage reinvestment, depress neighboring property values, and can negatively impact the quality of life in a neighborhood. Improving housing is an important goal of the City. The age of the City's housing stock indicates a potential need for continued code enforcement, property maintenance and housing rehabilitation programs to stem housing deterioration. Overall, however, given the moderate to higher incomes of residents, deferred maintenance is not a prevalent issue in the City. Property owners typically take pride in maintaining their homes and many have the financial means to do so.

Figure B-5: Year Housing Built



	2000-2010	1990-2000	1980-1989	1970-1979	1960-1969	1950-1959	1940-1949	1939 or earlier
% in Encinitas	7.6%	10.0%	25.6%	31.6%	11.1%	8.4%	2.5%	3.3%
% in San Diego County	9.9%	12.5%	19.7%	23.7%	13.5%	11.6%	4.4%	4.6%

Source: California Department of Finance (2010).

5.5.1 Lacking Plumbing and Kitchen Facilities

A city can estimate the number of substandard housing units within its jurisdiction using a number of sources of information, such as data collected by the Census Bureau. The 2005-2009 ACS reports 61 units in Encinitas were lacking complete plumbing facilities and 160 units lacking complete kitchens.

5.5.2 Value of Housing

The value of housing is another potential indicator of housing stock condition. In 2018, the median housing value in Encinitas was $1,008,500. Housing values are expected to continue the relative growth trend since 2011. Those units below $50,000 in value can be assumed to have significant deterioration. According to Census 2000 data, 28 units, or 0.2 percent of the housing stock, were valued at less than $50,000. It is unlikely that any homes are valued at less than $50,000 today.

5.5.3 Pre-1940 Housing

The U.S. Department of Housing and Urban Development (HUD) may consider units substandard if they were built before 1940. **Figure B-5** shows that 835 units in Encinitas were built before 1940, approximately three percent of the total housing in the City. Regionwide, five percent of units were built before 1940 (see **Figure B-5**).

5.5.4 Substandard Housing

The City has a minimal number of units in need of repair or rehabilitation, especially given the high percentage of units that have been recently constructed. Based upon a combination of previous "windshield surveys", observations and experiences of the code enforcement and planning staff, and indicators from other surveys, the City has estimated that approximately 50-100 units would fall into this category, although most, if not all, meet minimum housing and building code requirements.

5.6 Housing Costs and Affordability

Housing costs are indicative of housing accessibility to all economic segments of the community. Typically, if housing supply exceeds housing demand, housing costs will fall. If housing demand exceeds housing supply, housing costs will rise. In Encinitas, housing costs tend to be higher than in the San Diego region. The high cost of housing can be attributed to factors such as higher land costs and coastal location. This section summarizes the cost and affordability of the housing stock to Encinitas residents.

5.6.1 Homeownership Market

The median household value in 1990 was $285,891. The median household value increased 124 percent to $353,655 by 2000. The median value increased another 193 percent to $683,000 from 2000 to 2010. The overall change from 1990 to 2010 was 239 percent. By the summer 2014, the median priced home in Encinitas was $769,000, 24% higher than the North County Coastal median of $619,000. In 2016, median home price in Encinitas was estimated at $820,400, and in 2018 median home price is estimated at $1,008,500.

5.7 Rental Market

The primary source for renter costs in the San Diego region is the San Diego County Apartment Association (SDCAA). SDCAA conducts two surveys of rental properties per year. In Fall 2017, surveys were sent out to rental property owners and managers throughout San Diego County.

Table B-33: Encinitas Average Monthly Rent (2017)						
Zip Code	Unit Type	Fall 2017 Units/Properties Surveyed	Fall 2017 Monthly Rent	Fall 2017 Rent/Sq. Foot	Spring 2017 Avg Rent	Fall 2016 Avg. Rent
Encinitas 92023, 92024	Studio	11/2	$1414	$4.32	$0	$1000
	1 BR	30/3	$1734	$3.83	$1543	$1579
	2 BR	26/3	$2819	$3.41	$1454	$1786
	3+ BR	0/0	$0	$0	$0	$2160
Source: San Diego County Apartment Association (2017)						

The table shows that in the spring of 2017 average monthly rents in Encinitas ranged from $1,414 for a studio apartment to $2,819 for a two-bedroom apartment; no three bedroom apartments were available for rent. Rents had increased dramatically from Fall 2016, increasing by 41 percent for studio apartments and by 58 percent for two-bedroom apartments.

5.8 Affordability by Income Level

Although California is expected to experience an expanding economy over the next several years, lower overall wages associated with the expanding service and information sectors of the economy portend an increasing affordability problem. Housing affordability can be inferred by comparing the cost of renting or owning a home in the City with the maximum affordable housing costs for households at different income levels. Taken together, this information can generally show who can afford what size and type of housing and indicate the type of households most likely to experience overcrowding and overpayment.

The federal Department of Housing and Urban Development (HUD) conducts annual household income surveys nationwide to determine a household's eligibility for federal housing assistance. Based on this survey, the California Department of Housing and Community Development (HCD) developed income limits that can be used to determine the maximum price that could be affordable to households in the upper range of their respective income category. Households in the lower end of each category can afford less by comparison than those at the upper end. The maximum affordable home and rental prices for residents in San Diego County are shown in **Table B-34**.

Table B-34 shows the maximum amount that a household can pay for housing each month without incurring a cost burden (overpayment). This amount can be compared to current housing asking prices and market rental rates to determine what types of housing opportunities a household can afford.

Extremely Low income Households

Extremely low income households earn up to $19,100 for a one-person household and up to $29,450 for a five-person household in 2017. Extremely low income households cannot afford market-rate rental or ownership housing in Encinitas without assuming a cost burden.

Very Low income Households

Very low income households earn up to $31,850 for a one-person household and up to $49,100 for a five-person household in 2017. A very low income household can generally afford homes offered at prices between $114,000 and $176,000, adjusting for household size. Given the costs of ownership housing in

Encinitas, very low income households would not be able to afford a home in the City. Similarly, very low income renters could not afford appropriately-sized market- rate rental units in Encinitas. Including utilities, a very low income household at the maximum income limit can afford to pay approximately $797 to $1,228 in monthly rent, depending on household size.

Low income Households

Low income households earn up to $50,950 for a one-person household and up to $78,600 for a five-person household in 2017. The affordable home price for a low income household at the maximum income limit ranges from $183,000 to $282,000. Including utilities, maximum affordable rent for a one-person low income household is $1,274 in rent per month and for a five-person low income household is $1,965 per month.

Moderate Income Households

Moderate income households earn between up to 120 percent of the County's Area Median Income – up to $$66,600 for a one-person household and $102,750 for a five-person household in 2017. The maximum affordable home price for a moderate income household is $238,000 for a one-person household and $368,000 for a five-person family. Even moderate income households in Encinitas will have trouble purchasing adequately-sized homes. Including utilities, the maximum affordable rent payment for moderate income households is between $1,665 and $2,569 per month. Appropriately- sized studio and one-bedroom units are generally affordable to households in this income group, but two-bedroom and larger rental units are either not affordable or not available.

Table B-34: Estimated Affordable Housing Cost (2017)

Annual Income	Affordable Housing Cost Burden	Utilities, Taxes and Insurance	Affordable Price	Rent or Purchase	Rent/Sale Taxes	Sale Rent	Insurance
Extremely Low Income (30% of Area Median Income)							
1-Person	$19,100	$478	$31	$95	$112	$68,444	$447
3-Person	$24,550	$614	$40	$120	$144	$87,974	$574
4-Person	$27,250	$682	$50	146	$160	$97,650	$632
5-Person	$29,450	$737	$63	$182	$172	$105,533	$674
Very Low Income (50% of Area Median Income)							
1-Person	$31,850	$797	$31	$95	$186	$114,134	$766
3-Person	$40,950	$1024	$40	$120	$239	$146,743	$984
4-Person	$45,450	$1137	$50	146	$266	$162,869	$1,087
5-Person	$49,100	$1228	$63	$182	$287	$175,948	$1,165
Low Income (80% Area Median Income)							
1-Person	$50,950	$1274	$31	$95	$298	$182,878	$1,243
3-Person	$65,550	$1639	$40	$120	$383	$234,896	$1,599
4-Person	$72,750	$1819	$50	146	$425	$260,697	$1,769
5-Person	$78,600	$1965	$63	$182	$459	$281,660	$1,902
Median Income (100% Area Median Income)							
1-Person	$55,500	$1388	$31	$95	$324	$198,882	$1,357
3-Person	$71,350	$1784	$40	$120	$416	$255,680	$1,744
4-Person	$79,300	$1983	$50	146	$463	$284,168	$1,933
5-Person	$85,650	$2142	$63	$182	$500	$306,923	$2,079
Moderate Income (120% AMI)							
1-Person	$66,600	$1665	$31	$95	$389	$238,659	$1,634
3-Person	$85,650	$2142	$40	$120	$500	$306,923	$2,102
4-Person	$95,150	$2379	$50	146	$555	$340,966	$2,329

5-Person	$102,750	$2569	$63	$182	$599	$368,200	$2,506

Source: California Department of Housing and Community Development (2017) and Kimley-Horn and Associates Inc. Assumptions: 2017 HCD income limits;; 15% of monthly affordable cost for taxes and insurance; 10% down payment; and 5.5% interest rate for a 30-year fixed-rate mortgage loan. Utilities based on San Diego County Utility Allowance based on assumed unit size and number of occupants. . All numbers are rounded -to the nearest dollar. Maximum rent includes utility allowance

6 Affordable Housing

State law requires that the City identify, analyze, and propose programs to preserve existing multi-family rental units that are eligible to convert to non-low-income housing uses due to termination of subsidy contract, mortgage prepayment, or expiring use restrictions during the next ten years. Thus, this at-risk housing analysis covers the period until December 31, 2028. Consistent with State law, this section identifies publicly assisted housing units in Encinitas, analyzes their potential to convert to market rate housing uses, and analyzes the cost to preserve or replace those units.

6.1 Publicly Assisted Housing

The City maintains programs to provide quality housing affordable to different income groups for a healthy and sustainable community. Local affordable housing funds have been used to assist in providing affordable housing. **Table B-35** lists those projects in Encinitas that are required to be evaluated in the Housing Element. No projects are at risk of conversion to market-rate housing within the next ten years. The Element, therefore, does not contain a detailed analysis of "at risk" units.

Table B-35: Inventory of Assisted Rental Housing Projects (2018)

Development Name	Address	Funding Source	Exp. Date	Type	Units
Esperanza Garden Apartments	920 Regal Rd	CDBG, Tax Credit	Dec, 2049	Family	10
Su Casa Apartments	620 Melba Rd	HUD 236	June, 2046	Family	28
Manchester Apartments	2074 Manchester Ave	CDBG	April, 2053	General	4
Cantebria Senior Homes	645 Via Cantebria	HUD 202, HOME	June, 2060	Senior	44
Encinitas Ranch Apartments	1100 Garden View Rd.	HOME	Feb, 2058	General	22
Pacific Pines Condominiums	S. El Camino Real	CDBG/ HOME	Perpetuity	General	16
2nd Street Apartments	858 2nd St.	HOME	Jan, 2056	General	4
Boathouse Apartments	726-32 Third Street	City Funds	Perpetuity	General	4
Iris Apartments	639-643 Vulcan Ave	City funds, HOME, Tax-Credit	Perpetuity	General	20
Total					152

Source: City of Encinitas Planning Department(2018)

6.2 Resources for Preserving Affordable Units

Available public and non-profit organizations with the capacity to preserve assisted housing developments include San Diego County, the City of Encinitas, and various non-profit developers, including Mercy

Housing, North County Housing, Community Housing Works, and Habitat for Humanity. Financial resources available include bond financing, as well as CDBG and HOME funds, Section 8 rental assistance, and Affordable Housing Trust funds. However, no units are at risk until 2046.

6.3 Tenant Based Rental Assistance

The Housing Authority of the City of Encinitas has 136 Section 8 Housing Choice Vouchers allocated, although HUD funding only allows for approximately 101 to be leased given the local market conditions. Vouchers are closely split among disabled households, elderly households, and family households. As of this writing, there are currently 680 households on the City's Housing Choice Vouchers waiting list. Disabled households in Encinitas have the most need of those on the waiting list. Historically, an average of 6 households are admitted into the Section 8 voucher program each year.

Table B-36: Rental Assistance in Encinitas (2017)

Household Type	Households Currently Receiving Section 8 Vouchers	Household on Waiting List for Section 8 Assistance
Family	26	29%
Elderly	50	30%
Disabled	25	41%
Other (Single Households)	--	0%
Total	**101**	**100%**

Source: City of Encinitas, 2018

Other assistance programs include the HOME Investment Partnership Program. The County of San Diego administers the HOME Investment Partnership Program (HOME) within the County of San Diego Consortium, which includes cities with a population of less than 50,000, as well as the cities of Encinitas, Santee and Vista. City of Encinitas residents may receive assistance through the County of San Diego's HOME programs. This includes TRBA programs (Emancipated Foster Youth TBRA and Family Reunification TBRA). The TBRA programs are developed to provide rental assistance to former foster youth between the ages of 18 and 24 and those that are attempting to reunify with their children while in substance abuse recovery.

6.4 Constraints to the Provision of Housing

Actual or potential constraints to the provision of housing affect the development of new housing and the maintenance of existing units for all income levels. Governmental and non-governmental constraints in Encinitas are similar to those in other jurisdictions in the region and are discussed below. One of the most, if not the most, significant and difficult constraints to housing in Encinitas and elsewhere in the San Diego region is the high cost of land. This section describes various governmental, market, and environmental constraints on the development of housing that meets the needs of all economic segments of Encinitas population.

7 Non-Governmental Constraints

Nongovernmental constraints significantly affect the cost of housing in Encinitas, and can pose barriers to housing production and affordability. These constraints include the availability and cost of land for residential development, the demand for housing, financing and lending, construction costs, and the

availability of labor, which can make it expensive for developers to build any housing, and especially affordable housing. The following highlights the primary market factors that affect the production of housing in Encinitas.

7.1 Economic Factors

Market forces on the economy and the trickle-down effects on the construction industry can act as a barrier to housing construction and especially to affordable housing construction. California's housing market peaked in the summer of 2005 when a dramatic increase in the State's housing supply was coupled with low interest rates. The period between 2006 and 2009, however, reflected a time of significant change as the lending market collapsed. Double-digit decreases in median sale prices were recorded throughout the State. These lower-than-normal home prices allowed for a large increase in the number of homes sold initially until the availability of credit became increasingly limited.

After the post-peak trough of 2011, building activity and sales for residential structures have been steadily increasing. Housing values in Encinitas were the lowest in midyear 2011. The number of homes in California that were bought and sold in the first half of 2013 was the highest since 2005. While housing affordability hovered near historic highs post-recession, housing has become increasingly unaffordable, with demand far outpacing supply and construction lagging far behind need.

It is estimated that housing price growth will continue in the city and the region for the foreseeable future. A January 2018 report by Zillow found that there were 20 percent fewer homes on the market in San Diego County than one year ago. Almost one-third of homes sold above the asking price. The underlying reason is a Countywide shortage of supply due to both governmental and nongovernmental factors. Production Countywide has fallen in recent years from 10,000 units per year to 7,000 units per year. SANDAG currently estimates that 21,000 units per year must be constructed to meet the demand for housing. The purpose of this Housing Element is to assist in increasing housing supply.

7.2 Land and Construction Costs

High land costs are a significant constraint to the development of affordable and middle-income housing in the City. Land cost represents a significant cost component in residential development. There are significant fluctuations in land costs per square foot. Coastal areas have the most significant costs, with recent land sales upwards of $9 million per acre. Property located inland (east of I-5) exhibits significantly less cost per acre. Land cost in surveyed areas averaged approximately $1 million per acre. Coastal property is highly desirable and a scarce commodity.

High land costs have a demonstrable effect on the cost of housing in Encinitas, as the price of housing is directly related to the costs of acquiring land.

Construction costs based upon Type VA construction (wood construction) for multiple family construction can range in cost from $113 and $124 per square foot, exclusive of land acquisition costs, but labor and materials account for only about 30% of total costs in San Diego County.

Availability of skilled labor has become a challenge to the development of housing in Encinitas. Many workers exited the industry during times of recession. Labor shortages in the construction industries are evident throughout California as evidenced by the Go Build California campaign, which seeks to reduce

what it deems as a profound labor shortage in California and provides assistance to potential new workers. San Diego County builders have reported construction labor shortages as a barrier to home construction.

7.3 Availability of Financing

The availability of financing affects a person's ability to purchase or improve a home. Under the Home Mortgage Disclosure Act (HMDA), lending institutions are required to disclose information on the disposition of loan applications by the income, gender, and race of the applicants. This applies to all loan applications for home purchases, improvements and refinancing, whether financed at market rate or with government assistance. The data for Encinitas was compiled by census tract and aggregated to the area that generally approximates the City's boundaries.

Table B-37 summarizes the disposition of loan applications submitted to financial institutions in 2016 for home purchase or refinance or loans in Encinitas. Included is information on loan applications that were approved and originated, approved but not accepted by the applicant, denied, withdrawn by the applicant, or incomplete.

Table B-37: Disposition of Home Loans (2016)

Loan Type	Total Applicants	Percent Approved	Percent Denied
Government-Backed	110	63.6%	10.9%
Conventional	1,571	61.5%	10.3%
Refinance	4,229	63.5%	16.9%
Total	**5,910**	**62.9%**	**15%**

Source: Home Mortgage Disclosure Act (2017)

7.3.1 Home Purchase Loans

In 2016, a total of 1571 Encinitas households applied for conventional loans to purchase homes. The overall loan approval and origination rate was 61.5 percent and only 10 percent of applications were denied. Approximately 110 home purchase applications were submitted in Encinitas through government-backed loans (for example, FHA, VA) in 2016; 63.6 percent of these applications were approved and originated. To be eligible for such loans, residents must meet the established income standards, maximum home values, and other requirements. It appears that home purchase loans are generally available, and most applicants are eligible for the requested loans.

7.3.2 Refinance Loans

The majority of loan applications submitted by Encinitas residents in 2016 were for refinancing their existing home loans (4,229 applications). 63.5 percent of these applications were approved, while 16.9 percent (about one sixth) were denied, indicating a higher rate of denial for refinancing. This could be due to either the applicants' inability to pay or to inadequate home equity; no data is available on the reasons for denial of applications.

7.3.3 Foreclosures

Regionally, the number of foreclosures in 2017 has declined substantially from its peak in 2008, where 38,308 notices of default were issued in San Diego County. In 2017, a total of 3,494 Notices of Default (NODs) were recorded in San Diego County, a decrease from the 2008 peak. In December 2010, close to

the peak of the foreclosure crisis, 189 homes in Encinitas were listed as foreclosures. These homes were listed at various stages of foreclosure (from pre-foreclosures to auctions) and ranged in price, with some properties listed as high as $1.3 million, indicating the depth of the crisis. In January 2018, 31 homes were at some stage of foreclosure (default, auction or bank owned). That is an approximate 40% decrease since January 2017, and less than one-sixth of peak foreclosure activity. With the recent rapid increases in housing costs, owners threatened with foreclosure are likely to be able to avoid a foreclosure sale by selling their property.

7.4 Requests to Develop at Densities Below Those Permitted.

The City of Encinitas receives request for various development types throughout the community. For residential uses, the City views single-family development differently than multiple family development. For single-Family development, it is typically built on one housing unit per lot and most lots are of a size that is conducive to one unit per lot.

For single-family subdivisions, the majority of new development applicants over the past few years have developed at maximum density with a state density bonus. This has resulted in average densities above that permitted in the zoning code for new multiple-family and subdivision development.

While development could be proposed at lower densities than the maximum permitted on a parcel, it would be very unusual for this to occur due to the cost of land and overall cost to build in the community. The City does not see this as a constraint to development at this time.

7.5 Length of Time between Application Approval and Building Permit Issuance.

The time between application approval and building permit issuance in most cases is determined by the individual applicant. There is nothing to stop an immediate transition from application approval to permit processing. However, applicants must complete a number of actions which do not involve the City but that may influence the length of time between an approved application and the issuance of a building permit. These include:

- Technical/Engineering Studies
- Completion of Construction Drawings
- Construction-Level Landscaping/Site Design
- Construction and Permanent Financing
- Retention of Contractor and Subcontractors
- Obtaining required easements and rights of entry

In Encinitas, most approved projects are constructed in a reasonable time period. As of December 31, 2017 only 41 units approved over one year ago had not yet been constructed. Few project approvals had expired.

Because no development project will be the same and development pro formas will differ considerably based upon locational and other site factors, it will be instructive to proactively outreach to developers

and investors in the community who have received approvals but not constructed their projects in a reasonable time period. Program 3F proposes to contact applicants to identify nongovernmental constraints preventing construction.

7.6 Local Efforts to Remove Nongovernmental Constraints.

Nongovernmental constraints are defined as constraints on housing development that are not be under the control of the City or another governmental agency. Nongovernmental constraints are generally market-driven and outside the control of local government.

During the course of this Housing Element update, a number of comments from the development community and private citizens addressed potential nongovernmental constraints. In particular, the cost of land in Encinitas has outpaced that in adjacent jurisdictions. The limited availability of land also influences the premium for land in Encinitas.

According to local developers and entities doing business in Encinitas and coastal San Diego County, there are two major components that directly relate to the feasibility of development. Those are time and uncertainty. The faster a project applicant can process a project, the lower the holding costs. Therefore, reducing the approval timeline can be a significant contributor to accessing capital and reducing investor risk. Secondly, reducing the uncertainty of development approval can influence access to capital and the risk profile for investors. To summarize, local actions to reduce the timeline for project approval and to increase the level of certainty in entitlement decisions have been identified as methods to influence nongovernmental behavior and contribute to housing development.

The City has included several programs in the Housing Element that may assist in removing nongovernmental constraints. Rezoning of land as proposed by Program 1B will increase the land supply. Program 3E proposes to improve the efficiency of the development review process, and Program 3F is specifically focused on identifying nongovernmental constraints. The City will contact applicants so that potential Encinitas-specific nongovernmental constraints may be identified along with specific actions that may help to mitigate these governmental constraints.

8 Governmental Constraints

Aside from market factors, housing affordability is also affected by factors in the public sector. Local policies and regulations can impact the price and availability of housing and, in particular, the provision of affordable housing. Land use controls, site improvement requirements, fees and exactions, permit processing procedures, among other issues may constrain the maintenance, development and improvement of housing. This section discusses potential governmental constraints in Encinitas and efforts to address them.

8.1 Land Use Controls

The Land Use Element sets forth City policies for guiding local land use development. These policies, together with existing zoning regulations, establish the amount and distribution of land allocated for different uses.

8.1.1 Local Coastal Program

Approximately two-thirds of the City is comprised within the City of Encinitas Local Coastal Program (LCP). Under this program, which is required to be approved by the Coastal Commission, a coastal development permit is required for all development within the City's Coastal Zone, with the exception of the following:

- Improvements to an existing structure or a public works facility
- Repair and maintenance activities to existing structures or facilities that do not result in an addition to, or enlargement or expansion of, the structures or facilities
- The installation, testing, and placement in service or the replacement of any necessary utility connection between an existing service facility and any development which has been approved under the California Coastal Act
- The replacement of any structure other than a public works facility destroyed by a disaster
- Temporary uses or events
- Signs which are exempted from provisions of the Municipal Code

The reviewing authority for the coastal development permit varies depending on the type of application submitted. Furthermore, specific findings required for decisions on coastal development permits can include:

- Project effects on demand for access and recreation
- Shoreline processes
- Historic public use
- Physical obstructions
- Other adverse impacts on access and recreation

The City's decision on a coastal development permit may be appealed to the Coastal Commission. This could occur for any development project and may pose a constraint to development if the Coastal Commission denies a project that includes housing development or if the project is significantly delayed. Most housing development appealed to the Coastal Commission are single-family dwelling units located on coastal bluffs.

8.1.2 Coastal Bluff Overlay Zone

The Coastal Bluff Overlay Zone regulations apply to all areas of the City where there is the presence of a coastal bluff. In addition to development and design regulations which otherwise apply, the following development standards apply to properties within the Coastal Bluff Overlay Zone to protect public health and safety given coastal bluff recession, shoreline erosion, and sea level rise:

- No principal structure, accessory structure, facility or improvement shall be constructed, placed or installed within 40 feet of the top edge of the coastal bluff.

- No structure, facility, improvement or activity shall be allowed on the face or at the base of a coastal bluff.
- No grading or scraping shall be allowed on a bluff face, nor shall naturally occurring drought-tolerant vegetation be voluntarily removed from the bluff face.
- Existing legal structures and facilities within 40 ft. of a bluff edge or on the face of a bluff may remain unchanged.
- All drainage and run-off on the property shall be collected and delivered to approved drainage facilities.
- Landscaping on beach bluff properties shall avoid the use of ice plant, and emphasize native and drought-tolerant plants in order to minimize irrigation requirements and reduce potential slide hazards due to over-watering.
- Buildings and other structures shall be sited, designed and constructed so as not to obstruct views to and along the ocean and other scenic coastal areas from public vantage points.
- The design and exterior appearance of buildings and other structures visible from public vantage points shall be compatible with the scale and character of the surrounding development and protective of the natural scenic qualities of the bluffs.

The City intends develop a comprehensive plan, based on technical reports and studies addressing sea level rise and its impact on shoreline management practices, to address the coastal bluff recession and shoreline erosion problems in the City.

8.1.3 Hillside/Inland Bluff Overlay Zone

The Hillside/Inland Bluff Overlay Zone regulations apply to all areas within the Special Study Overlay Zone where site-specific analysis indicates that 10 percent or more of the area of a parcel of land exceeds 25 percent slope. The Planning Commission is the authorized agency for reviewing and granting discretionary approvals for proposed development within the Hillside/Inland Bluff Overlay Zone. Where development is proposed on slopes of greater than 25 percent grade, the following additional standards apply:

- Slopes of greater than 25 percent grade shall be preserved in their natural state.
- A geological reconnaissance report must be submitted.
- Where unstable conditions are indicated, a preliminary engineering geology report is also required.
- No principal structure or improvement or portion thereof shall be placed or erected, and no grading shall be undertaken, within 25 feet of any point along an inland bluff edge.
- All slopes over 25 percent grade which remain undisturbed or which are restored or enhanced as a result of a development approval, shall be conserved as a condition of that approval through a deed restriction, open space easement, or other suitable device that will preclude any future development or grading of such slopes.

The City has accounted for deductions due to steep slopes pursuant to objective standards contained in the Municipal Code in determining site capacity, and the Overlay Zone has not prevented the City from providing adequate sites.

8.1.4 Floodplain Overlay Zone

The Floodplain Overlay Zone regulations apply to all areas within the Special Study Overlay Zone where site-specific analysis of the land indicates the presence of a flood channel, floodplain, or wetland. The zone also applies to all areas identified as flood channels and floodplains on maps published by the Federal Emergency Management Agency or current City and County maps designating the floodway/floodplain areas. Any development within this zone is required to incorporate a series of improvements or modifications in order to ensure the ability of structures to withstand periodic flooding. The additional standards are also in place to guarantee the preservation of sensitive habitat areas.

The City has accounted for deductions due to sensitive habitat areas in determining site capacity, and this Overlay Zone has not prevented the City from providing adequate sites.

8.1.5 Agricultural Overlay Zone

The Agricultural Overlay (AGO) Zone regulations apply to all properties presently under a Williamson Act contract. No development other than that associated with the agricultural operation subject to the Williamson Act contract may occur within the AGO Zone. Any development that occurs within this zone shall conform to the setback and height requirements of the Rural Residential Zone. Furthermore, an open or landscaped buffer of at least 75 feet shall be provided along the boundary between all property subject to the AGO zone and properties not subject to the AGO zone.

Neither of the agricultural sites designated for upzoning is under a Williamson Act contract.

8.1.6 Scenic/Visual Corridor Overlay Zone

The Scenic/Visual Corridor Overlay Zone regulations apply to all properties within the Scenic View Corridor along Scenic Highways and adjacent to Significant Viewsheds and Vista Points as described in the Visual Resource Sensitivity Map of the Resource Management Element of the General Plan. When development is proposed on any properties triggering design review within the Scenic View Corridor Overlay Zone~~.~~, consideration is given to the overall visual impact of the proposed and to the preservation of scenic corridor viewsheds. While some of the proposed lower income sites are included within this overlay zone, in the City's experience consideration of these factors does not reduce the density or preclude the development of properties within these identified areas.

8.1.7 Planned Residential Development (PRD)

Planned Residential Development (PRD) regulations are intended to facilitate development of areas zoned for residential use by permitting greater flexibility and, consequently, more creative and imaginative designs for the development of such residential areas than is generally possible under conventional zoning and subdivision regulations

These regulations are further intended to promote more economical and efficient use of land while providing a harmonious variety of housing choices, a higher level of residential amenities, and preservation of natural resources and open space. Affordable housing opportunities are encouraged through the application of PRD.

8.1.8 Inclusionary Housing

Given the high cost of land in Encinitas, inclusionary housing policy has been one of the most effective approaches in achieving actual construction of affordable housing in the community. The City's inclusionary housing program requires housing developers of 10 or more dwelling units to reserve ten percent of the units for low or very low income households, or to pay an in-lieu fee if approved by the City Council. Most developers have provided the on-site units. As of December 31, 2017 the ordinance had created 146 very low and low income units.

The City is currently exploring the inclusionary policy options to amend current code requirements. On March 7, 2018, a joint working session with the City Council and Planning Commission began discussions with a panel of experts (for-profit and non-profit developers and city officials) to discuss updates to the City's inclusionary housing ordinance. They indicated that the City could increase its inclusionary percentage if it also provided more flexibility to developers. The City is currently considering updates to the ordinance that are consistent with the panel's recommendations and may extend the ordinance to rental projects, as permitted by AB 1505, enacted in 2017.

In a high-cost region such as San Diego, the inclusionary "costs" would likely be absorbed as part of market pricing mechanisms. The impact would be to somewhat diminish the profit margin on a highly profitable enterprise without much impact on the overall cost. As the City's inclusionary housing policy has a long-standing history, developers are familiar with the program and factor any associated costs in their feasibility analysis; many concurrently apply for a density bonus, which the City permits for inclusionary units that also meet the requirements of State density bonus law. The ordinance provides flexibility by including provisions for a waiver and allowing alternatives to on-site construction. For instance, the City approved a development to meet the inclusionary housing requirements through offsite construction and unit size reduction.

The Housing Element includes a program to continue and broaden inclusionary housing policies by updating the ordinance to allow additional options to provision of on-site units, more effectively meet the City's housing goals, and extend the ordinance to rental projects.

8.1.9 State Density Bonus Law

State Density Bonus Law (SDBL), in Government Code Section 65915, is a voluntary program for developers that requires cities and counties to provide a density bonus and certain other regulatory incentives "when an applicant for a housing development seeks and agrees to construct a housing development" that provides for a certain amount of affordable housing (GC 65915(b)(1). Under State law, a development of five or more units is eligible to receive a density bonus if it meets at least one of the following:

- *Very low income units:* Five percent of the total units of the housing development as target units affordable to very low-income households; or
- *Low Income Units:* Ten percent of the total units of the housing development as target units affordable to low-income households; or

- *Moderate Income Units:* Ten percent of the total units of a newly constructed condominium project or planned development as target units affordable to moderate-income households, provided all the units are offered for purchase; or
- *Senior Units:* A senior citizen housing development of 35 units or more.

Density bonuses and development incentives are based on a sliding scale, where the amount of density bonus and number of incentives provided vary according to the amount of affordable housing units provided.

The City provides a density bonus for inclusionary units when they also meet the requirements of State density bonus law.

As of December 31, 2017, the City had approved 27 density bonus projects that included 49 affordable units. Only two projects with two affordable units did not proceed to construction. In the ten-year period between 2003 and 2013, 68 percent of all units were approved under density bonus subdivisions. Furthermore, in all cases, the number of density bonus units was at least equal to or exceeded the number of inclusionary affordable units required for the project. Therefore, the City's inclusionary housing policy does not serve to constrain housing development.

The City's density bonus ordinance has been amended to be consistent with the amendments to state density bonus law adopted in ~~2015~~2016. When future amendments are adopted, the City will adopt conforming amendments, if needed, within one year.

Table B-38: Approved Density Bonus Projects (2003-2017)

Case #	Total Units	Affordable Units	Income Restriction	Unit Type	Time Restriction	Address	Notes
06-111	9	1	50%	Single-Family	30 Years	817 Sandy Court	Built-renting
05-169	9	1	50%	Single-Family	30 Years	206 Alexander Court	Built -Renting
06-005	18	1	50%	Single-Family	30 Years	1007 Scarlet Way	Built - Sold
06-107	12	1	50%	Single-Family	30 Years	2323 Edinburg Avenue	Approved but Application withdrawn
06-112	14	1	50%	Single-Family	30 Years	813 Dolphin Lane	Built - Renting
08-066	9	1	50%	Single-Family	30 Years	661 Quinten Court	Built - Rented
10-028	12	1	50%	Single-Family	30 Years	1257 Canton Court	Built - Rented
03-090	69	2	60%	Single-Family	30 Years	Coral Cove Way	Built - Sold
		5	60-80%	Multi-Family	Perpetuity	Coral Cove Way	Built
03-009	9	1	50%	Multi-Family	Perpetuity	Paxton Way	Built
11-115/ 09-089	72	6	50%	Multi-Family	Perpetuity	Channel Island Way	Built

Table B-38: Approved Density Bonus Projects (2003-2017)							
Case #	Total Units	Affordable Units	Income Restriction	Unit Type	Time Restriction	Address	Notes
04-066	9	1	50%	Multi-Family	Perpetuity	Sheridan Rd./Stewart Way	Built
02-233	20	2	50%	Multi-Family	Perpetuity	639-643 N. Vulcan Avenue	Built
04-021	10	1	50%	Single-Family	30 Years	634 Quail Gardens Ln	Project unlikely to proceed
05-072	10	1	80%	Single-Family	30 Years	685 Calyspo Court	Built - Rented
09-135	19	1	50%	Single-Family	30 Years	1507 Halia Court	Built - Rented
09-200	16	1	50%	Single-Family	55 Years	1335 Desert Rose	Approved
11-063	11	1	50%	Single-Family	30 Years	1085 Primrose	Built - renting
11-189	28	2	50%	Single-Family	30 Years	1140/1144 Urania Ave	Built - renting
98-295	120	10	50%	Multi-Family	55 Years	1100 Garden View	Built - rented
04-040	9	1	50%	Single-Family	30 Years	1165 Kava Court	Built - rented
13-187	9	1	50%	Single-Family	55 Years	378 Fulvia St	Under Construction
15-064	13	1	50%	Single-Family	55 Years	710 & 712 Clark Avenue	Under Construction
14-111	8	1	50%	Single-Family	55 Years	1412 Mackinnon Avenue	Under Construction
15-008	14	1	50%	Single-Family	55 Years	560 Requeza St	Under Construction
13-267	9	1	50%	Single-Family	55 Years	720 Balour Drive	Under Construction
16-211	13	1	50%	Single-Family	55 Years	710 & 714 Requeza St	Under Construction
Source: City of Encinitas, 2018							

8.1.10 Growth Management Measures

The City's General Plan, adopted in March 1989, includes an annual residential building limitation along with growth management policies and guidelines. The building limitation is based on the un-built development potential of the City at mid- range density divided by the remaining years of the 25 years build-out period (January 1989 to January 2014). Low- and moderate-income units are exempted from the allocation system, as are single family dwellings on lots established prior to adoption of the City's General Plan.

In 1999, the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the measure has had no effect on limiting growth in Encinitas. There has not been a single year in which the number of building permit applications has

exceeded the number of available permits. This is due primarily to two factors: low housing production and the cumulative effect of carrying over unallocated permits from year to year. The City stopped accounting for the permit cap shortly after this discovery was made. By 1999, the last year the City calculated permit caps, there were more than 1,200 permits available, more than triple the highest number of new dwelling permits issued in any year since the growth management plan was established. Given the large surplus of available permits, the growth management plan has not posed a constraint on housing production, nor impeded the City's ability to accommodate its share of the regional housing need. Program 3D of this Housing Element calls for rescinding obsolete growth management policies.

8.1.11 Proposition A – Voter's Right Initiative

Proposition A was adopted by voters in June 2013 and requires voter approval of land use changes. Proposition A requires an affirmative vote of the people when publicly or privately initiated changes are proposed to increase the currently allowed intensity or density of development (such as increasing the allowed number of residential units or, permitting residences in commercial zones). A vote is also required to convert residentially zoned properties to commercial or mixed use. Not only does Proposition A affect how amendments are made to planning policy documents are made, but the ballot measure modified building height standards in the City. Proposition A restricts the height of any structure to the lower of two stories or 30 feet, citywide. In cases where the existing codes specify a different maximum height standard, the more restrictive standard applies.

Thus, voter approval is required for amendments that would increase residential densities. On the other hand the voter requirement also creates additional challenges to convert residentially zoned properties to nonresidential, thereby deterring the potential loss of residential land to commercial, office, or industrial uses.

Each of the City's land use designations specifies a density range that includes the identification of how a property owner(s) can build or redevelop their land. Based on recent analysis and conversations with local real estate developers, real estate agents, and property owners; Proposition A has effectively reduced the holding capacity on some of the sites that formerly allowed three-story construction. This results in a decreased capacity in the DCM-1, DCM-2, and D-VCM Zones of the Downtown Encinitas Specific Plan, as well as the N-CM1, N-CM2, NCM-3, and N-CRM1 zones of the North 101 Corridor Specific Plan. On an unconstrained acre, it is estimated that the following averages could be developed under a two-story envelope:

- 19-24 units total for standalone residential (21.5 average)

15 units average when units are above ground floor retail. Since this zoning will not satisfy the State's default density standard of 30 units per acre unless this constraint is removed, sites in the DCM-1 Zone have been assigned to the moderate-income category as viable housing production opportunities at 15 units per acre. Consequently, Proposition A significantly reduced the net residential holding capacity of sites that formerly would have been suitable for lower income housing.

In November 2016, as required by Proposition A, the City placed a proposed Housing Element and related General Plan amendments and re-zonings on the ballot as Measure T. Measure T was not approved by the voters, and Proposition A did act as a constraint on the City's ability to comply with state housing element law.

As part of its adoption of this Housing Element, the City intends to submit to the voters in November 2018 a ballot measure that approves this Housing Element, as well as any General Plan, specific plan, and zoning amendments that may be necessary to permit the necessary densities. If this measure is adopted by the voters, Proposition A will not present a constraint to housing development in the City during the remainder of the 2013 – 2021 planning period. The City will be able to demonstrate adequate capacity to accommodate the City's full fair share of RHNA. To minimize any future constraints created by Proposition A, Program 3C in the Housing Element requires the City to ~~develop strategies~~begin developing the sixth cycle Housing Element as soon as RHNA allocations are made in early 2019, well in advance of the next Housing Element due date (April 30, 2021) to ensure that future housing elements ~~can be developed in a timely fashion~~can achieve community support and be consistent with State law, while still complying with Proposition A.

The applicability of Proposition A to the Housing Element and related General Plan and zoning approvals is the subject of litigation in San Diego County Superior Court. The City will comply with any final judgment related to a vote on this Housing Element and implementing actions.

Please note that Proposition A does not impact the inventory of lands available in previous planning periods or the City's AB 1233 "carryover" analysis. The sites identified in the inventory were available at full capacity throughout the 2005-2013 planning period, which ended on April 30, 2013 before Proposition A was adopted in June 2013.

Consistency with State Density Bonus Law

Proposition A does not interfere with the rights of a developer to obtain density bonuses, parking reductions, concessions, or waivers of development standards, including height regulations, under state density bonus law. As stated in the statute, none of these incentives require a general plan or zoning amendment that would trigger the need for a vote under Proposition A.

8.1.12 Specific Plans

The City of Encinitas has adopted the following specific plans, which offer a range of housing types, densities, and/or mix of uses:

- Downtown Encinitas Specific Plan (Adopted February 9, 1994)
- Encinitas Ranch Specific Plan (Adopted September 28, 1994)
- North 101 Corridor Specific Plan (Adopted May 21, 1997)
- Cardiff-by-the-Sea Specific Plan (Adopted July 21, 2010)
- Home Depot Specific Plan (Adopted September 8, 1993)

The City anticipates that new residential growth will occur in these Specific Plan areas, especially as mixed-use developments. **Table B-39** summarizes the zones where mixed-use developments are permitted.

8.1.13 Downtown Encinitas Specific Plan

The Downtown Encinitas planning area consists of approximately 198.6 acres located within the community of Old Encinitas. The area is bounded by the Pacific Ocean to the west, B Street on the north,

Cornish Drive on the east, and K Street on the south. The purpose of this Specific Plan was to treat the unique aspects, problems, and opportunities of the Downtown Encinitas area, and maintain its identity, community character, and scale, while fostering rehabilitation and successful economic restructuring.

The Specific Plan outlines housing strategies for increasing housing potential in the following areas:

First Street Mixed-use: The mixed-use zone for First Street (D-CM-1) allows residential units above or to the rear of primary commercial uses. Standalone residential is not permitted in this sub-district and residential units are not allowed to exceed 50 percent of the gross floor area of any site. Individual dwellings are required to be a minimum of 350 square feet in floor area. There is no residential density specified. Based on development standards and recent development projects when heights of three stories were allowed, the equivalent of up to 34 dwelling units per acre was constructed, taking into account the commercial portion of a site's development.

Second Street Mixed-use*:* The mixed-use zone for Second Street (D-CM-2) allows for residential mixed with commercial on a site as well as a limited amount of stand-alone residential. This is allowed to a maximum of 25 dwellings per acre and for no more than 25 percent of the lots (by lot area) along the street.

Cozen's Site: This sub-district (D-VCM) is another mixed-use zone. This zone is similar to the First Street zone in terms of residential use allowance, with no specified residential density but an overall limit by floor area on residential construction. Residential units in this subdistrict will be attached multi-family.

D-OM Zone: The D-OM Zone is another mixed-use zone, which applies to the east side of Third Street between E and F Streets, and is designed to allow office, residential, or mixed office/residential use. Stand-alone residential is limited to 15 dwellings per acre, to match the surrounding zoning allowance on Third Street. Mixed residential also is limited to 15 dwelling units per acre, and there is no proportional limit to the residential share.

Residential East Subdistrict: This zone does not permit attached apartments of three or more units but allows duplex units on all lots of at least 5,000 square feet. The broadened duplex allowance increases the expected residential build-out potential of this neighborhood and allows for the transition of this neighborhood from original single-family to predominantly multifamily use.

Residential West Subdistrict: With a few exceptions, most notably the Pacific View School site, the Residential West subdistrict is zoned D-R15 and D-R25, allowing up to 15 and 25 dwellings per acre respectively. For the most part these zones carry over the citywide R-15 and R-25 zoning provisions, allowing attached multi-family development.

Stand-alone residential development is required to meet citywide parking standards. Units in mixed-use development, however, are subject to a somewhat simplified parking standard, with no more than two off-street parking spaces required for any dwelling. The Specific Plan also offers a voluntary incentive for mixed-use units which are guaranteed to be affordable to low or very low income households. Affordable units are allowed a reduced, one- space per unit parking requirement.

8.1.14 Encinitas Ranch Specific Plan

The Encinitas Ranch Specific Plan is designed to allow agricultural uses to continue operating as a viable business, while permitting a mix of residential, commercial, mixed-use, recreation, and open space uses

to develop on the remaining portions of the project site. The Encinitas Ranch Specific Plan provides residential, commercial, and mixed-use development, in addition to a substantial amount of natural open space, recreational area, and agricultural uses on a total of 852.8 acres, which includes the 29.8 acre Magdalena Ecke Park.

The most intense development within Encinitas Ranch occurs in the Green Valley Planning Area, adjacent to El Camino Real. This area include a 73.8-acre Regional Commercial Center (straddling Leucadia Boulevard) and approximately 24.8 acres of multi-family housing types including townhomes, condominiums and apartments in close proximity to the planned commercial and office uses. Residential densities up to 25 dwelling units per acre are permitted for free-standing residential structures.

Besides the mixed-use development in Green Valley, the West Saxony Planning Area is developed with a mix of traditional residential and office uses. The Encinitas Ranch project also includes single family residential development. Single family dwelling units have been constructed in the Quail Hollow East, North Mesa, South Mesa and Sidonia East Planning Areas.

8.1.15 North 101 Corridor Specific Plan

The North 101 Corridor planning area consists of approximately 231 acres located within the communities of Leucadia and Old Encinitas. The specific plan allocates 83.1 acres of residential-only zoning which includes 10.4 acres of Residential 3 (N-R3), 28.4 acres of Residential 8 (N-R8), 1.4 acres of Residential 11(N-R1), 4.9 acres of Residential 15 (N-R15), 15.8 acres of Residential 20 (N-R20),10.6 acres of Residential 25 (N-R25), and 11.6 acres of Mobile Home Park (NMHP).

The specific plan has also expanded previous commercial zoning in the North Highway 101 Corridor Specific Plan area to allow residential use. There are five distinct commercial mixed-use zoning classifications in the Plan area. The N-CM- 1, N-CM-2 and N-CM-3 zones provide for stand-alone commercial or commercial and residential uses at a maximum density of 25.0 dwelling units per net acre on the same property or in the same structure, with the intent of providing opportunities for housing and live/work or artisan loft arrangements. The N-CRM-1 zone provides for a variety of development opportunities including: 1) stand-alone commercial; 2) stand-alone residential at a maximum density of 25 dwelling units per net acre; and 3) mixed-use at a maximum density of 25 dwelling units per net acre. The N-CRM-2 zone provides for the same development opportunities as the N-CRM-1 zone except that the maximum density is set at 15 dwelling units per net acre.

8.1.16 Cardiff-by-the-Sea Specific Plan

The Cardiff-by-the-Sea Specific Plan focuses on a small but highly visible and highly valued portion of the Cardiff community. Generally considered the “business district” or sometimes “Downtown Cardiff,” the area is principally a mix of low rise retail, office, institutional, and residential uses. Boundaries of the Cardiff-by-the-Sea Specific Plan are irregular but generally include properties between the west side of San Elijo Avenue and the west side of the alley between Newcastle Avenue and Manchester Avenue; and from the south side of Mozart Avenue to the north side of Orinda Drive.

Within the Cardiff-by-the-Sea Specific Plan area are four separate Planning Areas, two of which allow residential uses of up to 11 dwelling units per acre. Planning Area 1 is roughly bound by Mozart Avenue on the north, Montgomery Avenue on the east, Birmingham Drive on the south, and San Elijo Avenue on the west. Single- and multi-family housing, professional and administrative offices, and restaurants define

this Planning Area. This Planning Area functions as a transition between the residential area to the south and the commercial area to the north. More than half the area is developed residentially.

8.1.17 Home Depot Specific Plan

The Home Depot Specific Plan area encompasses a total of approximately 55.5 acres in the north central part of the City of Encinitas. The Specific Plan has been subdivided into four planning areas, one of which allows residential uses of up to 5 dwelling units per acre. The Encinitas General Plan allows for a maximum density of 5 dwelling units per acre and a midrange density of 4 dwelling units per acre in Planning Area 2. Planning Area 2 includes 17 single- family detached homes on approximately 6.5 acres (net) at a net density of 2.6 dwelling units per acre.

Table B-39: Land with Mixed-use Potential

General Plan Code	Description	Mixed-use Type	Density Allowed (Du/Ac)
D-CM-1	Mixed-use	Mixed-use: Commercial with Residential	Approximately 34 du/acre (realistic limit of 15 du/acre with two stories); limited to 50% of site's building floor area; floor area bonus for affordable housing.
D-CM-2	Mixed-use	Commercial with Residential (free-standing (single family or multi-family) or mixed-use)	25 du/ac; free-standing limited to 25% of the zone district's total lot acreage; mixed-use is limited to 50% of site's building floor area; floor area bonus for affordable housing.
D-VCM	Mixed-use	Mixed-use: Visitor-serving commercial -with multi-family residential	18 du/ac and limited to 30% of the ground floor area and 50% of the site's building floor area.
D-OM	Mixed-use	Commercial with Residential (free-standing single family (detached or attached) (Duplex; Senior. or mixed-use)	15 du/ac; mixed-use limited to 50% of the ground floor area.
N-CM-1	Mixed-use	Mixed-use: Commercial with Residential	25 du/ac and limited to 50% of the site's building floor area.
N-CM-2	Mixed-use	Mixed-use: Commercial with Residential	25 du/ac and limited to 50% of the site's building floor area
N-CM-3	Mixed-use	Mixed-use: Commercial with Residential	25 du/ac and limited to 50% of the site's building floor area
N-CRM-1	Mixed-use	Commercial with Residential (free-standing single family (detached or attached) or mixed-use)	25 du/ac; mixed-use limited to 50% of the site's building floor area
N-CRM-2	Mixed-use	Commercial with Residential (free-standing single family (detached or attached) or mixed-use)	15 du/ac; mixed-use limited to 50% of the site's building floor area
ER-MU-1	Mixed-use	Mixed-use: Commercial with Residential	25 du/ac
ER-MU-2	Mixed-use	Mixed-use: Commercial with Residential	20 du/ac

8.2 Residential Development Standards

Citywide, outside the specific plan areas, the City regulates the type, location, density, and scale of residential development primarily through the Zoning Code. The following summarizes the City's existing residential zoning districts. New zones created to implement the adequate lands inventory to accommodate the RHNA share of lower income households will be discussed separately.

- *Rural Residential (RR) – 0.125 to 0.5 du/acre:* Rural Residential is intended to provide for very low density single-family detached residential units on larger lots ranging in size from two to eight net acres with maximum densities of 0.5 to 0.125 units per net acre for compatibility with the more rural areas of the City. Parcels located in flood plain areas are designated 0.125 units per acre (8 net acre lots). One primary dwelling is permitted on each legal lot.

- *Rural Residential 1 (RR-1) – 1.0 du/acre:* Rural Residential 1 is intended to provide for low density single-family detached residential units with minimum lot sizes of one net acre and maximum densities of 1.0 unit per net acre for rural area compatibility. One primary dwelling is permitted on each legal lot.

- *Rural Residential 2 (RR-2) – 2.0 du/acre:* Rural Residential 2 is intended to provide for low density single-family detached residential units with minimum lot sizes of 21,500 net square feet and maximum densities of 2.0 units per net acre, as a transition from the rural to the more suburban areas within the City. One primary dwelling is permitted on each legal lot.

- *Residential 3 (R-3) – 3.0 du/acre:* Residential 3 is intended to provide for single- family detached residential units with minimum lot sizes of 14,500 net square feet and maximum densities of 3.0 units per net acre, as a rural to suburban transition. One primary dwelling is permitted on each legal lot.

- *Residential 5 (R-5) – 5.0 du/acre:* Residential 5 is intended to provide for lower density suburban development consisting of single-family detached units with minimum lot sizes of 8,700 net square feet and maximum densities of 5.0 units per net acre. One primary dwelling is permitted on each legal lot.

- *Residential 8 (R-8) – 8.0 du/acre:* Residential 8 is intended to provide for suburban single-family detached residential units with minimum lot sizes of 5,400 net square feet and maximum densities of 8.0 units per net acre. One primary dwelling is permitted on each legal lot.

- *Residential RS-11 (RS-11) – 11.0 du/acre:* Residential RS-11 is intended to provide for single family detached residential units with minimum lot sizes of 3,950 net square feet and maximum densities of 11.0 units per net acre. One primary dwelling is permitted on each legal lot.

- *Residential 11 (R-11) – 11.0 du/acre:* Residential 11 is intended to provide for a variety of residential development types found within the coastal areas, ranging from single-family detached units to single-family attached units, such as condominiums, townhouses, and senior housing. The minimum lot size is 3,950 net square feet and the maximum density is 11 units per net acre.

- *Residential 15 (R-15) – 15.0 du/acre:* Residential 15 is intended to provide for higher density residential development within the coastal areas including single- family units (attached and detached), duplex units, and senior housing, with a maximum density of 15 units per net acre.
- *Residential 20 (R-20) – 20.0 du/acre:* Residential 20 is intended to provide for compatible high density multiple-family residential development including apartments, condominiums, and senior housing, with a maximum density of 20 units per net acre.
- *Residential 25 (R-25) – 25.0 du/acre:* Residential 25 is intended to provide for compatible high density multiple-family residential development including apartments, condominiums, and senior housing, with a maximum density of 25 units per net acre.
- *Mobile Home Park (MHP) – 11.0 du/acre:* Mobile Home Park is intended to provide exclusively for mobile home park development with a maximum density of 11 units per net acre for new or redeveloped parks.

The City's Zoning Code also regulates the physical development of land by imposing minimum standards on lot size, lot width and depth, setbacks, and by placing maximum limits on lot coverage and floor-area ratio (FAR). These development standards are intended to control for unacceptable mass and bulk, ensure proper scale of development, provide minimum light, air, and open space for every lot, and minimize the potential for spillover and edge effects between uses. City-wide, the standards vary among zoning categories and are "fine-tuned" for the specific plan areas. The City's determination of realistic site capacity reflects these standards.

Table B-40: Residential Development Standards

Zoning District	Maximum Density	Maximum Building Height (ft.)	Minimum Net Lot Area (sq. ft.)	Minimum Lot (ft.)		Setbacks (ft.)			Maximum Lot Coverage
				Width	Depth	Front	Rear	Side	
RR	0.125 (8 ac flood plain) 0.25-0.5 (2-4 ac, depending on slope)	26	2 acres	110	150	30	25	15-20	35
RR-1	1	26	1 acre	110	150	30	25	15	35
RR-2	2	22-26	21,500	100	150	30	25	10-15	35
R-3	3	22	14,500	80	100	25	25	10	35
R-5	5	22	8,700	70	100	25	25	10	35
R-8	8	22	5,400	60	90	25	25	5-10	40
R-11/ RS-11	11	22	3,950	40	90	20	20	5-10	40
R-15	15	22	20,000	100	150	20	15-20	5-20	40
R-20	20	22	20,000	100	150	20	15-20	5-20	40
R-25	25	22	20,000	100	150	20	15-20	5-20	40
MHP	11	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: City of Encinitas Zoning Code, 2011.

8.3 Minimum Lot Sizes

Minimum lot sizes and dimensions (width and depth) correspond to their residential density categories such that application of these standards will allow planned density to be achieved. For example, the R-11 zone requires a minimum lot size of 3,950 square feet (sf) per dwelling unit (du) and minimum dimensions of 40 feet by 90 feet, which is less than the 3,960 sf/du minimum required to achieve a density of 11 du/acre (43,560 sf /11 du = 3,960 sf/du). Additionally, City ordinances allow some flexibility for legal non-conforming lots whose sizes may not meet current minimum standards. For example, a duplex development is permitted on legal lots as small as 5,000 sf (2,500 sf/du). Therefore, minimum lot size and lot dimension standards do not constrain the ability to achieve planned densities.

8.4 Setbacks

Minimum setback or yard requirements vary among the residential zones. The primary purposes of imposing setbacks is to ensure adequate air and light between properties, to ensure adequate on-site access and circulation, to provide opportunities for private open space areas (yards), and to separate uses between properties to minimize conflicts and potential life/safety hazards. Generally speaking, setbacks are tied to lot size, meaning smaller lots have lower minimum setbacks, and larger lots require larger "yards." As with other development standards, the Zoning Code and specific plans provide flexibility to minimum requirements under certain circumstances. For example, in the R-15 through R-30 zones, the minimum side yard requirement can be reduced from 15 feet to five feet for existing legal lots that do not meet current minimum lot size requirements. Also, the front yard requirement can be reduced from 20 feet to 15 feet in cases where parking access can be taken from an abutting alley. While it is possible that setback requirements may inhibit maximum density from being realized in some cases, there is enough flexibility in the current ordinances that setback requirements do not constitute a significant constraint on residential development. Setback requirements have been considered in the City's calculation of realistic site capacity.

8.5 Lot Coverage and FAR

Lot coverage and floor area ratio (FAR) standards are intended to control bulk, mass, and intensity of a use. Lot coverage limits a building's footprint and is defined as the percentage between the ground floor area of building(s) and the net area of a lot. FAR limits the total usable floor area and is expressed as a ratio between the bulk floor area of building(s) and gross lot area. In most residential-only zones (except R-30), while maximum lot coverage ranges between 35 to 40 percent, a FAR of 0.6 applies only in the middle density zones (R-5 to R-11/RS-11). Floor area ratio limits do not apply to the higher density multi-family zones, nor do they apply to any but three of the specific plan mixed-use zones (D-CM-2, D-OM, and D-VCM). As applied to residential development, these standards may only limit the size of dwelling units, and do not limit the number of units, which is an expression of density (that is, zoning). FAR, combined with height limitations, can potentially prevent maximum density from being achieved in certain cases. This is most likely to be the case in older, small lot areas, but as discussed under "Residential Height Limits", the City has adopted more flexible zoning standards to encourage infill and redevelopment in these areas.

To examine whether the FAR limitation alone or in combination with other development standards has resulted in development at less than maximum density, the City reviewed records of new construction

between 2000 and 2007 in the R-11 and D-CM-2 zones. During this time period some 85 new units were constructed in the R-11 zone. Only three properties developed at less than maximum density, none of which appeared to have been constrained by FAR or other development standards. Two of the properties developed as single-family homes with an accessory unit and the third developed as a single-family dwelling only. Also, during this period, five mixed-use projects were constructed in the D-CM-2 zone. Three of these developed at or near the maximum 0.65 FAR, only one of which achieved maximum density. The others that did not develop at maximum density could have if the non-residential floor area was dedicated to residential use (this zone allows standalone residential). Therefore, while it is conceivable that some combination of development standards may preclude maximum density from being realized under unique circumstances, the City's analysis has not identified any such constraints in the multi-family or mixed-use zones. Lot coverage and FAR do not constrain the ability to achieve planned densities.

8.6 Building Height

Residential building height in the rural residential zones (R through RR-1 and RR-2 for standard lots in Olivenhain) is permitted up to a maximum of 30 feet without discretionary review (26 feet in height if the structure consists of a flat roof). For most other residential zones, building height is limited to two-stories and 22 feet (flat roof)/26 feet (pitched roof). These restrictions on height in most cases do not pose a significant constraint to the provision of housing and reinforces the community's need to protect the existing character, views and quality of the communities within Encinitas. Higher density housing can be constructed within these height limits as demonstrated by the City's development history, particularly in the Downtown Encinitas Specific Plan area where there is no density limit. The City has demonstrated that higher density and affordable housing can be, and is being, constructed within these height parameters.

Relative to Proposition A, the ballot measure established a citywide height limitation and new method for establishing where height is measured from (the lower of natural or finished grade). Previously, in some circumstances (before Proposition A) an approved subdivision may have established the finished pad elevation from which building height is measured with consideration given to on-site and surrounding terrain. The purpose of the new method of measuring height is to discourage excessive grading activity and the building up of pads. This helps minimize impacts to the topography and adjacent views. Some architectural elements may project up to four feet above the height limit.

As part of the required upzoning of lower income sites, a measure will be placed on the ballot to allow heights of three stories and 37 feet on lower income sites where developments achieve a minimum density of 25 units per acre. These exceptions will be applied only to those site-specific parcels as identified in the rezoning program and will require inclusion of some two-story elements. Even without an amendment to the height limit, however, local developers have confirmed that R-25 sites could develop at densities of 19-24 units per acre under the Proposition A limits.

The building envelopes resulting from the height limits discussed above, combined with other development standards such as setbacks, results in sufficient area to realize the density of dwellings as planned for individual lots. That is, the existing or proposed height limits are intended to allow planned density to be achieved. While certain lots in the City may be impacted by physical limitations, such as non-conforming lot areas and/or unusual shapes or topography, such properties can seek relief from development standards through the variance process. Also, since substandard lot conditions are most

likely to occur in the older parts of the city, flexibility in the zoning regulations has been provided in those areas through the adoption of specific plans.

8.6.1 Net Lot Area

The City's General Plan and Zoning Code require that certain constrained lands be excluded from net lot area. The net lot area is then utilized to calculate the project density. For purposes of density, the gross lot area is reduced by the presence of steep slopes as follows: the density for properties containing slopes is calculated based on the following:

- Zero to 25 percent slope – no deduction (100 percent density);
- 25-40 percent slope – half of area deducted (50 percent density); and
- Slopes greater than 40 percent, plus or minus area completely excluded (no density allowance).

Other constrained areas are deducted as well, including floodplains, beaches, permanent bodies of water, significant wetlands, major utility easements, railroad track beds or rights-of-way, and easements for streets and roads. According to SANDAG (2030 Forecast, 2005 Inputs), approximately ½ of the remaining land otherwise available for residential development in Encinitas (excluding the Downtown and North Highway 101 specific plan areas) is environmentally-constrained. However, almost 99 percent of the identified constrained lands occur in the lower residential density categories: 1 du/acre through 8 du/acre. Land at these densities is capable of supporting above-moderate income housing. As demonstrated in the Housing Resources section of this Housing Element, the City has sufficient land to support the regional share for all income levels, even with the environmental constraints identified above.

8.6.2 Parking Standards

Adequate off-street parking shall be available to avoid street overcrowding. Parking requirements for single-family and multi-family residential uses in Encinitas are summarized in **Table B-41**.

Table B-41: Parking Requirements

Type of Residential Development	Required Parking Spaces
SRO Hotels and Temporary Shelters	1 space for every 2 units
Single-Family or Two-Family Dwelling	2 enclosed parking spaces for each unit up to 2500 square feet of floor area. 3 spaces for dwelling units in excess of 2500 square feet. Any parking space over 2 spaces may be enclosed or unenclosed.
Multiple-Family Apartments (including Mobile Home Parks)	
Studio Apartments	1.5 spaces per unit + 0.25 spaces per units
1-2 Bedroom Units	2 spaces per unit + 0.25 spaces per units
3+ Bedroom Units	2.5 spaces per unit + 0.25 spaces per units
Accessory Apartments	1 space

Source: City of Encinitas Zoning Code, 2010.

The relaxing of parking standards is often used as an incentive to induce the redevelopment of existing buildings and the creation of affordable dwelling units. The City has provided this incentive within the

Downtown Encinitas and North 101 Corridor Specific Plans. The specific plans require only one space per unit for units that are guaranteed affordable to low or very low income households. This provides an incentive for affordable housing construction. Additionally, the majority of residential projects in the City are eligible for density bonus and can elect to use the lower standards permitted by state density bonus law (one onsite space per unit for studio to one bedroom units, two onsite spaces per unit for two to three bedroom units, and 2.5 onsite spaces per unit for four or more bedroom units, inclusive of guest and disabled parking spaces).

Through the conditional use permit process, the City can also consider a less stringent parking requirement if a site-specific parking study clearly demonstrates that traffic circulation, public safety, coastal access, and the availability of public on-street parking are not impaired. The Zoning Code also provides for case-by-case evaluation of proposed joint-use parking agreements and off-site parking arrangements.

Not only does the required number of parking spaces affect the development potential of a property, but the physical design of the required parking can also affect it as well. The Planning Commission has the authority to establish and amend from time to time parking design guidelines, which govern parking space layout, minimum dimensions, location, circulation, landscaping, surfacing materials and the like.

While off-street parking standards can affect planned residential density, especially for small lots and in-fill areas, this potential constraint is mitigated by the incentives and flexible standards described above. However, the Housing Element includes Program 3A to amend the zoning code parking standards for affordable, mixed-use and transit-oriented housing projects and to ensure that the parking standards do not constrain realistic capacity.

8.6.3 Flexibility in Development Standards

In addition to the variability and flexibility in the development standards described above, the Zoning Code also provides potential for further flexibility through the Lot Area Averaging and Planned Residential Development (PRD) entitlement processes. Implemented through a conditional use permit, these provisions encourage more creativity and flexibility in design to minimize grading, preserve significant natural resources or topographical features, and promote more efficient and economical use of land. Where the lot averaging and PRD processes are not appropriate but relief from the above standards is still warranted, the opportunity for a variance approval exists. As such, the above standards collectively do not pose a significant constraint to residential development overall, and the sites identified in the Housing Element have adequate capacity to accommodate the City's RHNA.

8.6.4 Mid-range Density

Projects resulting in five or more residential units/lots are limited to the mid-point density of the applicable zoning category. Project applicants may request to exceed the mid-point if findings can be made that the proposed project excels in design excellence or provides extraordinary community benefits. To avoid this midpoint limitation, most developers elect to develop at the maximum permitted density with a density bonus. Thus the policy has had the actual effect of increasing the number of both market-rate and affordable units built in the City.

This policy will be eliminated on sites rezoned to accommodate lower income housing.

8.7 Provision for a Variety of Housing Types

Housing Element law specifies that jurisdictions shall identify adequate sites to be made available through appropriate zoning and development standards to encourage the development of a variety of housing types for all economic segments of the population. This includes single-family homes, multi-family housing, accessory dwelling units, mobile homes, emergency shelters, and housing for persons with disabilities.

Table B-42 below summarizes the various housing types permitted within the City's zoning districts.

Table B-42: Use Regulations for Residential Districts

Use	RR, RR-1, RR-2	RS-11, R-3, R-5, R-8	R-11, R-15	R-20, R-25	MHP
Single-Family Dwelling	P	P	P	P	P
Accessory Dwelling Unit	P	P	P[1]	P[1]	P[1]
Multi-Family Dwelling	X	X	P	P	X
Mobile Home Park	X	X	C	C	P
Manufactured Housing	P	P	P	P	P
Residential Care Facility (6 or fewer)	P	P	P	P	X
Residential Care Facility (7 or more)	C	C	C	C	X

Notes:
1 - in conjunction with an existing single-family residence or the construction of a new single-family residence on a lot zoned for single-family or multifamily use

8.7.1 Single-Family Dwelling

A "single-family dwelling" is defined in the Zoning Code as a one-family dwelling, attached or detached, located on separate lots or parcels exclusively for residential occupancy. Single-family dwellings are permitted in all residential zones. The City's definition of "family" does not limit the number of unrelated persons who may be considered a "family," as discussed later in this Appendix.

8.7.2 Accessory Dwelling Unit and Junior Accessory Dwelling Unit

Accessory dwelling units (ADUs) are attached or detached dwelling units that provide complete independent living facilities for one or more persons including permanent provisions for living, sleeping, cooking and sanitation. Junior accessory dwelling units (JADUs) have access to the main home, may share a bath, and have limited kitchen facilities. Accessory dwelling units may be an alternative source of affordable housing for lower-income households, seniors, family members, and live-in assistants enabling owners to age in place.

As described in Program 1C, the City has adopted flexible ADU standards to encourage ADU production. Those standards allow both an ADU and a JADU on one lot, reduce setbacks, and increase floor area. The City also waives development fees for ADUs.

8.7.3 Multi-Family Dwelling

According to the State Department of Finance, multiple-family housing consisted of approximately 22 percent of the 2010 housing stock in Encinitas. In 2017 that number was approximately the same. The Zoning Code allows multi-family developments as a permitted use in the higher density residential zones (R- 15, R-20 and R-25). The maximum density for the R-25 zones is 25 units per acre.

Program 1B provides for upzoning the proposed lower income sites to a maximum density of 30 units per acre.

8.7.4 Mobile Home Parks and Manufactured Housing

Manufactured housing and mobile homes can be an affordable housing option for low and moderate income households. According to the California Department of Finance, there were 770 mobile homes in the City as of January 2010. In 2017, that number was estimated to be 678 units. A mobile home built after June 15, 1976, certified under the National Manufactured Home Construction and Safety Act of 1974, and built on a permanent foundation may be located in any residential zone where a conventional single-family detached dwelling is permitted subject to the same restrictions on density and to the same property development regulations. The Encinitas Municipal Code does not define manufactured housing. However, factory-built modular homes, constructed in compliance with the City's construction codes, and mobile homes/manufactured housing units that comply with the National Manufactured Housing Construction and Safety Standards Act of 1974, are considered single-family dwellings and treated as such. Mobile Home Parks require a Conditional Use Permit (CUP) in the R-11 and the higher density residential zones (R-15, R-20 and R-25) and are a permitted use in the MHP zone.

8.7.5 Residential Care Facilities

Residential care facilities licensed or supervised by a federal, state, or county agency provide 24-hour non-medical care of unrelated persons who are handicapped and in need of personal services, supervision, or assistance essential for sustaining the activities of daily living or for the protection of the individual in a family-like environment. Several state laws, including the Community Care Facilities Act (California Health and Safety Code) and Lanterman Developmental Disabilities Services Act (California Welfare and Institution Code), require that State-licensed residential care facilities serving six or fewer persons (including foster care) be treated as a regular residential use and therefore shall be permitted by right in all residential zones allowing residential uses. These facilities cannot be subject to more stringent development standards, fees, or other standards than the same type of housing in the same district.

In accordance with these provisions, Encinitas allows residential care facilities serving six or fewer persons within all residential zones. Residential care facilities serving more than six persons are conditionally permitted in all single-family residential zones when located on a prime arterial roadway, and conditionally permitted in all multi-family zones. Conditions for approval are similar to those of similar uses in the same zone.

8.7.6 Emergency Shelters

Senate Bill 2, enacted in October 2007, requires local governments to identify one or more zoning categories that allow emergency shelters (year-round shelters for the homeless) without discretionary review. The statute permits the City to apply limited conditions to the approval of ministerial permits for emergency shelters. The identified zone shall have sufficient capacity to accommodate at least one year-

round shelter and accommodate the City's share of the regional unsheltered homeless population. In 2017, the January homeless count found 33 sheltered and 84 unsheltered individuals.

The City of Encinitas' Zoning Code does not explicitly address emergency shelters. Housing Element Program 2E provides that the City will amend its Zoning Code by November 2018 to permit homeless shelters by right, without discretionary review, within the Light Industrial (LI) and Business Park (BP) zones, consistent with State law. Areas designated as Light Industrial and BP total approximately 28 acres. A small concentration of various light industrial uses are all tightly clustered, with some commercial services, in a specific area located off of Westlake Street (south of Encinitas Boulevard). Uses in this light industrial area include storage facilities and some service-related uses, such as auto body repair. Located at the corner of Westlake Street and Encinitas Boulevard are bus stops going to and from the Town Center (Route 309). Within this area, two parcels are vacant (0.46 acre). These zones will be more than able to accommodate, in vacant and underutilized properties or through conversion of warehouse buildings, at least one emergency shelter for Encinitas' unsheltered homeless population of 84 individuals.

8.7.7 Transitional Housing

Government Code Section 65582 defines "transitional housing" as buildings configured as rental housing developments, but operated under program requirements that call for the termination of assistance and recirculating of the assisted unit to another eligible program recipient at some predetermined future point in time, that shall be no less than six months from the beginning of assistance. Residents of transitional housing are usually connected to supportive services designed to assist the homeless in achieving greater economic independence and a permanent, stable living situation. Transitional housing can be located in single-family homes but is usually located in multi-family apartments and typically offers case management and support services to help return people to independent living (often six months to two years).

Currently, transitional housing facilities are included in the Encinitas Zoning Code as residential care facilities. Program 2E in the Housing Element provides that the City will amend its Zoning Code to allow transitional housing to be considered a residential use of property, subject only to restrictions that apply to other residences of the same type (single-family or multi-family) in the same zone.

8.7.8 Supportive Housing

Supportive housing links the provision of housing and social services for the homeless, people with disabilities, and a variety of other special needs populations. Government Code Section 65582 defines "supportive housing" as housing with no limit on length of stay, that is occupied by the target population, and that is linked to on-site or off-site services that assist the supportive housing resident in retaining the housing, improving his or her health status, and maximizing his or her ability to live and, when possible, work in the community. "Target population" means persons with lower incomes who have one or more disabilities, including mental illness, HIV or AIDS, substance abuse, or other chronic health conditions, or individuals eligible for services provided under the Lanterman Developmental Disabilities Services Act (Division 4.5, commencing with Section 4500, of the Welfare and Institutions Code, who include persons diagnosed with a developmental disability before age 18) and may, among other populations, adults, emancipated minors, families with children, elderly persons, young adults aging out of the foster care system, individuals exiting from institutional settings, veterans, or homeless people. Similar to transitional housing, supportive housing may be located in single-family homes or multi-family apartments.

Supportive housing includes a service component either on- or off-site to assist the tenants in retaining the housing, improving his or her health status, and maximizing his or her ability to live and, when possible, work in the community.

The Encinitas Zoning Code does not currently address the provision of supportive housing. Program 2E in the Housing Element contains a program to amend the Zoning Code to allow supportive housing to be considered a residential use of property, subject only to restrictions that apply to other residences of the same type (single-family or multi-family) in the same zone.

8.7.9 Single Room Occupancy Units (SROs)

SRO units are one-room units intended for occupancy by a single individual. They are distinct from a studio or efficiency unit, in that a studio is a one-room unit that must contain a kitchen and bathroom. Although SRO units are not required to have a kitchen or bathroom, many SROs have one or the other and could be equivalent to an efficiency unit. The Encinitas Zoning Code does not contain specific provisions for SRO units.

The City permits SROs in the DCM-1 zone with a major use permit. Additionally, the City will amend the Zoning Code to permit SROs in multifamily zones.

8.7.10 Tiny Homes

The City has also expressed its interest in exploring the concept of “tiny homes” The tiny house movement (also known as the "small house movement") is a description for the architectural and social movement that advocates living simply in small homes. There is currently no set definition as to what constitutes as tiny home in the City’s Zoning Code; however, a residential structure under 500 square feet is generally accepted to be a tiny home. The City has no minimum unit size that would limit the provision of tiny homes.

8.7.11 Farmworker Housing

The City of Encinitas has established an agricultural overlay zone and, within the Encinitas Ranch Specific Plan, an Agricultural (AG) zone. The Specific Plan further specifies that farm employee housing requires the approval of a minor use permit.

The City will amend the Zoning Code to comply with State laws with regard to agricultural worker housing. Specifically, pursuant to the State Employee Housing Act (Section 17000 of the Health and Safety Code), employee housing for agricultural workers consisting of no more than 36 beds in a group quarters or 12 units or spaces designed for use by a single-family or household is permitted by right in an agricultural land use designation. Therefore, for properties that permit agricultural uses by right, a local jurisdiction may not treat employee housing that meets the above criteria any differently than an agricultural use. Furthermore, any employee housing providing accommodations for six or fewer employees shall be deemed a single-family structure within a residential land use designation, according to the Employee Housing Act. Employee housing for six or fewer persons is permitted wherever a residence is permitted. To comply with state law no conditional use permit or variance will be required.

8.7.12 Housing for Persons with Disabilities

Both the federal Fair Housing Amendment Act (FHAA) and the California Fair Employment and Housing Act direct local governments to make reasonable accommodations (that is, modifications or exceptions)

in their zoning laws and other land use regulations when such accommodations may be necessary to afford disabled persons an equal opportunity to use and enjoy a dwelling. The City conducted an analysis of the zoning ordinance, permitting procedures, development standards, and building codes to identify potential constraints for housing for persons with disabilities. The City's policies and regulations regarding housing for persons with disabilities are described below.

8.7.13 Land Use Controls

Under State law, small licensed residential care facilities for six or fewer persons shall be treated as regular residential uses and permitted by right in all residential districts. Encinitas allows residential care facilities serving six or fewer persons within all residential zones. Residential care facilities serving more than six persons are conditionally permitted. The City has not adopted a spacing requirement for residential care facilities.

8.7.14 Definition of Family

A restrictive definition of "family" that limits the number of unrelated persons and differentiates between related and unrelated individuals living together is inconsistent with the right of privacy established by the California Constitution. The City of Encinitas Zoning Code defines a "family" as "one or more persons, an individual or two (2) or more persons related by blood, marriage or adoption, or a group including unrelated individuals bearing the generic character of and living together as a relatively permanent unit sharing such needs as cooking facilities. Family shall also mean the persons living together including the licensee, the members of the licensee's family, and persons employed as facility staff in the following facilities licensed to serve six (6) or fewer persons: A) a licensed "residential facility", as that term is defined in the California Community Care Facilities Act, California Health & Safety Code Section 1500 et. Seq; B) a licensed "residential care facility for the elderly", as that term is defined in the Residential Care Facilities for the Elderly Act, California Health & Safety Act, Section 1569 et. seq.; C) a licensed "congregate care" or "intermediate care facility, as defined in California Health & Safety Code Section 1250; or D) a licensed Alcohol and Drug Abuse Recovery Treatment Center, as defined in the Uniform Controlled Substances Act, California Health & Safety Code Section 11000 et seq." The City's definition of family does not limit the number of unrelated persons living together and does not need to be amended.

8.7.15 Building Codes

The Building and Safety Division actively enforces Titles 11A and 11B of the California Building Code and Americans with Disability Act provisions that regulate the access and adaptability of buildings to accommodate persons with disabilities. No unique restrictions are in place that would constrain the development of housing for persons with disabilities. Section 233.3.2 of the 2010 ADA Standards for Accessible Design requires that a percentage of units in a housing development provide mobility accessibility features and communications features. Other features, such as accessible parking spaces, accessible route of travel, and accessible baths are also required.

8.7.16 Encroachment Permit Procedure

Encroachment permits for structures within public rights-of-way are handled administratively by the Engineering Services Department. Improvements designed to improve accessibility (such as a wheelchair ramp) that encroach on the public right-of-way needs a Permanent Encroachment permit with a Maintenance and Removal Covenant. The applicant provides a drawing of the proposed improvements in

relation to the public right of way, which is then reviewed by the City Engineer. The improvements shall be completed by a licensed and insured general contractor. There is a nominal permit fee as well as a small recording fee. The City's permit processes for waivers and encroachments are relatively simple and expeditious and do not constitute a constraint to reasonable accommodations for persons with disabilities.

8.7.17 Retrofitting and Barrier Removal

The City also allows residential retrofitting to increase the suitability of homes for persons with disabilities in compliance with ADA requirements. Such retrofitting is permitted under Chapter 11 of the California Code. The City works with applicants who need special accommodations in their homes to ensure that application of building code requirements does not create a constraint.

The City does not impose special permit procedures or requirements that could impede the retrofitting of homes for accessibility. The City's requirements for building permits and inspections are the same as for other residential projects. City officials are not aware of any instances in which an applicant experienced delays or rejection of a retrofitting proposal for accessibility to persons with disabilities.

8.7.18 Permits and Review Procedures

The City does not impose special occupancy permit requirements for the establishment or retrofitting of structures for residential use by persons with disabilities. Generally, if structural improvements were required for an existing group home, a building permit would be required. If a new structure were proposed for a group home use, review would be required as for any other new residential structure.

Many residential projects in the City require some level of design review. The design review and hearing process is the same for group homes and special needs housing for persons with disabilities as for other residential projects. The City's design review process has not been used to deny or make infeasible a housing project for persons with disabilities.

8.7.19 Reasonable Accommodation

Both the Federal Fair Housing Act and the California Fair Employment and Housing Act direct local governments to make reasonable accommodations (that is, modifications or exceptions) in their zoning laws and other land use regulations when such accommodations may be necessary to afford disabled persons an equal opportunity to use and enjoy a dwelling. For example, it may be reasonable to accommodate requests from persons with disabilities to waive a setback requirement or other standard of the Zoning Code to ensure that homes are accessible for the mobility impaired. Whether a particular modification is reasonable depends on the circumstances.

Encinitas currently provides information to applicants or those inquiring of City regulations regarding accommodations in zoning, permit processes, and application of building codes for persons with disabilities. Applicants for development projects may apply for a variance from development standards if circumstances warrant. Certain minor variances may be granted by the City's zoning administrator, while other variance requests are approved by the Planning Commission. In either case, rather strict findings must be made in order to grant a variance. As such, the formal variance procedure may not be the appropriate vehicle to consider requests for reasonable accommodations. Housing Element Program 5A states that the City will amend the Zoning Code to adopt a reasonable accommodation ordinance.

8.8 Development and Planning Fees

Residential developers are subject to a variety of fees and exactions to process permits and provide necessary services and facilities as allowed by State law. In general, these development fees can be a constraint to the maintenance, improvement, and development of housing because the additional cost borne by developers contributes to overall increased housing unit cost. However, the fees are necessary to maintain adequate planning services and other public services and facilities in the City. These fees have not been found to act as a constraint to the development of housing in Encinitas.

Table B-43 summarizes the most common planning and development impact fees for the City of Encinitas and other North County Coastal cities. In general, the City's fees are comparable to those imposed on developments in other North San Diego communities.

Development fees vary depending on housing type and the location of the project. However, generally, a developer can expect to pay approximately $5,000in total planning fees for a typical single-family dwelling unit. For a small multi-family project (five to ten units), fees total approximately $6,000 per unit (1,200 square feet). Given the high land costs in Encinitas, the City's planning and development fees represent only a small percentage of the overall development costs and do not serve to constrain housing development.

Table B-43: Regional Comparison of Planning and Development Fees (2018)

	Encinitas[1]	Carlsbad[2]	Oceanside[3]	Solana Beach[4]
Planning Fees				
Coastal Development Permit	$1,600	$910-$3,774	$3,000 - $4,000	
Design Review/Development Review	$274-$4,800	--	$5,000-$6,435	$3,030-$10,000
Major Use Permit/Conditional Use Permit	$6,000	$4,765	$5,000	$9,300
Minor Use Permit	$2,110	$798	$3,000	$2.327
Tentative Parcel Map	$4,555	$4,044	Deposit Account	--
Final Parcel Map	$355	$3,115	--	--
Tentative Subdivision Map	$13,000 (plus $650 per lot in excess of 5 lots)	$4,044 - $17,501	Deposit Account	$8,674-$10,858
Final Subdivision Map	$520	$7,964	--	$4,002-$5,777
Variance	$1,580-$3,810	$3,005	$4,000	$2,163
Plan Check	$70-$1,000	70% of building permit	--	--
Environmental Review-Initial Study	$5,055	--	$5,000 Deposit Account	$291 plus cost
General Plan Amendment	$13,000-$20,000 (Plus staff time and costs)	$4,537-$6,544	$10,000	$10,000

Table B-43: Regional Comparison of Planning and Development Fees (2018)				
	Encinitas[1]	Carlsbad[2]	Oceanside[3]	Solana Beach[4]
Impact/Capacity Fees				
Parks and Recreation Fee	$5,423-$9,220/unit	$3,696-$7,649/unit	$4,431/unit	$600/unit
Open Space Land Acquisition	$287 - $438/unit	--	--	--
Trail Development Fee	$107 – $168 unit	--	--	--
Community/Public Facilities Fee	$387-$571/unit	--	$2,621/unit	1% of valuation
Affordable Housing In-Lieu Fee	--	$2,915-$4,515/unit	$1,000/project + $100/unit plus $5.80/sq ft	--
Sewer Connection Fee	$2,680 - $4,006/unit	$934/unit	$7,794/unit	--
Public Art Fee	--	--	--	0.5% of valuation
Traffic Impact Fee	$2,680 to $4,006/unit	$111 - $329 per ADT	--	SF: $3,623/unit MF: $2,899/unit
School Facilities Fee	--	--	$3.20 - $3.48/sq. ft.	--
Water Connection Fee	SDWD: $8,940 - $49,608 OMWD: $12,807 - $82,697	--	--	--

Source: Cities of Encinitas, Carlsbad, Oceanside and Solana Beach, 2018.
Notes:
(1)effective Jan 1, 2018
(2) Effective Jan 1, 2018
(3) effective April 1, 2017
(4) effective 2011

8.9 On and Off-Site Improvements

Site improvements in the City consist of those typically associated with development for on-site improvements (fronting streets, curbs, gutters, sewer/water, and sidewalks), and off-site improvements (drainage, parks, traffic, schools, and sewer/water). Thus, these are costs that will be added to the sale or rental price of housing. Because residential development cannot take place without the addition of adequate infrastructure, site improvement requirements are not seen as a constraint to the development of housing within the City.

Unlike most cities, Encinitas does not impose standardized infrastructure requirements. Adopted policies in other elements of the General Plan call for street and sidewalk improvement standards adequate to serve and protect public safety but are tailored to specific community and neighborhood design needs. This approach is expected to result in requirements less stringent and less costly than the normal type of

citywide engineering requirements imposed by most municipalities. The improvements and exactions required for residential development are limited to those improvements needed to allow the project based on its impacts.

For single-family residential development on vacant land, examples of typical on-site improvements might include stormwater detention facilities, roads, sidewalks, perimeter walls, fire hydrants and emergency access drives, and recreational trails. The Fire Department may require fire breaks and fuel management areas if a project is within or near brush areas. Multifamily developments may also include common open space and recreation areas, as well as lockable storage areas.

Typical off-site improvements for both single-family and multi-family developments might include: new curbs, gutters, and sidewalks, recreational trail facilities, road improvements and traffic control needed to serve the development, street trees, and landscaping. Utilities may need to be upgraded or installed to serve the development, including water mains, sewer mains, stormwater pollution prevention measures, and undergrounding of electric utilities.

Infill residential projects may be required to install any of the example improvements listed above, depending on site-specific circumstances and neighborhood needs. As mentioned previously, required site improvements are limited to just those needed to serve the project and offset related impacts.

For residential projects, there is no fixed landscaping requirement as a percentage of the total site. However, projects subject to design review, such as single-family subdivisions and multi-family projects are required to submit landscaping plans as part of the overall project. Multifamily projects are required to maintain a landscape buffer when adjacent to a rural residential or single- family zone. Specific landscaping requirements may vary from city-wide standards in the various specific plan areas. For projects not subject to design review (for example, a new single-family home on an individual lot), an approved landscaping plan is generally not required. Open space requirements apply to residential projects under certain circumstances such as the presence of steep slopes, floodplains, sensitive habitat, or other environmentally constrained features. For example, properties subject to the Hillside/Inland Bluff Overlay Zone shall preserve undisturbed or restored areas that exceed 25 percent in slope in an open space easement or deed restriction. The purpose of such restrictions is to protect environmentally or geologically sensitive areas from the adverse effects of development.

Open space requirements can be applied through Lot Area Averaging and Planned Residential Development (PRD) projects. A primary purpose for lot averaging and PRD projects is to allow design flexibility to protect sensitive areas and significant topographic features while maintaining the ability to achieve planned densities. Open space reservations also provide a recreational amenity for the residents of such developments. For example, the PRD standards require that 40 percent of a development site contain both developed and undeveloped open space for the purposes of preserving natural and sensitive areas while providing common recreational and private use areas.

Public street widths are specified in the City's Municipal Code (23.36.090). The City requires a standard right-of-way of 30 feet for residential and light collector streets. These improvement requirements are typical and do not constrain housing development. These are typical standards acceptable to the Encinitas Fire Protection Department and County Fire.

8.10 Building Codes and Enforcement

The City of Encinitas' construction codes are based upon the California Code of Regulations, Title 24 (Building, Plumbing, Mechanical, Electrical and Housing Codes) and are considered to be the minimum necessary to protect the public health, safety and welfare of the City's residents. The City has also adopted the Uniform Fire Code (UFC). Code enforcement is conducted by the City and is based on systematic enforcement in areas of serious concern and on a complaint basis throughout the City. The Code Enforcement Division works with property owners and renters to assist in meeting State health and safety codes. The Code Enforcement Division has not found any structures to be unfit for human occupancy as a result of its code enforcement efforts.

8.11 Local Permits and Processing Times

The processing time needed to obtain development permits and required approvals is commonly cited by the development community as a prime contributor to the high cost of housing. Depending on the magnitude and complexity of the development proposal, the time that elapses from application submittal to project approval may vary considerably. Factors that can affect the length of development review on a proposed project include: completeness of the development application and responsiveness of developers to staff comments and requests for information. Approval times are substantially lengthened for projects that are not exempt from the California Environmental Quality Act (CEQA), require rezoning or general plan amendments, or encounter community opposition.

Certainty and consistency in permit processing procedures and reasonable processing times is important to ensure that the development review/approval process does not discourage developers of housing or add excessive costs (including carrying costs on property) that would make the project economically infeasible. The City is committed to maintaining comparatively short processing times. Total processing times vary by project, but most residential projects are approved in three months to one year. **Table B-44** provides a detailed summary of the typical estimated processing procedures and timelines of various types of projects in the City.

Table B-44: Processing Times

Project Type	Reviewing Body	Public Hearing Required	Appeal Body (if any)	Estimated Total Processing Time
Single-Family Subdivision	≤4 lots: Development Services Director ≥5 lots: Planning Commission	Yes	City Council; Coastal Commission in Coastal Commission appeal jurisdiction	≤4 lots: 3-6 months ≥5 lots: 6 months to 1 year
Multiple-Family	Planning Commission	Yes	City Council; Coastal Commission in Coastal Commission appeal jurisdiction	6 months to 1 year
Multiple-Family (with subdivisions)	Planning Commission	Yes	City Council; Coastal Commission in Coastal Commission appeal jurisdiction	6 months to 1 year
Mixed-use	Planning Commission	Yes	City Council; Coastal Commission in Coastal Commission appeal jurisdiction	6 months to 1 year

At a minimum, building permits are required to construct any new or structurally-remodeled dwellings. New single-family units and multi-family development proposals are subject to design review. Land subdivisions require approval of a parcel or subdivision map. Proposed residential development within the Coastal Zone is also subject to approval of a Coastal Development Permit. In all residential zones single-family and multi-family development is permitted by right, that is, not subject to a conditional use permit unless the applicant proposes a Planned Residential Development (PRD) or lot area averaging. Single-family and multi-family uses also are permitted by right in mixed-use zones. The review procedures for single-family and multi-family development are similar. The processing time for the most common residential development applications are summarized in **Table B-45**. These applications are often processed concurrently while Coastal Development Permits are usually processed concurrently with other development permits, they can add approximately two months to the processing time for a single-family home that would not otherwise be subject to discretionary review.

While the review and permit processing procedures and time frames are comparable to those in other coastal cities, Encinitas continues to improve its procedures. The City has implemented a number of improvements to the review process, including upgraded permitting software, improved coordination and communication among departments, weekly pre-development meetings with prospective developers, periodic distribution of a newsletter to the development community, and improved access to zoning and development information via the City's website and informational brochures at City Hall. Housing Element Program 3E calls for the City to continue to improve the efficiency of the development review process for housing projects.

Table B-45: Approximate Processing Times

Process/Application	Time
Conditional Use Permit	6-18 months
Design Review	6-18 months
General Plan Amendment	1-2 years (if part of Local Coastal Program then an additional 18 months to several years)
Environmental Impact Reports	1-2 years
Plan Check/Building Permits	2-6 months (varies by type of permit)
Variance	4 months to 1 year
Zone Change	1-2 years (if part of Local Coastal Program then an additional 18 months to several years)

Source: City of Encinitas Planning Department, 2018.

8.11.1 Design Review

The design review process is regulated by Municipal Code Chapter 23.08 and adopted Design Guidelines. While there are some exceptions to the design review requirement, such as limited additions and remodels, a single home on a pre-existing legal lot, walls and fences under six feet high, and so forth, all other new development is subject to the regulations. Design review determinations are either made by the Planning Director or Planning Commission (see "Administrative Review" and "Discretionary Review" discussion below). Most new residential developments will be reviewed by the Planning Commission. In

order to gain approval, the design review regulations require that the decision-maker must find that the project:

- Is consistent with the General Plan, a Specific Plan or the Municipal Code;
- Is substantially consistent with the Design Review Guidelines;
- Would not adversely affect the health, safety, or general welfare of the community; and
- Would not tend to cause the surrounding neighborhood to depreciate materially in appearance or value (EMC 23.08.080).

To guide developers in designing their projects and assist staff and the Planning Commission in evaluating them, the Design Guidelines contain detailed policies covering various aspects project design: site planning, grading and landform, circulation, parking and streetscape, architecture and signage, lighting, and landscaping. Some guidelines are mandatory, i.e., the project shall incorporate certain features into their designs. For example, "barrier-free design amenities for the disabled shall be provided." Most guidelines, however, are presented in the more suggestive terms "should", "should not", "encouraged" and "discouraged". The guidelines are intended to articulate community vision about how development is executed while at the same time provide enough flexibility to encourage creativity and cost-effective design. However, under the Housing Accountability Act, a housing development may be denied or reduced in density only if it violates objective standards.

In addition, each of the adopted Specific Plans has written guidelines tailored to the design and character issues unique to those areas. The written guidelines enable prospective developers to understand how their projects will be evaluated and enable them to design accordingly, minimizing costly redesigns and delays in the review process.

A concern has been expressed that design review finding No. 4 (above) could be used to deny an affordable housing project (although studies show that affordable housing does not reduce property values). This would not be permitted by the Housing Accountability Act. However, while there is no known case in Encinitas that a residential project was denied on the basis that it may "tend to cause the surrounding neighborhood to depreciate materially in appearance or value", Housing Element Program 3B states that the City will modify this finding to remove references to "value depreciation" when considering the character of the surrounding neighborhood.

8.11.2 Building Permit

The construction of one single-family residence outside the Coastal Zone, which meets the requirements of a custom home and complies with all other City ordinances and regulations generally does not require any level of discretionary review. The permit process is a building permit application and takes approximately two to three months for approval. The building permit process follows these steps:

1. Filing a Building Permit application and payment of fees;
2. Submitting Construction Plans for Building and Grading Permits;
3. Resubmit Construction Plans for re-review as needed; and
4. Permits Issued.

All residential projects, whether or not they require design review or a coastal development permit, follow the building permit process before receiving final building permit approval.

8.11.3 Coastal Development Permit

New development in the City's Coastal Zone requires a Coastal Development Permit. In 1994, Encinitas assumed permitting authority from the California Coastal Commission through an adopted Local Coastal Program (LCP). To reduce overlapping requirements, the LCP allows processing of coastal development permits concurrently with other reviews such as design review and conditional use permits. However, in the case of individual single-family home construction, coastal permit requirements can add two months to the review process.

The City is seeking to exempt certain types of development in specific locations (including individual homes) from the Coastal Development Permit process, provided there are no environmental constraints or coastal access issues.

8.11.4 Administrative Review (Director Approval)

Construction of residential projects may require Administrative Review. The Administrative Review process involves submitting an application, staff and public review, and finally Planning Director approval. The Administrative Review process takes between three to six months for approval. Administrative Review decisions can be appealed to the City Council, which can lengthen the review process. The following types of projects require Administrative Review:

- Tentative Parcel Map (four lots/units or fewer)
- Boundary Adjustment
- Certificate of Compliance
- Minor Use Permit
- Minor Variance
- Condominium Conversion (four units or fewer)
- Administrative Design Revie

8.11.5 Discretionary Review (Planning Commission Approval)

Residential projects that require Planning Commission review involve submitting a Discretionary Permit Application, staff and public review, and final approval by the Planning Commission. The Discretionary Review process generally takes six months up to a year for approval. Planning Commission determinations can be appealed to the City Council, which can lengthen review time. The following types of projects require Planning Commission approval:

- Tentative Subdivision Map (five or more lots/units)
- Major Use Permit
- Major Variance

- Condominium Conversion (five or more units)
- Design Review

9 Environmental and Infrastructure Constraints

The City of Encinitas is bounded by the Pacific Ocean on the west. Coastal bluffs at the City's northern boundary overlook the portion of Batiquitos Lagoon that falls within Encinitas, and includes lands south and southeast of the lagoon, including Indian Head Canyon, Magdalena Ecke Park, the slopes above Green Valley, and habitat north of Encinitas Boulevard between El Camino Real and Rancho Santa Fe Road. At the City's southern perimeter, slopes and bluffs overlook San Elijo Lagoon. Escondido Creek, a major east-west waterway, traverses the southern boundary of the City and ultimately empties into the San Elijo Lagoon.

Portions of Encinitas are exposed to a variety of environmental hazards and resources which may constrain development. These constraints include topography, flooding, landslides and seismic hazards, and areas with natural and cultural resources. For example, areas of Olivenhain and the Sphere of Influence area beyond the City's eastern limits include slope areas greater than 25 percent and are characterized by the presence of biological habitat. A number of residential properties along the coast in Old Encinitas and Leucadia are affected by the presence of coastal bluffs and erosion. The Zoning Code has defined a Special Purpose Overlay Zone that recognizes

the need for additional site development considerations in these areas before future development may proceed. These constraints were taken into account as part of the residential capacity figures that were generated as part of the site inventory analysis.

In Encinitas those areas planned for higher density are less subject to environmental limits and hazards. Conversely, those areas that are more constrained are planned for lower density to lessen the potential for unacceptable impacts on the environment. Approximately 6.1 percent of the land cannot be developed in Encinitas due to physical or environmental constraints such as steep slopes, floodplains, wetlands, or public ownership.

The City of Encinitas has evaluated the availability of infrastructure from a Citywide and site-specific standpoint. In determining the feasibility of sites to accommodate the City's RHNA needs, infrastructure provision was a determining factor. Based on the site inventory analysis contained in Appendix C of this Housing Element, the current location of infrastructure facilities, adjacent to, or on the parcels within the inventory of sites, do not pose a constraint to development. All of the lower income sites are adjacent to existing public roads that contain infrastructure facilities.

A Final EIR was certified for the Measure T Housing Element. As a complement to this Housing Element update, an Environmental Assessment under Government Code Section 65759, in the form of a draft Supplemental EIR, was conducted to evaluate any additional potential impacts to the environment. The Environmental Assessment will become part of the General Plan when the Housing Element is adopted.

9.1 Geologic and Seismic Hazards

Southern California is considered as one of the most seismically active regions in the United States because the faulting is dominated by the compression regime associated with the "big bend" of the San

Andreas Fault Zone. The San Diego region is transected by several sub-parallel, pervasive fault zones, as well as smaller faults. The City of Encinitas is located in the southern part of the Peninsular Ranges geologic Province: an area that is exposed to risk from multiple earthquake fault zones. The San Andreas Fault, which runs from Baja, California to San Francisco, is approximately 100 miles east of the City and poses a potential risk for much of the San Diego region. However, for the City the highest risks originate from nearby zones such as the Elsinore Fault zone, the Rose Canyon Fault zone and other offshore faults. Each zone has the potential to cause moderate to large earthquakes that would cause ground shaking in Encinitas and nearby communities.

The major onshore and offshore fault zones present some relative seismic risk to the City, similar to most Southern California communities. In the early 1990s, the City conducted a survey for unreinforced masonry buildings in Encinitas and identified structures vulnerable to earthquake forces. The survey provides 20 site addresses in the City that are subject to risk, as well their estimated occupancy information and building condition. None of the sites for lower income households identified in the site inventory analysis are at risk due to the presence of unreinforced masonry buildings.

Although future development constructed under the Housing Element would involve the construction of new residential structures in a seismically active area, the potential hazards would be less than significant because of the existing regulatory framework related to seismic safety. Sites containing greater than a 25 percent grade would be at a greater risk for damage during an earthquake. Accordingly, the site inventory analysis reduced the expected residential production on sites for lower income households with more than a 25 percent grade, and geologic and seismic hazards do not prevent the City from providing adequate sites.

9.2 Flooding

Flood zones are geographic areas that the Federal Emergency Management Act (FEMA) has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area. Portions of the City are located within a FEMA 100-year or 500-year flood zone. The low-lying areas along the floodplains of Cottonwood Creek, Encinitas Creek and Escondido Creek, as well as their tributaries, can experience flooding during severe rain seasons.

In addition, portions of the City are also within a dam inundation area. Dam inundation areas are downstream areas subject to flooding or other effects during large storm events. Dam inundation areas are also subject to the uncontrolled release of an upstream reservoir as well as events leading to breaks in levees or dams. The areas of potential dam inundation are generally along the Cottonwood Creek, Encinitas Creek and Escondido Creek; portions of tributary stream channels; and the low-lying areas near the coastal portions of the plan area. Based on historical data and the high level of development in portions of the dam inundation hazard zones, should a dam failure occur, the flood hazard would be serious. However, the risk of dam failure is considered to be low.

The City does not consider flooding as a constraint to development due to federal requirements. There is one of the identified lower income housing sites (Strawberry Fields) within the FEMA 100-year flood zone. The acreage for the portion of the site affected by the 100-year flood zone has been removed from the net acreage. The net acreage reflects that constraint.

9.3 Wastewater Capacity

The City's wastewater collection division is responsible for maintaining the existing sewer infrastructure within the City. The City sewer maintenance includes cleaning sewer lines, clearing blockages, repairing breaks, and responding to emergencies. Sewage is conveyed through pipes to either the Encina Wastewater Authority (EWA) in Carlsbad, north of Encinitas, or to the San Elijo Water Reclamation Facility in Cardiff, south of Encinitas. The EWA plant currently treats approximately 43.4 million gallons of sewage per day from Encinitas, Carlsbad, Vista, Leucadia Sewer District, Vallecitos Water District, and Buena Sanitation District. Additionally, the EWA also produces recycled water for use in irrigation. The EWA also owns approximately 37 acres adjacent to the existing plant for potential future expansion although no current plans for expansion are planned at this time.

The San Elijo Water Reclamation Facility currently has a capacity to treat 5.25 million gallons of sewage per day for the communities of Cardiff, Solana Beach, Rancho Santa Fe and Olivenhain. The facility is also permitted to discharge up to 2.48 million gallons of recycled water to customers per day. There are no current plans for plant expansion.

Under the City's 2012 Sewer Master Plan, the City is allocated approximately 3.8 million gallons of sewage per day by the two sanitary districts that provide sewer service. Wastewater flow projections based on full build-out of vacant and underdeveloped parcels through 2035, plus assuming that all existing septic users connect to the City's sewer system would equal approximately 3.24 million gallons of sewage per day, which is within the capacity allocated to the City for sewage treatment. Therefore, the City of Encinitas's sewer infrastructure has capacity for the full buildout of the City, and sewer infrastructure does not place a constraint on development.

9.4 Water Supply

The City of Encinitas currently has three sources of water: raw water from the San Diego County Water Authority (SDCWA) through the State Water Project, treated water from the SDCWA, and runoff from the Lake Hodges watershed east of the City. This treated water is conveyed through pipes to the City's customers for residential, public, commercial and industrial uses. Fire flow capacity is also provided within the water system network for the City.

The San Dieguito Water District (SDWD) is a subsidiary of the City of Encinitas and provides water to approximately 40,000 residents in the communities of Leucadia, Old Encinitas, Cardiff-by-the-Sea and New Encinitas. The distribution system consists of approximately 170 miles of pipeline, a 2.5 and 7.5 million-gallon reservoir, and over 11,000 water meters. Approximately 30 percent of the District's water is from local sources, and the remainder (70 percent) is imported. The SDWD receives local runoff water from Lake Hodges and imported raw water from the San Diego County Water Authority. Both sources are treated at the R.E. Badger Filtration Plant located in Rancho Santa Fe. The plant is jointly owned with the Santa Fe Irrigation District. Treated water from the San Diego Water Authority can also be delivered directly to the District.

The Olivenhain Municipal Water District (OMWD) provides service to the remainder of the City. The OMWD is an independent public agency addressing the water needs of up to 40 percent of Encinitas residents. OMWD primarily serves the City's eastern half, including all or a part of the communities of Olivenhain, New Encinitas, Leucadia and Cardiff-by-the-Sea. OMWD delivers approximately 6.27 million

gallons per day to 9,420 water meters in Encinitas. In addition to portions of Encinitas, OMWD also includes portions of the cities of Carlsbad, San Diego, Solana Beach, San Marcos, and the County of San Diego. Overall, OMWD includes over 48 square miles (31,123 acres) and serves a population of 68,000 and has over 26,600 meters in service. Based on OMWD's 2009 Comprehensive Annual Financial Report, the distribution system also includes a recycled service area of 10,567 acres (including 46 miles of recycled water main). Approximately 94 percent of the treated water delivered by OMWD is treated at the David C. McCollom Water Treatment Plant, located within the community of Elfin Forest. Water treated at this facility is imported raw water from the SDCWA (blend of water from the Colorado River and the State Water Project). The remaining 6 percent of the treated water treated at SDCWA's Twin Oaks Valley Water Treatment Plant in San Marcos and at the Skinner Water Treatment Plant located in southwestern Riverside County.

Water Master Plans for the San Dieguito Water District and Olivenhain Municipal Water District provide an assessment of the existing water system conditions and demands. The plans concluded that the overall system is adequately sized to accommodate future 2030 growth demands. In the San Dieguito Water District, the current average day demand for the district is 6.63 million gallons per day. The projected average future 2030 demand is 7.74 million gallons per day. In the Olivenhain Municipal Water District, the average daily water demand was 20.5 million gallons per day and the annual average basis of water demand in 2030 is 27.9 million gallons per day. The Master Plans identified areas for improvement that were then included into the future planning horizon CIP. These CIP upgrades include pipeline system upgrades, valve replacement, meter replacement and treatment plant upgrades.

Taking into account conservation program, maintenance of current adjudicated surface water rights, recycled water supply, and additional imported water from SDCWA, SDWD and OMWD anticipate having sufficient water supply to meet current and future customers' needs through at least 2035. Therefore, water supply does not place a constraint on development.

9.5 Stormwater Management

The City of Encinitas Public Works Department is responsible for maintaining the storm drain infrastructure through comprehensive programmatic efforts. The Stormwater Management Division (Clean Water Program) of the Engineering Department is responsible for enforcing regulatory mandates related to surface water.

The Clean Water Program has two goals: maintain water quality and protect beaches, lagoons and creeks from illicit discharges, sewage spills and other pollutants. In order to maintain high stormwater quality (and reduce/eliminate non-storm water discharge to the storm drain system) and to implement controls to reduce pollutants the City implements several activities including:

- Sewer spill prevention
- Preventing illicit discharges to the storm drain system.
- Litter, trash and debris removal
- Commercial runoff containment at gas stations and restaurants
- Public education

- Restoration of local waterways
- Storm drain system, biofilter, detention basin and channel maintenance
- Construction site runoff reduction
- Ultra Violet Treatment Facility at Moonlight Beach

Future development and redevelopment projects are required to implement the measures outlined in the City's Stormwater Manual, March 2010, and Best Management Practices Manual Part I and II. The Stormwater Manual includes requirements for the control measures to reduce stormwater pollutants to the maximum extent practicable for new development and redevelopment.

The City of Encinitas has an extensive storm drainage system that consists of:

- 100 miles of storm drain pipe
- Over 2,500 catch basin boxes
- Over 90 miles of channels

These facilities intercept stormwater runoff and convey it from the eastern part of the City to the west where it discharges into either the San Elijo Lagoon, south of the City Batiquitos Lagoon, north of the City. The coastal area of the City discharges through several outfalls to the ocean.

Although development of housing to meet the City's RHNA would increase impervious surface coverage in the City, runoff control under the City's standards would help to ensure that any increased stormwater flow would not exceed the capacity of the City's storm drain system. Therefore, stormwater management does not place a constraint on development.

9.6 Fire and Emergency Services

The Encinitas Fire Protection Department serves residents of the coastal, rural and agricultural communities of Encinitas, Olivenhain, Leucadia and Cardiff-by-the-Sea. The County of San Diego's County Service Area (CSA) 17 consists of Del Mar, Del Mar Heights, Solana Beach, Encinitas, Rancho Santa Fe and portions of Elfin Forest. Emergency medical services are provided by the Department and San Diego Medical Services Enterprise (SDMSE) within CSA 17.

There are six strategically located fire stations in the City of Encinitas, which allow firefighters and paramedics to provide timely responses to emergencies and to efficiently respond to volume demand. Five of the six stations house an engine company consisting of three fire suppression personnel, a fire engine, as well as various other emergency apparatus for specialized responses. In 2014, the Department's average response time for the city as a whole was 4 minutes and 35 seconds. The Insurance Services Organization (which rates fire departments based on the effectiveness of their response capabilities) gave the Department an ISO rating of 3, which is the third best among North County fire divisions and has resulted in lower homeowners insurance premiums for Encinitas residents. In addition to fire suppression and prevention, the Encinitas Fire Department provides safety marine and disaster preparedness services. City lifeguards provide beach safety for four miles of Encinitas beaches and responds to calls for wild life rescues, cliff rescues and other accidents in local lagoons and rivers. In 2014, the Encinitas Fire Department responded to 5,866 service calls within the City limits, from minor incidences and first aid to

rescues. The City's Community Emergency Response Team (CERT) program trains volunteers in skills to assist in large scale regional disasters. The City now provides volunteer trainings so CERT volunteers are ready and able to assist in emergency situations. It is not anticipated that any new fire safety or emergency service facilities would be required as a result of development on the housing sites. Therefore, this does not place a constraint on development.

9.7 Police Services

The City of Encinitas contracts with the County of San Diego Sheriff's Department (Sheriff's Department) to provide police/law enforcement services to the City. In addition to the City of Encinitas, North Coastal Station provides a wide range of municipal law enforcement services to the cities of Del Mar, Solana Beach and Rancho Santa Fe. Services include the following:

- Helicopters;
- A bomb/arson squad;
- A Special Enforcement Detail team;
- Canine units;
- Modern crime lab facilities; and
- One of the nation's most modern law enforcement radio communications networks.

There are no current plans for new facilities. There have been discussions of a possible expansion; however, a formal plan is not in place. As of 2016, the Encinitas Station staffed 42 police officers and 12 additional personnel. It is not anticipated that any new police facilities would be required as a result of development on the housing sites. Therefore, this does not place a constraint on development.

10 Housing Resources

The extent of housing needs in a community often exceeds the resources available. This section of the Housing Element provides an overview of resources available to the City.

10.1 Residential Sites Inventory

Appendix C contains a detailed list of vacant and non-vacant properties to meet the City's RHNA need through the 2013-2021 planning period. The following discussions summarize the City's site inventory and discuss the City's experience with the redevelopment of non-vacant sites.

10.2 Above Moderate and Moderate Income Sites

For the 2013-2021 planning period, the City's RHNA allocation is 413 dwelling units for moderate income sites and 907 dwelling units for above moderate income. As of December 31, 2017, 4 moderate income dwelling units and 784 above moderate income dwelling units, including accessory dwelling units, had received building permits during the projection period beginning January 1, 2010. Another 108 above moderate income units had been approved by the City, for a total of 892 above moderate income units constructed or permitted. Accounting for the new construction and approved projects, the City's

remaining RHNA allocation is 409 moderate income dwelling units and 15 above moderate income dwelling units.

New growth is expected primarily in two adopted specific plan areas: Downtown Encinitas and North 101 Corridor, along with other existing residential neighborhoods. Within these preserved communities 624 additional moderate-income and above moderate income units can be accommodated in mixed-use and residential-only sites.

10.2.1 Analysis of the City's Existing Capacity and Zoning

The Housing Element must demonstrate the City's ability to accommodate the RHNA either through production or the availability of properly zoned land that can accommodate additional growth. The Measure T Housing Element, which was extensively reviewed at numerous public hearings, contained an inventory of all sites suitable for moderate and above moderate income housing in its Table A-1. Appendix C in this Housing Element includes those sites listed in Table A-1 which have not been developed in this planning period; can accommodate at least 4 additional units; and continue to be zoned appropriately to accommodate moderate or above moderate-income housing. **Table B-46** below summarizes the capacity of the sites listed in Appendix C, which can accommodate 448 moderate-income units (compared with the need to accommodate 409 units) and 191 above moderate-income units (compared with the need to accommodate 15 additional units),

Table B-46: Residential Capacity for Moderate and Above Moderate Income Sites

	Max Density	Minimum or Average Density	Number of Parcels	Acreage	Potential Units
Moderate Income Sites – Mixed Use					
D-CM1	n.a.	34 (15)	18	12.83	139
D-CM2, N-CM1, N-CM2, N-CM3, N-CRM1	25	20 (15)	40	19.16	135
D-VCM	18	15	1	0.67	5
D-OM, N-CRM2	15	12	4	2.60	14
Subtotal			*63*	*35.26*	*293*
D-R25, N-R25, R25	25	20	2	0.78	15
N-R20	20	15	12	3.51	66
D-R15, N-R15, R15	15	12	4	3.08	35
R-11	11	8.8	7	4.80	39
Subtotal			*25*	*12.17*	*155*
N-R8, R8	8	6.4	10	8.86	52
R5	5	4	3	5.52	21
N-R3, R3	3	2.4	15	43.09	96
RR2	2	1	3	23.99	22
RR1	1	.5	0	0	0

Table B-46: Residential Capacity for Moderate and Above Moderate Income Sites					
	Max Density	Minimum or Average Density	Number of Parcels	Acreage	Potential Units
RR	.5	.125	0	0	0
Subtotal			31	81.46	191
Total			119	128.89	840

The following discussion describes how site capacity was determined for the moderate and above moderate-income sites.

10.2.2 Reasonable Capacity Assumptions

Reasonable capacity was calculated for each site based on environmental constraints, site size, zoning requirements, and average density achieved in projects with similar zoning. Deductions were made as applicable for site constraints, such as steep slopes and potentially limiting known environmental factors.

10.2.3 Capacity on Mixed-Use Sites.

There are a number of mixed-use commercial districts that permit residential uses as part of a mixed-use development. Underutilized commercial sites that permit residential development are a key component of the housing sites inventory. These sites were evaluated by multiplying the parcel size by the minimum density for that zoning designation. Sites in mixed-use areas (Downtown and North 101 Specific Plan Areas) where there is no density maximum were assumed to develop at 15 units per acre based on projections of possible development given Proposition A's height limit. In these zones, a factor was then applied a factor based on the likelihood that they would redevelop, as explained below.

While not all underutilized properties in the two Specific Plan areas will redevelop with a residential component, market studies in the San Diego region have indicated that future growth will most likely be spearheaded by mixed-use developments. Accordingly, this Housing Element assumes that approximately 50 percent of sites in the DCM-2, D-VSC and D-OM Zones of the Downtown Encinitas Specific Plan, as well as the N-CM1, N-CM2, N-CM3, N-CRM1, and N-CRM2 Zones of the North 101 Corridor Specific Plan, will be redeveloped as mixed-use projects, with a residential component. This yields a total, realistic capacity of 293 potential units that can be credited to this planning cycle and applied against the RHNA obligation for moderate- and above moderate-income household opportunities.

Different methodologies were employed in the DCM-1 Zone. Based on the analysis, it can be reasonably concluded that 75 percent of the sites listed in the DCM- 1 Zone inventory are reasonably expected to provide viable, short-term opportunities. This “discounting” methodology yields a total, realistic capacity of 139 potential units that can be credited to this planning cycle and applied to the moderate-income category (at 15 units per acre).

10.3 Development of Non-Vacant Sites and Converting to Residential Uses

Some non-vacant sites are designated as sites suitable to meet the City's RHNA. Appendix C includes detailed discussions of each lower income site, as well as letters from property owners~~hip~~ of non-vacant

sites who propose residential development of those sites. For non-vacant moderate-income sites, existing uses and other information is included.

State law requires that the City analyze the extent to which existing uses may constitute an impediment to additional residential development, the City's past experience with converting existing uses to higher density residential use, current market demand for the existing use, analysis of leases that would prevent redevelopment of the site, development trends, market conditions, and regulatory or other incentives to encourage redevelopment. This section discusses each of those factors.

There are number or pending and approved projects that illustrate the viability of developing ~~of~~ non-vacant sites in Encinitas. These include subdivision of land and~~,~~ recycling of older uses with stand-alone residential and mixed use residential uses. T~~t~~his ~~in~~ discussion and the previous section ~~to~~ illustrate the extent of market activity for infill residential development

The City has a large inventory ~~and~~ of past development projects and current development applications ~~for development~~ on infill properties. Table B-47 is a sample of existing applications under review.

Table B-47: Infill Development Project in Review – Infill Properties

Case No	Project Name	Description	Zone
15-222	Weston Density Bonus	48-lot subdivision	R3
18-074	Lakes Subdivision	Nine-lot subdivision	RR1
17-280	Vulcan 9 Density Bonus	Nine Condominium Unit Subdivision	NR20
18-001	735 Santa Fe Drive	14-lot subdivision	R8
16-135	Quail Meadows Density Bonus	52-lot subdivision	R3/R5
17-114	The Summitt at Lake Drive	3-lot subdivision	RR1
17-291	Evergreen TPM	3-lot subdivision	R8
16-094	Engert Subdivision	2-lot subdivision	R3
18-020	Coastal Pacific Group Subdivision	2-lot subdivision	R8
17-032	Osuna Tentative Parcel Map	3-lot subdivision	R3
18-055	Rippy Tentative Parcel Map	2-lot subdivision	R3
17-296	Colony Terrace Subdivision	2-lot subdivision	RR2
17-107	Garrett Tentative Parcel Map	2-lot subdivision	RR2
17-206	Massie Parcel Map	2-lot subdivision	RR2
17-071	Summitt Condo Map	Three Condominium detached single family	R11

17-041	Roden Duplex Condo	Convert existing duplex to condominium	R11
16-250	Ocean View TPM	4-lot subdivision	R3
17-183	4th Street Four	4-unit (Two Townhomes on two separate lots)	DR-15
17-089	West A Street Duplex	Two condominium units	R15
17-134	141 Quail Drive	4-lot subdivision	R5
14-244	Granite Homes 4-lot subdivision	4-lot subdivision	RR1
17-197	Kunzik Mixed Use	Five Residential Condominiums	NCM1
Source: City of Encinitas, 2018			

Additionally, the City has a number of recently built mixed use and/or residential infill projects theat illustrate the market's willingness and the city's approval of infill mixed use and residential uses. A sample of these projects includes:

- **Pacific Station –** a successful mixed use development with rental and ownership opportunities complimented with commercial uses. Former use was commerciicial/industrial
- **The Lofts –** a mixed use project with residential and commercial uses in a vertical mixed use setting.
- **1200-1212 Coast Highway** – Infill mixed use residential with ground floor retail. Former use was commercial.
- **Capri @ 960 South Coast –** an infill mixed use development with residential development on Pacific Coast Highway. Former use was commercial.
- **H Street/ South Coast Highway –** an infill mixed use project with residential commercial and retail. Former use was commericecial.
- **Harrison Project** -(under construction) – mixed use commercial/residential development.

The City of Encinitas has a good track record and history of underutilized sites recycling to accommodate additional homes. In the DCM zones, at least 12 mixed use projects have been developed involving reuse of existing commercial sites, with densities as high as 47 units per acre. In terms of trends of *underutilized* sites recycling in the City, Encinitas has had on average 99 new housing starts in recent years with a considerable spike occurring after the trough of the market in 2011. Overall, building on previously vacant or subdivided land demonstrates a high degree of land turn-over or repurposing land in a built-out community.

Because the City of Encinitas is approaching "built out" conditions, infill development, especially in the downtown and Highway 101 areas, continues to be the primary method by which land is recycled. One of the primary concerns is the ability of the market to absorb new residential and mixed use development on sites with current uses. As stated above, the number of projects occurring on infill sites in the city is

an excellent prognosis of market trends in Encinitas. The City, based on a review of recent development activity and trends, believes there are a few primary areas by which development on infill sites may potentially constitute an impediment to additional residential development:

1. Viability of Existing Commercial Uses – The primary areas of infill development area in existing traditionally established commercial zones. Many of these areas have experienced a general change from traditional auto-oriented commercial development to activities and uses that can be considered mixed use in nature. Adoption of specific plans in the Highway 101 Corridor and Downtown demonstrate the general trend to a mixed use, more urbanized infill environment. Most of the new development in this corridor can be described as conducive to a mixed use, residentially-supportive environment.

   Based upon local historical observation by City staff, the existing ownership patterns in the City can be generally described as long-term historical ownership. Many owners of land and property in the community have been present for many years and in some cases generations. What this implies is long-term ownership of properties generally feature lower incidences of debt service on existing land. Multiple generations of ownership, create conditions where, although land values may be at a premium, individual development viability may be positively influenced by the minimization or lack of debt service on land.

   Because of this observation, the City believes infill development will continue to be the primary type of development that will occur in the City. Additionally, as the market continues to improve, redevelopment will continue to play a role in expanding residential opportunities in the City.

2. Land Values – One of the primary considerations for the viability of infill uses on mixed use sites is the cost of land in the City. There are significant variations in land costs depending on the geographic location in the City. What this means is that those areas that experience higher land costs should provide the maximization of development potential on individual sites. The City understands that coastal communities will always exhibit higher land costs. Therefore, methods to contribute to higher levels of land utilization with the introduction of housing opportunities as an additional development options will contribute to the heightened viability of landdevelopment. Changes in land use development regulations, including the permitting of residential and residential mixed use development in areas that are traditionally commercial-only is one method to achieve this. The City has continued to see applications for residential development on infill sites, as evidenced by the recently approved development applications and permits.

   Another aspect to consider in the land use analysis, is land to improvement value equation. The idea is the potential for a relatively small amount of land to hold a relatively high number of structures, as the same piece of land can contain a single-family home with one set of tenants or a multiplex consisting of two, three or even four units, creating the possibility of doubling, tripling or even quadrupling the amount of rent that can be collected from the property. Redevelopment is likely to occur in those instances where an underutilized site has a high land value and relatively low improvement value. In terms of the basic relationship between “land” as a scarce resource and “choice”, there is a great opportunity cost to the property owner since the potential gain from the “highest and best use” alternative exceeds the alternative of not redeveloping.

The City has focused its provision of lower income ~~need~~ sites on sites that are vacant or~~f~~ highly underutilized. Those sites considered non-vacant, but highly underutilized have favorable comparison of existing improved value versus land value. And for those sites exhibiting existing "uses", many of them are derelict, unused or vacant structures. This means the future improvement costs will not be complicated by the significant removal, tenant relocation and or repurposing of existing structures on a site.

The City understands lower income and moderate income unit production is the primary need in the community and has provided and will provide through the city's rezone program the establishment of land use standards and provisions that encourage and facilitate the development of multiple family and other development types affordable to moderate and lower income households. Much of these opportunities are on land defined as vacant and therefore are excellent candidates to provide opportunities for housing need in the City.

3. Alternatives to traditional infill development – the C~~c~~ity understands that existing land use policy can be complimented by various strategies to encourage further development on existing built areas. These include Accessory Dwelling Units and Inclusionary Housing provisions. This is another method for utilized existing developed land for additional infill opportunities. The City has recently development a revised Accessory Dwelling Unit policy that furthers the ability of existing "built out" parcels to accommodate additional residential development that is affordable to lower and moderate-income households. Additionally, the City is currently studying its inclusionary housing policy to further encourage residential development on infill properties by providing inclusionary housing development by providing additional development capacity on a site. While this analysis is in its early stages, the development community is directly involved in its development. Therefore, future policies and programs will have considered the needs of the development community in its future implementation.

4. Height Standards – the current height limitation of 2 stories places a significant constraint on the feasibility of moderate and lower income units. Because of this height limitation, other development factors such as setbacks, lot utilization, parking, open space and other factors reduce the "box" in which development can occur on a site. The city has had extensive discussion about the height issue at a number of Housing Element Task Force Meetings, City Council Study Sessions and consultation with stakeholders. The general consensus is that three story heights would be more appropriate and conducive to the development of affordable housing. This consideration is part of the planned rezoning to accommodate remaining RHNA need.

10.3.1 Lease Analysis

One of the primary concerns for redevelopment/infill development on non-vacant sites is the existence of leases that may prevent land development within the planning period. While state law requires the City to consider lease terms in evaluating the use of non-vacant sites, the City does not have access to private party lease agreements or other contractual agreements amongst private parties. However, no owner or tenant has opposed the inclusion of a property based on the existence of a long-term lease. For non-vacant sites proposed to be upzoned as lower income sites, many property owners have provided a letter, included in Appendix C, either stating that leases are short term or otherwise stating that development

can be accomplished within the planning period. Owners and developers have also expressed to the City that in most cases existing leases are not per se a barrier to development. Rather, they are factored into land costs.

There are currently very favorable market conditions for residential and residential mixed-use infill development in the City of Encinitas. This is exhibited by the number of development applications for infill development in recent years. The City believes this pace of activity is very healthy based upon historical trends. Because of the value of land in the community, mixed-use and higher density residential products continue to show noticeable activity in the City. The Ceity believes this trend will continue for the long term.

10.3.2 Regulatory Incentives

Many of the developments of infill residential uses have utilized density bonus provisions, so it is very common for infill residential projects to take advantage of density bonus provisions to construct units affordable to lower income families.

The City understands that existing land use policy may not necessarily contribute to the development of housing. Therefore~~,~~ regulatory incentives can be helpful in bring housing units to the market.

The city is limited in its discretionary funding resources, so fee waivers~~s~~ and other monetary concessions are not a standard practice in the City. The City has evaluated and updated its fees recently to reflect market considerations and internal cost recovery. While fee deferral, waivers or other modifications are an option for the city, it will take additional study to determine what is appropriate in Encinitas.

Land use incentives in for infill residential include a 'permit ready' program underdevelopment that will include pre-approved designs for ADUs with expedited processing. The City has also sponsored legislation to make it easier to legalize ADUs built without building permits.

Another method for incentivizing new development is the ability to sub-divide land. Creating lots from subdividing one lot from another creates separate land title for additional housing development activity.

While resources at this time are not conducive to monetary incentives/concessions, the city believes continue exploration is necessary to identify incentive opportunity. Programs 3E and 3F are expressly written to address these issues.

10.3.3 Current Market Demand for Existing Uses

If current socio and demographic trends continue, the demographic profile of the San Diego region will change dramatically by the middle of this century. According to draft population forecasts developed by SANDAG (Series 13), the region's population will rise to 4,068,759 million in 2050, from 3,095,313 million in 2010. This represents a 31.4 percent increase. Forecast modeling also reveals that the region's fastest-growing population overall will be its retirement or senior-aged community. Based on the Series 12 modeling (2010), the swell in the 65 years-and-older group will lead to an increase in the proportion of the population in older age groups, with the share of those 65 years and older rising 143 percent and the number of people older than 85 projected to increase by 214 percent by year 2050. Nationwide, a lot of attention has also been paid to the baby boomer generation, those born between 1946 and 1964. This

large group of Americans currently totals 76 million, and as they age, their changing housing demands and choices create changes in housing markets.

A growing elderly population generates demand for housing near commercial goods and services, amenities, and where older adults can get what they need without getting in a car. Also, typically, income decreases with age this reflects a willingness to live in smaller spaces to be able to afford their lifestyle. As boomers start to retire, many more will be seeking more of a senior-friendly lifestyle and housing. Although many will initially expect to stay in their existing homes and communities, others will choose to downsize homes and/or seek more service-rich environments. One development association, the Urban Land Institute (ULI), contends that these demographic factors will lead to a population that will want to adapt to smaller, more efficient living units in areas more convenient to work, shopping, recreation and entertainment (ULI, Emerging Trends, 2011). Other documents and publications have also indicated that smaller units near transit services are expected to be the trend (Sources: Builder Online, American Public Transportation Association, National Association of Realtors®, Journal for Public Transportation, Real Estate Economics, etc.) Nationally, America's suburbs are experiencing a shift away from the development patterns of previous decades, which were almost entirely auto-centric. Evolving demographics and preferences held by specific demographic groups, or generational cohorts will drive the change. And it isn't just the baby-boomer generation. A February 2013 article posted on ULI's website, "*How to Make Suburbs Work Like* Cities", and discussed at a Housing Opportunity 2013 Conference, reported that Generation Y (an 80 million-member group that is just entering the housing market), tends to favor the convenience and choices provided by urban-style environments and apartment- like mixed-use housing; and not the suburb environments that they grew up in. In response to this growing trend and demographic swing, local agencies are looking at innovative solutions to create unique places where people can live and work. This will fundamentally reshape our cities in terms of transport infrastructure and density to meet everyday shopping and lifestyle needs within a single neighborhood.

Additionally, with the increasing amount of on-line shopping, many retail areas are experiencing increased vacancies. Self-driving cars may substantially reduce the need for parking. While it is difficult to predict the extent to which these long-term trends will affect particular sites, given high demand for housing and less demand for retail, it is likely that many owners over time may desire to construct residences on sites now used for retail stores.

10.3.4 Development Trends

Land availability and demographic trends are reshaping the location and types of residential development in urban areas of the San Diego region. Policy direction at the state, regional and local levels coupled with these trends, created high demand for housing. The revitalization and reuse of existing underdeveloped areas into multifamily and mixed-use projects at higher densities is the primary way in which housing needs will be met in the San Diego region. As a coastal community in the northern San Diego region with little undeveloped and unconstrained land yet in need of more housing, the regional influences pushing revitalization and reuse for accommodating new housing are expected to be mirrored in Encinitas. Many of the proposed sites for Encinitas involve revitalization and reuse, consistent with regional policies and trends backed by market analysis. There is also a practical need to rely in part on these types of sites since undeveloped and unconstrained sites are largely lacking in the city.

The site assessment methodology for evaluating parcels listed in Appendix C was crafted under realistic assumptions regarding the potential of each candidate site to develop and recycle with high density housing. The analysis demonstrated that these inventoried sites are not only ripe for development, but collectively represent a smart and sustainable housing strategy for both market-rate and affordable housing opportunities for lower income households.

11 Sites Suitable for Lower Income Housing

The City has identified ~~12~~ parcels that can accommodate ~~1,621~~1,431 lower income units, compared with the City's remaining lower income RHNA obligation of ~~1,170~~1,141 units. Sites that can accommodate ~~846~~ 656 units are vacant, while the remainder are non-vacant sites accommodating 775 units where owners have expressed written interest in redeveloping their property for residential development within the planning period.

The very low and low income sites inventory in Appendix C describes each of these sites in detail, including site capacity, existing uses (if any), development constraints, and other features. Water and sewer distribution lines are available in the public right of way adjacent to each site, and the City has adequate water and sewer capacity to accommodate the RHNA. Appendix C also describes in detail assumptions made in calculating site capacity.

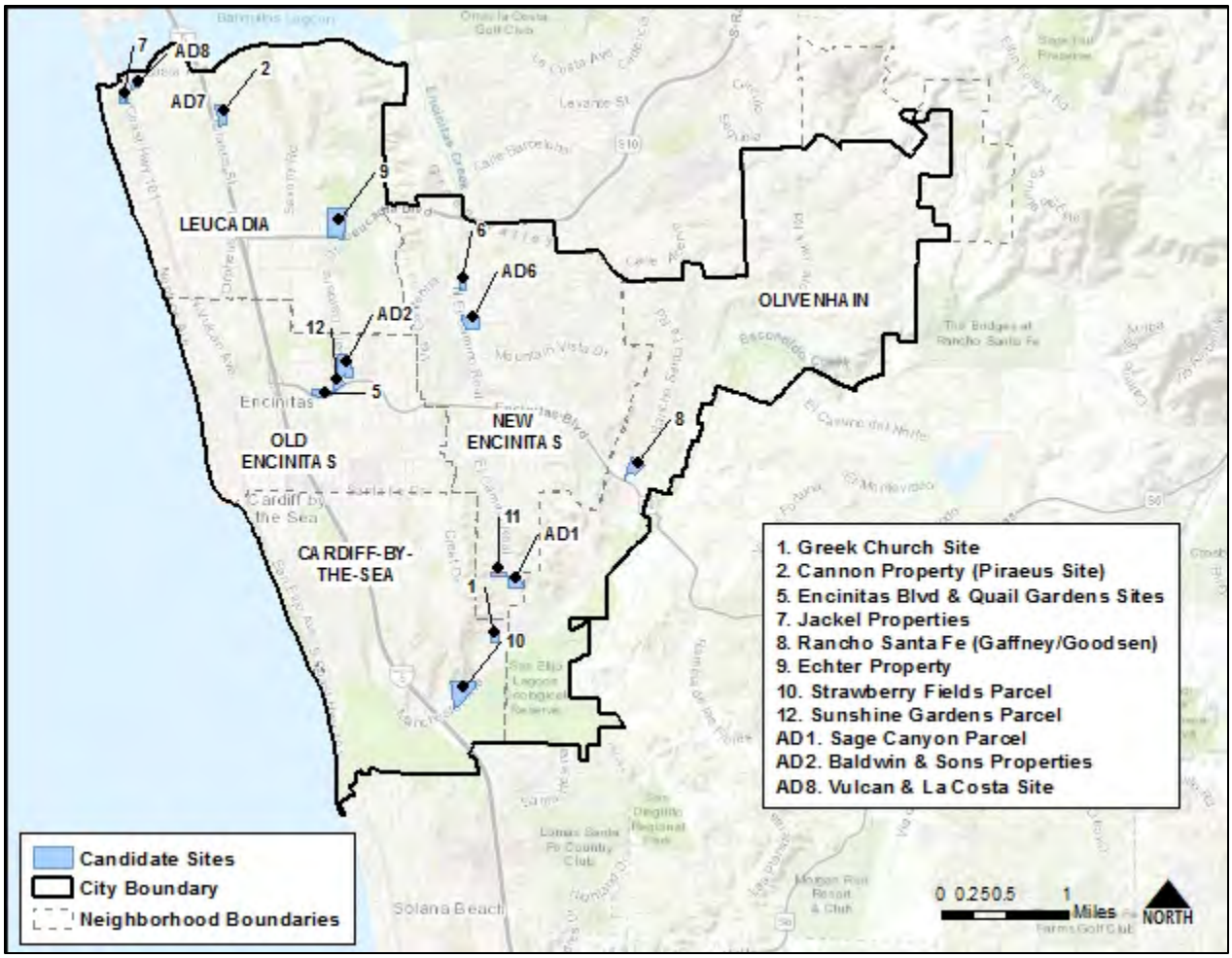
Housing Element Program 1A identifies these sites. Housing Element Program 1B provides the planned rezoning program. It states that each of these sites will be rezoned to a minimum density of 25 units per acre and maximum density of 30 units per acre, with 'by right' approval for any project with 20 percent low income housing that does not involve a subdivision. On all sites listed in the Housing Element, housing occupied by lower income households in the last five years must be replaced. Allowable building height will be increased to three stories, with two-story elements, but only for residential developments achieving 25 units per net acre on the rezoned sites. Lastly, the Land Use Element, Zoning Regulations and existing Specific Plans will be amended as needed to allow for residential densities between 25 and 30 du/ac.

The sites designated as suitable for lower income housing were selected based on their existing vacant or underutilized character, owner interest in developing residential uses, and suitability for development. **Table B-48** summarizes the residential capacity of these sites. In total, this rezoning program results in the rezoning of ~~79.10~~59.24 net acres of land which creates an opportunity for additional multi-family rental or ownership housing development during the planning period. ~~1,621~~1,431 units can be achieved as realistic capacity under the new zoning.

Table B-48: Residential Capacity on Sites to be Rezoned			
Site Number	**Site Name**	**Net Acreage**	**Potential Units**
Vacant			
01	Greek Church Parcel	2.00	50
02	Cannon Property (Piraeus)	6.93	173
~~03~~	~~L-7 Parcel~~	~~7.60~~	~~190~~
05	Encinitas Blvd & Quail Gardens Parcels	4.78	117
07	Jackel Properties	2.97	33*
AD1	Sage Canyon	2.40	60
AD2	Baldwin & Sons Properties	9.05	223
Subtotal		*~~35.73~~28.13*	*~~846~~656*
Non-vacant			
08	Rancho Santa Fe Parcels (Gaffney/Goodsen)	6.02	149
09	Echter Property	9.85	246
10	Strawberry Fields Parcel	9.85	246
12	Sunshine Gardens Parcels	3.39	84
AD8	Vulcan & La Costa	2.00	50
Subtotal		*31.11*	*775*
Total		~~66.84~~59.24	~~1,621~~1,431

* Unit Yield anticipates that this site will be developed for mixed-use.

Figure B-6: Map of Rezoned Sites



11.1 Accessory Dwelling Unit Production

The City records the number of accessory dwelling units (ADUs) built on an annual basis. Consistently maintained records help determine trends in accessory unit construction. Between January 1, 2010 and December 31, 2017 203 new accessory dwelling units were constructed. Of these units, 16 were restricted for very-low and low-income households. In the past three years, permits have averaged 35 per year. Given the City's adoption of a liberal ADU ordinance in 2018, the City expects the number of ADUs built to increase to 40 per year, for total ADU construction of 320 units. The City projects that ~~50~~ 79 ADUs total will be affordable to lower income households.

Due to limited available land within the City, ADU construction is very important to the City in its efforts to provide opportunities for affordable housing, and it has created numerous incentives for ADU construction.

After passage of new state laws effective January 1, 2017, the City applied state standards in evaluating ministerial applications for ADUs. Those standards eliminated many parking and other requirements, especially for ADUs contained within existing space. In March 2018, the City adopted its own ADU and

junior accessory dwelling unit (JADU) ordinances which incorporated the loosened state standards, as well as providing further incentives:

- Both an ADU and a JADU may be constructed on one lot;
- Setbacks have been reduced to five feet in many cases;
- Floor area ratios have been increased on lots smaller than 10,000 sq. ft.;
- ADUs may have a maximum size of 1,200 sq. ft. so long as they do not exceed the floor area of the primary residence; and
- Development fees have been waived.

The City is developing a 'permit ready' program that will include pre-approved designs for ADUs with expedited processing. The City has also sponsored legislation to make it easier to legalize ADUs built without building permits.

~~The City is currently surveying ADU owners to determine the affordability of their units.~~ In April 2018, the City conducted an additional survey ~~efforts~~ to determine affordability levels of second units built during the planning period. The survey was sent to all recipients of building permits within the planning period, and a copy of the survey form is attached to this Appendix B. The results of that survey effort revealed that 24.6 percent of the second units were rented at levels affordable to very low and low income households and 17 percent were affordable to moderate-income households. Because standards have been so significantly reduced, and JADUs are now permitted, the City anticipates that at least ~~15~~ 24.6 percent of the ADUs built during the planning period, or ~~50~~ 79 units, will be affordable to lower income households, and 54 units will be affordable to moderate income households. The actual percentage of affordable units may be higher if JADU construction becomes common, since these units are smaller with more limited facilities, and so may be more affordable than ADUs.

Figure B-7: April 2018 Accessory Dwelling Unit Survey (Page 1)

ACCESSORY UNIT SURVEY
HOUSING ELEMENT UPDATE

An important component of the Housing Element update is planning for future housing needs, including the provision of affordable housing. In Encinitas, accessory units can provide an opportunity to address affordable housing needs while maintaining the quality and character of existing neighborhoods. For this reason, the City of Encinitas is collecting information on existing accessory units to assess their affordability. Our records show that you obtained a building permit to construct an accessory unit. **If this is correct, and you have an accessory unit**, please complete the survey and return in the enclosed self-addressed, postage-paid envelope. You may also drop the survey off at City of Encinitas, Development Services Department at, 505 S. Vulcan Avenue, Encinitas, CA, 92024. Please return by **April 30, 2018**. **If you do not have an accessory unit**, you do not need to complete the survey. However, if you have any thoughts on accessory units, we welcome your comments on the back of the survey.

Please note that this survey is to be completed anonymously and no identifying information is required or requested. Any identifying information will be kept confidential to the extent permitted under the law.

An accessory unit, as defined by the State, is a self-contained residential dwelling either attached or detached from the main house or in a separate structure on the property. The unit shall include all of the following:

- A bedroom
- A full bathroom
- A separate cooking facility

1. Is the accessory unit:

a) Attached to the main house
b) Detached from the main home

2. Does the Accessory unit have an outside entry?

a) Yes
b) No

3. How would you describe the use of the unit?

a) Occupied as living quarters or rented (Even if no rent is charged)
b) Short-term rental or guest house (Less than 30 days)
c) Not rented or occupied. Please specify: _____

4. Please circle the unit type and circle the corresponding rent:

Unit Type:	0 Bedroom (Studio)	1-Bedroom	2-Bedroom
Monthly Rent:	No rent charged	No rent charged	No rent charged
	Under $700	Under $800	Under $900
	$700-$830	$800-$950	$900-$1,070
	$830-$1,525	$950-$1,750	$1,070-$1,965
	Over $1,525	Over $1,750	Over $1,965

Figure B-8: April 2018 Accessory Dwelling Unit Survey (Page 2)

Additional Comments Regarding Accessory Units:

_____

_____

_____

_____

_____

_____

_____

The City of Encinitas thanks you for your participation in this survey. If you have any questions, please contact Nicole Piano-Jones, Management Analyst, Development Services Department, at (760) 943-2237 or npiano@encinitasca.gov.

The City will continue to monitor accessory unit production and affordability over the Housing Element planning period. If the rate of accessory unit production falls below anticipated levels, City staff will consider different regulatory or processing options to facilitate their production.

11.2 Regional Housing Needs Allocation

11.2.1 Future Housing Needs

Future housing need refers to the share of the regional housing need that has been allocated to the City. The State Department of Housing and Community Development (HCD) supplies a regional housing goal number to the San Diego Association of Governments (SANDAG). SANDAG is then mandated to allocate the housing goal to city and county jurisdictions in the region through a RHNA Plan. In allocating the region's future housing needs to jurisdictions, SANDAG is required to take the following factors into consideration pursuant to Section 65584 of the State Government Code:

- Market demand for housing;
- Employment opportunities;
- Availability of suitable sites and public facilities;
- Commuting patterns;
- Type and tenure of housing;
- Loss of units in assisted housing developments;
- Over-concentration of lower income households; and
- Geological and topographical constraints.

SANDAG adopted its Regional Housing Needs Allocation (RHNA Plan) in July 2011. This RHNA covers an 11-year planning period (starting in 2010) and addresses housing issues that are related to future growth in the region. The RHNA allocates to each city and county a "fair share" of the region's projected housing needs by household income group. The major goal of the RHNA is to assure a fair distribution of housing among cities and counties within the San Diego region, so that every community provides an opportunity for a mix of housing for all economic segments.

The RHNA allocation process is primarily legislative rather than adjudicatory in nature and involves the actions of more than a single entity. Each respective council of governments develops a methodology for distributing the housing needs to the local governments in its region. By statute, SANDAG consulted with both the affected municipalities and the public in accomplishing this task. Once adopted, local agencies must accommodate the full allocated share of units by income category. Please note that the housing allocation targets are not building requirements or mandates, but goals for each community to accommodate through appropriate planning policies and land use regulations. Allocation targets are intended to assure that adequate sites and zoning are made available to address anticipated housing demand during the planning period.

Encinitas' share of regional future housing needs is a total of 2,353 new units for the current planning cycle (2013-2021). This allocation is distributed into various income categories, as shown in **Table B-49**. The RHNA includes a fair share adjustment which allocates future (construction) need by each income

category in a way that meets the State mandate to reduce the over-concentration of lower income households in one community.

Table B-49: Housing Needs for 2013-2021		
Income Category (% of County AMI)	**Number of Units**	**Percent**
Extremely Low (30% or less)	293	12.4%
Very Low (31 to 50%)[1]	294	12.5%
Low (51 to 80%)	446	19.0%
Moderate (81% to 120%)	413	17.5%
Above Moderate (Over 120%)	907	38.5%
Total	2,353	100.0%

Note 1: Pursuant to AB 2634, local jurisdictions are also required to project the housing needs of extremely lowincome households (0-30% AMI). In estimating the number of extremely low income households, a jurisdiction can use 50% of the very low income allocation or apportion the very low income figure based on Census data. Therefore, the City's RHNA of 587 very low income units was split evenly.
Source: Final Regional Housing Needs Allocation, SANDAG, 2011.

11.3 Credits toward the 2013-2021 RHNA

Since the RHNA uses January 1, 2010 ais the baseline for growth projections for the Housing Element planning period of 2013-2021, jurisdictions may count toward the RHNA any new issued building permits or approved since January 1, 2010.

Overall, the City has a remaining RHNA of 1,644 units, including 1,~~220~~ 141 very low/low-income units, ~~409~~ 355 moderate income units, and 15 above moderate income units. **Table B-50** shows the breakdown of existing RHNA, including carryover (discussed in the next section), and a summary of new construction during the planning period and anticipated accessory unit yield. The City has adequate sites properly zoned to accommodate its moderate and above moderate income need. Assuming ~~50~~ 79 accessory units are affordable to lower income households and 54 units are affordable to moderate income households, the City needs to zone sites capable of accommodating ~~1,170~~1,141 lower income units and 355 moderate income units. The sites shown in detail in Appendix C can accommodate ~~1,621~~ 1,431 lower income units.

Table B-50: Credits Toward the RHNA (Built and/or Approved)					
	Extremely Low/ Very Low 0-50% AMI	Low 51-80% AMI	Moderate 81-120% AMI	Above Moderate > 120% AMI	Total
RHNA	587	446	413	907	2,353
RHNA Carryover	253		--	--	253
Subtotal RHNA	1,286		~~409~~413	~~15~~907	~~1,594~~2,606
New Construction (including ADU)	66		4	892	962
Anticipated Accessory Units and AUP Units	~~50~~79		~~0~~54	0	~~60~~133
Total Remaining RHNA	**~~1,170~~1,141**		**~~409~~355**	**15**	**~~1,594~~ 1,511**

11.4 RHNA Carryover from the Previous Planning Period

If a jurisdiction fails to provide adequate sites in the prior planning period, within one year of the new cycle, the jurisdiction must rezone/upzone adequate sites to accommodate the shortfall. This requirement is in addition to rezoning/upzoning that may be needed to address the RHNA for the new cycle.

This law affects the City of Encinitas' 2013-2021 Housing Element, requiring the City to address its deficit in sites for the previous housing element cycle (2005-2010). For the 2005-2010 planning period, the City of Encinitas submitted a Draft Housing Element for review by the State HCD. The 2005-2010 Draft Housing Element was unable to secure a "substantial compliance status" from HCD and was never adopted. As such, this 2013-2021 Housing Element must address any deficit in sites incurred during the last Housing Element RHNA cycle.

In the previous planning period, the regional share and/or total number of housing units by income category (very low, low, moderate, and above moderate) assigned to the City was 1,712. From 2003 through 2010, the City only produced 1,020 total housing units. The potential AB 1233 carryover will be equal to the portion of RHNA not accommodated either through actual housing production or land made available for residential development within each income category. To determine any potential carryover, this report follows the following approach outlined by HCD:

> Step 1: Subtracting the number of housing units constructed, under construction, permitted, or approved since January 1, 2003 to December 31, 2010 by income/affordability level;
>
> Step 2: Subtracting the number of units that could be accommodated on any appropriately zoned sites available in the City during the RHNA cycle.

The City's RHNA obligations and credits as of December 2010 are summarized in **Table B-51**. Specifically, the City constructed a total of 1,020 units, including 62 units that were deed restricted as long-term affordable housing for very low and low income households based on the City inclusionary housing requirements or funding subsidies.

Among the remaining 968 non-deed-restricted units, 53 units can be credited as affordable to lower and moderate income households based on actual sale prices or rents determined as required by Health & Safety Code Sections 50052.5 and 50053. The City requires the inclusion of rents and sale prices information in the application for a Certificate of Occupancy. Based on the actual rents and sale prices reported by the owners/developers and affordable housing costs at the time of completion, 53 (six percent) of the 958 units were affordable.

Overall, the City met approximately half of its RHNA for the 2005-2010 planning period with actual production, with a remaining RHNA of 900 units (305 moderate-income units and 595 lower income units) that the City was required to accommodate on appropriately zoned sites. Zoning existing in 2005 – 2013 could accommodate additional housing. Specifically, during the previous planning period (2005-2013), 860 units (at a maximum density of 25 units per acre and average density of 20 units per acre prior to the two-story height limit imposed by Proposition A) could be accommodated on vacant and underutilized mixed-use and R25 sites in the Downtown Encinitas and North 101 Corridor Specific Plans, more than double the sites required for the City's remaining moderate income RHNA units.

Furthermore, the D-CM1 districts in the Downtown Encinitas Specific Plan area allowed for mixed-use development with no density limit during the entire previous planning period, extending to April 30, 2013. Based on the development standards established in the Specific Plan in effect at the time, a typical mixed-use project could achieve 34 units per acre. Up to 684 units could have been accommodated on the vacant and underutilized D-CM1 sites. Assuming that only half of these mixed-use sites would have been redeveloped with a residential component, these sites could fulfill 342 units of the City's remaining lower income RNNA, resulting in a RHNA carryover of 253 lower income units from the previous Housing Element cycle.

As discussed previously, the two-story limit imposed by Proposition A in June 2013 reduced the effective density of sites in the D-CM1 zone to 15 units per acre, below the default density of 30 units per acre. Consequently, none of these sites are being proposed as lower income housing sites in this Housing Element. However, they are suitable for moderate-income housing.

Table B-51: AB 1233 Carryover from Previous Housing Element Cycle

	2003-2010	Very Low Income	Low Income	Moderate Income	Above Moderate	Total
Units Constructed	Deed Restricted	49	13	0	0	62
	Non-Deed Restricted	10	24	19	905	958
RHNA		392	299	324	697	1,712
Remaining RHNA		**333**	**262**	**305**	**0**	**900**
Sites Available in Preserved Communities in the Previous Planning Cycle (No Change from Existing General Plan)						
Mixed-use:						
D-CM1		684*		--	--	684*
D-CM2, N-CM1, N-CM2, N-CM3, N-CRM1, D-VCM		--		748*	--	748*
D-OM, N-CRM2		--		--	30	30
Residential-Only:						
D-R25, R25		--		112	--	112

Table B-51: AB 1233 Carryover from Previous Housing Element Cycle						
	2003-2010	Very Low Income	Low Income	Moderate Income	Above Moderate	Total
D-R15, N-R15, R15		--		--	62	62
R11, N-R8, R8, R5, N-R3, R3, RR2, RR1, RR		--		--	1,160	1,160
Total		684		860	1,252	2,796
Overall Site Capacity (Assuming 50% Mixed-use with Residential)		342		486	1,237	2,065
Carryover		253		0	0	253
*Proposition A – Voter Right Initiative was passed by Encinitas voters in June 2013, after the end of the 2005 – 2013 planning period on April 30, 2013.~~.~~						

In litigation in San Diego County Superior Court, plaintiffs allege that the City should not receive credit for either the D-CM1 sites or the 34 lower income units that are not deed restricted. This would increase the City's remaining lower income obligation from ~~1,170~~1,141 units to ~~1,556~~1,527 units. The sites identified as lower income sites would accommodate ~~1,621~~1,431 units, requiring that the City upzone sites accommodating another 96 units if the litigation is successful. The City will comply with any final judgement related to its carryover obligation. ~~so that the City will have adequate site capacity regardless of the outcome of the litigation.~~

11.5 Adequacy of Sites for RHNA

As part of this Housing Element update, the City is proposing an adequate site's rezoning program to accommodate the shortfall of sites necessary to accommodate the remaining housing need for housing for all income categories during the planning period. The program ensures that the sites are zoned to allow residential uses "by- right" for sites with 20 percent low income housing and no subdivision. The rezoning program will ensure that at least 50 percent of the remaining lower income need is accommodated on sites designated for residential uses only, where mixed-use and nonresidential use is not permitted.

The Housing Element update lists sites that can accommodate approximately ~~2,334~~ 2,100 additional units. This capacity discounts the development potential in mixed-use areas, recognizing that not all mixed-use sites will include a residential component, and does not include many small sites that could be consolidated for a housing development. Overall, the City has adequate capacity to accommodate both the 2013 - 2021 RHNA and the 253-unit carryover.

Table B-52: Adequacy of Sites Inventory					
	Extremely Low/Very Low Income	Low Income	ModerateIncome*	Above Moderate Income	Total
RHNA (2013-	587	446	413	907	2,353
RHNA Penalty	253		--	--	253
Units	33	33	4	892	962
Remaining	1,220		409	15	1,644
Sites Available					
Moderate Income - Mixed	--		~~293~~277	--	~~293~~277
Existing Residentially Zoned	0		~~233~~215	~~187~~177	~~420~~392
Accessory Unit	~~50~~79		54	--	~~50~~133
Total Potential Capacity Based on Existing GP	--		~~580~~492	~~187~~177	767
Remaining	~~1,170~~1,141		0	0	~~1,170~~1,141
Sites Proposed for Rezoning	~~1,621~~1,431		--	--	~~1,621~~1,431
Total Capacity Over Lower	~~451~~290				

*Moderate income category includes the DCM-1, DCM-2, NCM-1, NCM-2, NCM-3, NCRM-1, N-CRM-2, D-OM ~~and~~, D-VCM Zones, R11, R15, N-R15, D-R15, N-R20, D-R25, N-R25, and R25. Reasonable capacity assumptions for the DCM-1 Zone are based on new information not previously available for previous planning periods.

11.6 Financial Resources

Providing for an adequate supply of decent and affordable housing requires layering of funding from various sources. The City has access to the following funding sources:

11.7 Affordable Housing Fund

The City has an Affordable Housing Fund using revenues primarily generated from the City's Inclusionary Housing program. The City's Inclusionary Ordinance provides the opportunity to a developer to pay a fee in lieu of providing affordable units on site. The per-unit in-lieu fee is calculated on a case-by-case basis, depending on the market conditions at the City. The affordable housing funds collected are then applied and/or leveraged with additional funding sources to create affordable housing in other locations. As of May 2014, the City has a balance of $1,352,571.00 million in the Affordable Housing Fund.

11.8 Section 8 Housing Choice Voucher

The Section 8 Housing Choice Voucher program is the Federal government's largest program to assist very low-income families, the elderly, and the disabled by providing rent subsidy payments in privately owned

rental housing units. As the units are market- rate, the program offers households the opportunity to have an expanded choice in housing. Section 8 participants typically, upon initial approval, pay 30 to 40 percent of their income for rent and utilities. The Housing Authority of the City of Encinitas administers the program and pays the difference between the tenant's contribution and the actual rent and utility costs, up to the payment standard established by the Housing Authority, based on HUD-established Fair Market Rents. To cover the cost of the program, HUD provides funds to allow the City to make housing assistance payments on behalf of the families. HUD also provides the Housing Authority with a separate allocation for administering the program.

11.9 Community Development Block Grants (CDBG)

The Community Development Block Grant (CDBG) program was initiated by the Housing and Community Development Act (HCDA) of 1974. The primary objective of the program is to develop viable urban communities by providing decent housing, a suitable living environment, and economic opportunities, principally for persons of low incomes (up to 80 percent AMI). CDBG funds can be used for a wide array of activities, including:

- Housing rehabilitation;
- Lead-based paint screening and abatement;
- Acquisition of buildings and land;
- Construction or rehabilitation of public facilities and infrastructure, and:
- Public services for low income households and those with special needs.

The City of Encinitas has been an entitlement jurisdiction for CDBG funding since 1990. Annually, the City receives approximately $300,000; however, appropriations for many domestic programs, such as CDBG, have experienced declines over the past few years and future funding allocations are unknown at this time. Typically, the City expends CDBG funds to public services, fair housing, capital improvement projects, residential rehabilitation, and administration.

11.10 HOME Investment Partnership Program (HOME)

The HOME program provides federal funds for the development and rehabilitation of affordable rental and ownership housing for households with incomes not exceeding 80 percent of area median income. The program gives local governments the flexibility to fund a wide range of affordable housing activities through housing partnerships with private industry and non-profit organizations. HOME funds can be used for activities that promote affordable rental housing and homeownership by low income households.

Encinitas is not an entitlement jurisdiction, and therefore, does not receive HOME funds directly from HUD. The City participates in the HOME Consortium administered by the County of San Diego. Until FY 2014-15, HOME funding was allocated to each of the participating members of the HOME Consortium; however, due to federal changes to the HOME program, Encinitas no longer receives funding from the County of San Diego to administer HOME programs. As a continued member of the San Diego Regional Consortium, City of Encinitas residents may receive assistance through the County of San Diego's HOME programs. These programs include a first-time homebuyer down payment and closing costs assistance program and a tenant-based rental assistance program. HOME funding was also provided to the

Emancipated Foster Youth TBRA and Family Reunification TBRA. The programs are developed to provide rental assistance to former foster youth between the ages of 18 and 24 and those that are attempting to reunify with their children while in substance abuse recovery. Additionally, the County periodically makes funding available for the new construction or acquisition and rehabilitation of affordable housing. Projects meeting the County's requirements would be eligible to apply for funding, when available.

11.11 Administrative Capacity

11.12 City of Encinitas Housing Authority

The Encinitas Housing Authority offers Section 8 Housing Choice Vouchers to very low income households. Currently, the Housing Authority administers 136 vouchers, although current HUD funding supports 101 households.

11.13 Community Resource Center

The City partners with the Community Resource Center (CRC) located in Encinitas to provide a range of homeless services, including case management and counseling, services for victims of domestic violence, homeless prevention and intervention, food distribution, and employment assistance. The CRC is a 501(c)(3) nonprofit organization that has been the primary provider of comprehensive social services to the North County Coastal region since 1979. The agency has an estimated annual budget of $3.2 million and employs approximately 44 persons. Annually, the City provides CDBG funding for CRC to support its homeless services. The City has also provided assistance in the rehabilitation of CRC's social services facility, and transitional housing facility, located in downtown Encinitas. The City also provides general funds to CRC Opening Doors program, which provides housing navigation, case management, landlord incentives, and move-in support for homeless households.

11.14 Nonprofit and For-Profit Housing Developers

The City partners with a number of nonprofit and for-profit housing developers to provide permanent affordable housing in the community. These include:

- Habitat for Humanity
- Mercy Housing: Cantebria Senior Apartments (44 units)
- North Coast Housing: Su Casa Family Apartments (28 units)
- Community HousingWorks: Esperanza Garden Apartments (10 units)
- Chelsea Housing, Iris Apartments: recently constructed (20 units)
- Second Street Apartments: Private Developers (4 units)
- Encinitas Preservation Association: Boathouse Apartments (4 units)
- Encinitas Ranch Apartments, LLC: Elan Pacifico (120 units, 22 affordable)

11.15 Opportunities for Energy Conservation

The primary uses of energy in urban areas are for transportation lighting, water heating, and space heating and cooling. The high cost of energy demands that efforts be taken to reduce or minimize the overall level of urban energy consumption. Energy conservation is important in preserving non-renewable fuels to

ensure that these resources are available for use by future generations. There are also a number of benefits associated with energy conservation including improved air quality and lower energy costs.

The City's energy goals, stated in the Resource Management Element of the General Plan, make every effort to conserve energy in the City thus reducing dependence on fossil fuels. The City's policies relating to energy include encouragement of the use of alternate energy systems, urban design that maximizes opportunities for solar energy use and energy conservation, and promotion of energy conserving standards and requirements for new construction.

Starting in 2012, the City promoted energy efficiency, environmental stewardship, and sustainability by eliminating or reducing permit fees for solar photovoltaic home systems, solar water heating home systems, electric vehicle supply equipment for home charging, clean natural gas systems for home refueling, etc. What started as a one-year program (launched in July 2012) has evolved into a program that will be evaluated on a yearly basis with the overall budget. The energy efficiency permit fee waiver program was recently extended, and is still in existence.

In January 2018, the City adopted an update to its Climate Action Plan. To further advance community energy goals, the City will implement a number of actions/measures (e.g., require energy audits, solar photovoltaic systems and solar water heaters) to achieve residential-focused greenhouse gas emission reductions. Until those actions/measures are adopted, Title 24, Building Energy Standards for Residential Development, establishes energy budgets or maximum energy use levels. The standards of Title 24 supersede local regulations, and State requirements mandate Title 24 requirements through implementation by local jurisdictions. The City will continue strict enforcement of local and state energy regulations for new residential construction, and continue providing residents with information on energy efficiency.

SDG&E offers an Energy Savings Assistance program that offers income-qualified households assistance to:

- Install improvements to help make the home more energy efficient;
- Help understand the best ways to save energy around the home; and
- Determine whether some of the appliances are eligible for free repairs or replacement.

Examples of free home improvements offered by SDG&E include: attic insulation; door weather-stripping and caulking; low-flow showerheads and faucet aerators; water heater blankets; energy-efficient lighting; and assistance in selecting energy-efficient appliances. The City helps publicize this program on the City website.

11.16 Evaluation of Previous Housing Element Related Work Efforts

To lay the basis for preparing a Housing Element update, the Housing Element must analyze the City's accomplishments during previous Housing Element planning periods and/or progress in implementing Housing Element law and/or other statutory mandates. In this section, the City describes and quantifies the actual progress and effectiveness of previous work efforts to attain the community's housing goals and objectives. It is important to determine if the housing needs have changed, if the goals and policies are still relevant, and if the programs were effective. This task was systematically considered as part of the 2013-2021 Housing Element update.

Typically, a locality will utilize the last adopted Housing Element in order to evaluate progress towards facilitating a variety of housing types, services, and programs to meet needs within a community. Since the 2005-2010 and 1999-2004 Encinitas Housing Elements were never adopted by the City, there is no standardized basis for this assessment. However, draft policies and programs were developed during these planning periods; therefore, both draft documents serve as the best proxy for benchmark review. While the draft documents were never officially adopted, the 2005-2010 and 1999-2004 draft Housing Elements address housing needs and community-specific and housing-related issues of the time period.

This section evaluates the City's progress in two contexts: 1) the City's progress towards meeting Coastal Zone requirements; and, 2) the City's success in meeting its housing goals and program objectives. This evaluation is a key component in the determination of goals and programs to be included in the 2013-2021 Housing Element.

11.17 Evaluation of Progress towards Meeting Coastal Zone Requirements

Section 65588 of the Government Code requires that, in housing element updates, coastal jurisdictions document the number of low and moderate income units converted or demolished, and the number of replacement units provided. Section 65588 also requires that revisions of the housing element must include, for the coastal zone:

- Number of new units approved for construction after January 1, 1982
- Number of units for low and moderate income households required to be provided either within the coastal zone or within three miles of it.
- Number of units occupied by low and moderate income households and authorized to be demolished or converted since January 1, 1982.
- Number of units for low and moderate income households required either within the coastal zone or within three miles in order to replace those being demolished or converted.

Because the City was incorporated in 1986, information is not available for units produced between 1982 and 1986. The information in **Table B-53** was obtained from the County of San Diego Department of Housing and Community Development and from City records.

Table B-53: Residential Development in Coastal Zone (1986-2012)

Residential Development in the Coastal Zone	1986-1999	1999-2004	2005-2017*
New construction	1,021	1,013	1,062
New low-and moderate-income housing	43	48	92
Demolished market rate housing	65	81	213
Demolished/converted low- and moderate-income housing	4	0	0
Replacement low- and moderate-income housing	4	0	0

*Date range includes 7/1/2005 to 12/31/2017

11.18 Evaluation of Adopted Housing Element Goals and Programs

This section of the Housing Element is intended to describe the City's progress in meeting the goals and policies of the latest adopted Housing Element. However, the last Housing Element was adopted in 1992 and a lot has changed since then. That is, it is difficult to gauge or infer progress out of evaluating programs that were developed 20+ years ago. Since a considerable amount of effort went into updating the Housing Element during the fourth and fifth cycles (1999 and 2005), it is reasonably expected that these draft programs are a more useful source of information.

The programs contained in these draft Housing Elements described specific actions the City of Encinitas proposed to carry out to satisfy the community's housing needs and meet the requirements of State law. The evaluation section of these draft documents detailed what happened and described the actual results or outcomes of the prior planning efforts. For example, for each program the draft documents compared significant differences to determine where the previous draft housing element met, exceeded, or fell short of what was anticipated.

The results of this review and assessment were used to revise and update the proposed programs for 2013-2021 as described in the Implementation Plan section. The programs were organized into five major issue areas: Housing Opportunities, Homeownership Opportunities, Rental Assistance, Quality of Housing, and Maintenance and Preservation of Housing.

11.19 Housing Opportunities

1999/2005 HE Program 1: Zoning Code – Existing Provisions

The relationship between housing goals and land use planning is direct. The Land Use Element of the Encinitas General Plan and its implementing zoning regulations is the City's most important "housing program," by providing for the number and type of housing units needed. The Housing Needs, Housing Constraints and Housing Resources sections of the Housing Element establish the relationship between identified housing needs and the ability to meet those needs through the City's land use planning. The following existing provisions of the City's Zoning Code are designed to ensure that the City achieves its housing objectives as a result of zoning implementation. Note that some of the City's zoning provisions will continue to be implemented on an on-going basis, while others need modification or "fine tuning" through amendments to the Zoning Code.

1999/2005 HE Program 1A: Overall Land Use Plan Implementation

The City proposed to continue to apply zones through the Zoning Code and Zoning Map to correspond with the Land Use Element's residential designations that would have provided a range of residential densities and housing types. These included the single-family residential categories, (RR through RS-11) the multi-family categories (R-11 through R-25 zones) and the specialty category of Mobile Home Park (MHP).

Program Accomplishment: This program was an on-going activity. The City initiated a comprehensive update to its General Plan in 2010. The Comprehensive General Plan Update and subsequent Housing Element-related work provided additional opportunities to evaluate appropriate locations for high-density residential and mixed-use development.

Program Evaluation: This program is continued as part of the 2013-2021 Housing Element.

1999/2005 HE Program 1B: Accessory Units

The City proposed to apply zoning code provisions that allowed accessory units (also known as second units or granny flats) by right in all single-family residential zones, in accordance with State law. In addition, the City allowed developers of single-family subdivisions to meet inclusionary housing requirements by building accessory units. After conducting an inventory of inclusionary, accessory units in 2003, the City re-evaluated that accessory unit option. Many owners of the accessory units did not rent the units out in accordance with the recorded covenant.

Program Accomplishment: The City's accessory unit regulations were amended in the mid-1990s, permitting their construction by right in single-family neighborhoods. Implementation of the City's ordinance permitted the construction of at least 163 new accessory units. Over the past several years, the production on new accessory units has ranged from 14 to 21 units per year, with about 19 new units on average.

Program Evaluation: This program has been successful in fostering the development of accessory units throughout the community and is continued in the 2013-2021 Housing Element. Program 1C has been added to relax development standards and to encourage more accessory unit (second-unit) production.

1999/2005 HE Program 1C: Agricultural Worker Housing

The City proposed to continue to apply zoning code provisions that would allow agriculture worker housing as an accessory to agricultural/horticultural land uses. The City proposed to review development standards/limitations that were in effect for agricultural worker housing to avoid potential disincentives, and allow for flexibility in the type of structure allowed as accessory agricultural program housing.

Program Accomplishments: The City did not undertake any formal review of its zoning/development standards for agricultural worker housing. At the same time, there has been no indication that the City's standards have posed a constraint to the provision of such housing.

Program Evaluation: The City's current Zoning Code requires agricultural worker housing requires a minor use permit, which is inconsistent with state law. A program is included in the 2013-2021 Housing Element to amend the Zoning Code to comply with state law. Refer to Program 3D.

1999/2005 HE Program 1D: Mobile Home/Trailer Parks

The City proposed to continue to apply zoning provisions that allowed the development of new mobile home/trailer parks and that recognize and allow the expansion of existing parks. The City will maintain the exclusive mobile home park zone (MHP), where appropriate, and will continue to provide for parks as an option under other zones. The 2005 draft Housing Element identified a need to conduct a citywide assessment of mobile homes/trailer parks to determine their status and ability to continue to provide affordable housing opportunities.

Program Accomplishments: The City did not receive any applications to expand mobile home parks or to rezone parks to the MHP zone. The City recently conducted an evaluation of mobile home parks and their capacity to continue to serve relatively affordable housing. The objective of the study was to develop a series of strategies and programs to encourage park conservation and sustain long-term, relatively affordable housing. The City Council considered a number of regulatory and non- regulatory alternatives.

In response to resident-based surveys and community input received at three workshops, the Council decided not to pursue an alternative that would have expanded the sites that are currently zoned for exclusive mobile home park use. However, City Council directed staff to implement several different programs aimed at mobile home park preservation. One particular strategy included a City-administered residential rehabilitation program for mobile homes and trailers, which has been implemented.

Program Evaluation: Mobile homes continue to be an affordable homeownership option, but space rents in many parks have remained relatively high. A recent mobile home park inventory, conducted in 2007-2008, addressed a variety of mobile home park strategies for implementation to provide affordable housing opportunities.

1999/2005 HE Program 1E: Care Facilities

The City proposed to continue to allow for the development of small scale care facilities, community care facilities, congregate care facilities, and residential care facilities under zoning to meet the special housing needs of seniors and persons with disabilities.

Program Accomplishments: In early 2005, the City revised its ordinance and definitions to be consistent with State standards.

Program Evaluation: This program is continued as part of the 2013-2021 Housing Element. Refer to Program 3D.

1999/2005 HE Program 1F: Identify and Remove Constraints to the Development of Housing for Persons with Disabilities

State law requires jurisdictions to analyze potential and actual governmental constraints on the development of housing for persons with disabilities and describe the City's efforts to remove or mitigate those constraints. During the 1999 Housing Element cycle, the City proposed to analyze its zoning ordinance and procedures to ensure that they provided flexibility in, and not constrain, the development of housing for persons with disabilities. If constraints were found, the City proposed to amend their zoning ordinances and/or change their procedures in order to remove them. Similarly, in the 2005 Housing Element planning period, the City proposed the development of a formal reasonable accommodation procedure.

Program Accomplishments: Through its building permit authority, the City enforces state Title 24 accessibility regulations. As needed on a case-by-case basis, the City has made reasonable accommodations with respect to accessibility in its application of zoning/development standards. As part of the City's participation in the Regional Analysis of Impediments to Fair Housing Choice study, the City's processes and ordinances were reviewed.

Program Evaluation: This program is carried over into the 2013-2021 Housing Element programs. Refer to Program 5A. The City will develop a formal reasonable accommodation procedure for persons with disabilities as related to zoning/development and building permit processes.

1999/2005 HE Program 1G: Density Bonus

At the time that the 1999 Housing Element was prepared, State law required that if a developer agrees to construct at least 20 percent of the total units of a housing development for lower income households, or 10 percent of the total units of a housing development for very low income households, or 50 percent of

the total units for elderly households, a city had to grant a density bonus of at least 25 percent over the otherwise maximum allowable density for the project site. Additionally, the law requires a city to offer at least one concession or incentive to a developer in exchange for affordable housing. The City's Local Coastal Program (LCP) restricts density bonuses to a maximum of 25 percent and allows only one concession or incentive due to the California Coastal Commission's interpretation of State Density Bonus Law.

New State law (SB 1818) has modified the requirements for the City if a developer requests a density bonus for providing affordable housing as part of a development proposal. Key provisions of the new law include lowering minimum density bonuses and affordable housing set-asides, providing a density bonus range that caps at 35 percent and requiring cities to grant up to three incentives or concessions. The law also provides for reduced parking requirements if requested by a developer. The program contained in the 2005 Housing Element cycle sought to bring the City's density bonus provisions into compliance with the new provisions of State law.

Program Accomplishments: The City's implementing ordinance of density bonus law is inconsistent with the recent changes. Although the City's density bonus regulations do not comply with State law, they have not been a barrier to the City approving density bonus projects. Most of the City's approved subdivisions since 2003 have associated with density bonus projects.

Program Evaluation: The 2013-2021 Housing Element will include a program to bring the City's density bonus ordinance and LCP into conformance with the new provisions of State law. Refer to Program 3A. The City updated its density bonus regulations, which related Local Coastal Program amendment was certified by the Coastal Commission in 2016. Additionally, the City will evaluate how the ordinance may be applied in conjunction with the City's Inclusionary Housing program to maximize affordable housing opportunities.

1999/2005 HE Program 1H: Inclusionary Housing Program

The City proposed to establish an inclusionary housing program that required subdivisions of 10 or more units to set aside at least 10 percent of the units for low income households. As a condition of approval of any tentative subdivision map for residential dwellings, community apartments, stock cooperatives or conversions of 10 units or more, it was proposed that the subdivider was to reserve a unit or units to tenants at or below 50 percent of the area median income. The units either had to be rented at or below the affordable rent level or sold at a price affordable to eligible households.

Residential subdivisions of 10 or more units could have met the City's 10 percent Inclusionary Housing Requirement by building an accessory dwelling unit with an affordability deed restriction. Accessory units also were rent restricted through the City's Affordable Unit Policy. After conducting a citywide survey of accessory unit owners in October 2003, the City found that many homeowners did not rent out the accessory units in accordance with the recorded covenant. The 2005 Housing Element sought to implement changes to the inclusionary program to more effectively meet the City's affordable housing goals and grant developers greater flexibility in how they fulfill their inclusionary requirements.

Program Accomplishments: The City enacted an ordinance that implemented the above requirements of the 1999 Housing Element. Since adoption of the inclusionary housing program, 125 units were produced, including 14 for-sale units, 67 rental units, and 44 accessory units. As mentioned above, although at one

time allowing developers to build inclusionary, accessory units has dispersed affordable units throughout the community, enforcement of rent restrictions has proven to be difficult. The City subsequently re-evaluated that accessory unit option. Many owners of the accessory units did not rent the units out in accordance with the recorded covenant. After some discussion, the City changed its policy and no longer allows developers to meet inclusionary housing requirements by building accessory units.

Program Evaluation: This program was successful in fostering the development of affordable units and should be continued in the 2013-2021 Housing Element. Refer to Program 2A. The City will evaluate how this program may be combined with the City's Density Bonus program to maximize affordable housing opportunities. The City also will evaluate expanding the application of inclusionary housing to increase homeownership and rental opportunities for moderate-income households, as well as other changes in the program to more effectively meet the City's affordable housing goals.

1999/2005 HE Program 1I: Permit Streamlining Policy

The City proposed to continue its existing policy to streamline permitting procedures for affordable housing projects. This effort was to address the possible administrative constraints of securing permits to produce an affordable housing project.

Program Accomplishments: The City engaged in a program to improve the efficiency of the development review process. Elements of the program included upgrading the computerized permitting system, reducing unnecessary paperwork, eliminating certain permit requirements, and establishing an interdepartmental team to quickly resolve problems as they arise.

The City streamlined permitting for two affordable housing projects, Poinsettia Ridge and Cantebria Senior Apartments. The non-profit developer of the Cantebria project developed the units under a HUD senior housing program, and due to a lengthy review process within HUD, was not able to realize any advantage from the expedited processing.

Program Evaluation: This program is continued in the 2013-2021 Housing Element with an emphasis on working with non-profit and for-profit housing developers to better utilize the expedited process.

1999/2005 HE Program 1J: Reduced Parking Standards for Mixed-use and Affordable Housing in Specific Plan Areas

Mixed-use units that were guaranteed to be affordable to low or very-low income households were allowed a reduced, one-space-per-unit parking requirement. The City proposed to continue to enforce these zoning provisions and to seek to incorporate reduced parking standards for mixed-use and affordable housing projects in future Specific Plan Areas.

Program Accomplishments: In the Downtown Specific Plan Area and the North 101 Corridor Specific Plan Area, no more than two off-street parking spaces required for any unit in a mixed-use development.

In the Encinitas Ranch Specific Plan Area Mixed-use Zones, the Planning and Building Director has the authority to reduce the above parking requirements for affordable housing projects, provided either that a parking study was prepared to support the proposed reduction in parking spaces or a baseline parking study was conducted by the City that was applicable to all affordable housing development in the City. This authority was exercised in at least one affordable housing development during the last review period.

Program Evaluation: The City reduced parking standards for the Cantebria Senior Apartments to 0.67 per unit, based on parking studies conducted by the developer of similar senior complexes in Southern California. However, when the complex began leasing up, the property manager discovered that 75 to 80 percent of applicants had cars. As a result, after the complex was 60 percent leased, the property manager began selecting only applicants without cars. This program is continued the 2013-2021 Housing Element; however, in senior complexes the City will require a minimum of one space per unit, plus guest parking.

1999 HE Program 1K: New Zoning Code Provisions for Multi-Family Residential Use

The City proposed to continue to review zoning code development standards to identify and remove disincentives for the development of multi-family units. The City considered relaxing multi-family off-street parking requirements for affordable housing projects on a case-by-case basis.

Program Accomplishments: This program was applied to the Second St. mixed-use project (4 units) and the Cantebria Senior Housing (45 units).

Program Evaluation: The City will continue review of the zoning code for any incentives and/or disincentives. However, it should be noted that multi-family housing development is eligible for the density bonus program and under the new density bonus law, incentives and concessions to development standards are provided for. Thus, any potential disincentives that can be identified may be mitigated if a developer seeks out concessions or waivers through the density bonus program. This program is not separately identified in the 2013-2021 Housing Element.

2005 HE Program 1K: Eliminate Separate Lot or Airspace Ownership Requirements in North Highway 101 Specific Plan

The North Highway 101 Corridor Specific Plan requires that all new residential detached dwelling units in residential-only developments must be constructed on a legally subdivided lot or must be subdivided to permit ownership of airspace in the form of a dwelling unit with an undivided share in common elements. While this requirement is appropriate for single-family homeownership projects, it may pose as a disincentive to the provision of multi-family housing.

Program Accomplishments: The City has not implemented this program.

Program Evaluation: This program was included in the 2013-2021 Housing Element. Refer to Program 3C.

1999/2005 HE Program 1L: Manufactured Housing

The City proposed to continue to permit manufactured housing units by right in single- family zones, as long as the units meet all zoning and building codes.

Program Accomplishments: This is an on-going program.

Program Evaluation: This program is continued in the 2013-2021 Housing Element.

2005 HE Program 1M: Neighborhood Revitalization Opportunities

The City proposed to designate blighted or declining residential neighborhoods as a "Neighborhood Revitalization Area" to enable HUD funding allocations and other available resources to implement housing rehabilitation, new construction, homeownership opportunities, etc.

Program Accomplishments: The City has not implemented this program.

Program Evaluation: HUD expects to approve strategies that will achieve substantial improvements in the delineated neighborhood area and will create meaningful levels of economic opportunities. Regardless of Federal appropriation streams or other funding levels, a neighborhood strategy submission for a delineated geographic area of the City is unlikely to be competitive. This program was not included in the 2013- 2021 Housing Element.

2005 HE Program 1N: Amend Design Review Findings for Residential Projects

The City requires design review approval for most proposed development. Unless exempt, residential projects need to be consistent with the City's design guidelines and comply with certain regulatory findings before they may be constructed. Among these findings is the requirement that the project "would not tend to cause the surrounding neighborhood to depreciate materially in appearance or value (EMC 23.08.080)." In response to concerns that such a finding could pose a constraint to housing, the City will evaluate this design review finding for its potential to be subjectively applied in denying a residential development.

Program Accomplishments: The City has not implemented this program. However, through the Housing Element "Restart" process, the community expressed some clear support to create design standards for future projects so that the community can be confident that they will fit in with existing neighborhoods.

Program Evaluation: This program was included in the 2013-2021 Housing Element. Refer to Program 3C.

1999 HE Program 2, 2005 HE Program 2b: Encourage Mixed-Use Development and Increase Awareness of Potential for Mixed-Use Development; Assess Feasibility of Expanding Mixed-Use Zoning in Other Parts of the City

The City proposed to continue to allow for the inclusion of mixed-use development of secondary residential units with development of principal commercial uses. Mixed-use residential provisions could have included requirements or incentives to be affordable. In a high-cost area such as Encinitas, this represented a significant opportunity for the development of multi-family housing.

The City also proposed to assess the feasibility of expanding mixed-use zoning provisions in other areas of the City (in both the 1999 and 2005 Housing Elements).

Program Accomplishments: Mixed-use was integrated into the City's Zoning Code. The Encinitas Ranch, Downtown Encinitas, and North 101 Corridor Specific Plans included provisions for mixed-use development in commercial districts with densities from the residential portion at 15-25 dwelling units per acre, with certain areas not being limited to a specific density. The City works to increase developer awareness of the potential for mixed-use development in Encinitas. Additionally, the City continues to provide technical support to developers proposing mixed-use projects.

Program Evaluation: This program is continued in the 2013-2021 Housing Element and should be made a high priority for implementation.

2005 HE Program 2A: Affordable Housing Overlay Zone

As part of the 2005-2010 Housing Element, the City conducted an analysis of its land use plan to determine the potential capacity to meet its regional housing needs allocation. The analysis showed that it would be

beneficial to augment the higher- density capacity of mixed-use zones by establishing an Affordable Housing Overlay Zone (AHOZ). The AHOZ would designate specific sites for higher residential density, provided that the affordable housing targets established for each site is met through development. The City will identify appropriate sites and apply the AHOZ designation through a zoning ordinance, General Plan, and Local Coastal Program amendment.

Program Accomplishments: The City has not implemented this program.

Program Evaluation: While an AHOZ is a land use tool that the City can utilize to develop RHNA capacity, an up-to-date sites inventory program was established for the 2013-2021 Housing Element to provide sufficient sites (appropriately zoned) to meet the City's full, "fair" share of RHNA for the current planning period. However, depending on how the overlay is created, an AHOZ could be a tool to consider implementing better design control or more attainable housing units in rezoned areas.

2005 HE Program 2C: Coastal Housing Replacement

As part of the 2005 Housing Element, the City proposed a program to identify resources to provide for the replacement of housing. State law (Government Code Section 65590) requires replacement of low- and moderate-income housing lost due to conversion or demolition of housing in the Coastal Zone. The replacement requirement is applied to projects of three or more dwelling units (eleven or more if multiple structures).

Program Accomplishments: The City has not initiated this program.

Program Evaluation: The range of options that could be considered under this activity could include fees for condominium conversions and other replacement housing requirements, especially for affordable housing lost through conversion or removal. This program was included in the 2013-2021 Housing Element. The City advances Government Code Section 65590 by regulating the applicability of these provisions on a case-by-case basis. However, the objective of this program may be something that the City should consider addressing in the next planning cycle.

11.20 Homeownership Opportunities

1999 HE Program 3, 2005 HE Program 3a: First-Time Homebuyer Down Payment Program

The City proposed to continue to provide the First-Time Homebuyer Program. This program provided down payment and/or closing cost assistance to low- income first- time homebuyers. The maximum loan limit was $10,000 and the appraised value of the property being purchased could not have exceeded $269,000. The City placed a second trust deed on the property as security for the loan. Repayment of the loan was deferred until sale, transfer, or non-owner occupancy of the unit. If the buyer resided in the unit for seven full years, the loan was forgiven.

Program Accomplishments: The program provided one down payment assistance loan which was used in conjunction with a Section 8 Homeownership Voucher. Due to the steep rise in the price of condominium properties, which had previously been the most affordable units for first-time homebuyers, the subsidy provided by the City was found to be inadequate. In response, the City increased its subsidy level to $40,000 per household and increased the maximum sales price to $421,000.

Program Evaluation: Housing prices have sky-rocketed in recent years making the first- time homebuyer program all but infeasible even with the increased loan amounts and home valuation. The required subsidy would be so large as to exceed HOME funding limits and would be an inefficient use of limited resources. The gap between the affordable sales price and the median sales price for condominium units is at least

$200,000. Thus, unless condominium prices decline, it will be difficult to assist first-time homebuyers.

Previously allocated funding for down payment assistance can be made available for the rare circumstance of a qualified buyer purchasing an affordable unit. However, this program should be phased out in favor of directing the City's limited financial resources to more effective uses such as rental assistance or affordable housing development.

1999 HE Program 4, 2005 HE Program 3b: San Diego Regional Mortgage Credit Certificate Program (MCC)

The City proposed to continue to participate in and promote the San Diego Regional Mortgage Credit Certificate Program. This program entitled qualified first-time homebuyers to take a federal income tax credit of 15 percent of the interest paid on the mortgage. The credit reduced the buyers' income taxes and increases net earnings, thereby increasing the buyers' ability to qualify for a mortgage loan.

Qualified applicants had to be first-time homebuyers earning no greater than 120 percent of the area median income.

Program Accomplishments: This program was more effective when combined with the Downpayment Assistance program and resulted in the use of six certificates within the City during that time frame. As mentioned above, the surge in home prices over the first part of the 2000s has rendered this program all but infeasible as well. One MCC has been issued in the last seven years.

Program Evaluation: The City may continue to participate in the MCC program in the event that a unique opportunity for such assistance presents itself. Given the extremely high property values in Encinitas, the City will not rely on this program to achieve its affordable housing goals. However, the program is ongoing.

1999 HE Program 5: Homebuyer Classes

The City proposed to continue to sponsor homebuyer classes twice a year to educate citizens about the home buying process and to inform participants of the available home buying assistance programs.

Program Accomplishments: A few classes were held during the first half of the 1999- 2005 Housing Element cycle but none have been conducted since. Due to the lack of affordable for-sale housing opportunities in Encinitas, the City decided to discontinue homebuyer classes. Interested persons are now referred to private organizations that hold classes in the area.

Program Evaluation: Limited staff resources and surging home prices have forced this program to a low priority activity. This program has not been identified in the 2013- 2021 Housing Element.

11.21 Rental Assistance Programs

1999 HE Program 6, 2005 HE Program 4A: Section 8 Rental Assistance

The Section 8 Housing Choice Voucher Program is the Federal government's major program for assisting very low-income families, the elderly, and the disabled to afford decent, safe, and sanitary housing in the private market. The City proposed to continue to administer the Section 8 Rental Assistance Program. This program provided rental assistance to eligible very low and low income households. The subsidy represented the difference between the rent that exceeds 30 percent of a household's monthly income and the actual rent charged.

Program Accomplishments: The City added 86 additional vouchers to an existing base of 50 vouchers. Of these new vouchers, 50 initially were "mainstream" vouchers for persons with disabilities. To cover the cost of the program, HUD provided, and continued to provide, funds to allow the City's Housing Authority to make housing assistance payments on behalf of the families. HUD also pays the Housing Authority a fee for the costs of administering the program.

In FY 2008-2009, City Council also approved the use of HOME funds for a tenant-based rental assistance program (see 1999 HE Program 7, 2005 HE Program 4B). The TBRA program replicates the City's Housing Authority Section 8 Housing Choice Voucher Program. TBRA recipients are selected from the top of the Section 8 waiting list. The TBRA will assist in shortening the wait times for households prior to receiving a Section 8 Choice Voucher.

Program Evaluation: This program is continued in the 2013-2021 Housing Element. HUD (the U.S. Department of Housing and Urban Development) has not issued any new vouchers to the City of Encinitas for several years. In January 2004 and January 2005, HUD capped the Section 8 budget, which required the City to reduce program operating costs. The City responded by increasing the payment standards and enhancing occupancy standards, which provides more opportunity for rental units. Then, more recently, on March 1, 2013, around $85 billion in Federal budget cuts known as sequestration took effect. The sequestration cuts are part of a 10-year plan of catastrophic funding reductions to discretionary domestic programs, including HUD and the military. The impact of sequestration on the City's Housing Authority has resulted in the more losses. Although the City will continue to administer its Housing Voucher Program, the City's ability to expand this program or even maintain it at its current level is dependent upon the Federal budget process. Recent indications from HUD are that Federal support for Section 8 will not be expanded. The City currently provides assistance to about 111 households. From 2009 to 2015, the City also administered a TBRA program, subsidizing 7 additional households. When additional funds become available to assist new families, the City will fund additional Section 8 Housing Vouchers.

1999 HE Program 7, 2005 HE Program 4B: HOME Housing Vouchers Program

The City proposed to continue to fund this program by using vouchers to target very low income households mirroring the Section 8 program. The HOME Housing Voucher program provides 24 months of rental assistance. During this time period, eligible participants could have transferred to the Section 8 program for on-going assistance as vouchers became available.

Program Accomplishments: In early 2009, City Council approved the use of HOME funds for tenant-based rental assistance (TBRA) program. This provided rent subsidies to lower-income households that are

currently awaiting a voucher on the Section 8 waiting list. The maximum length of assistance is 24 months, and at the time, the approved HOME funding of $199,356 was going to provide rent subsidies for approximately over a two-year period. The TBRA program replicated the City's Housing Authority Section 8 Housing Choice Voucher Program. TBRA recipients were selected from the top of the Section 8 waiting list. The TBRA assisted in shortening the wait times for households prior to receiving a Section 8 voucher.

Program Evaluation: This program was planned to continue in the 2013-2021 Housing Element; however, due to federal changes to the HOME program, Encinitas will not be receiving funding from the County of San Diego to administer HOME programs. As a continued member of the San Diego Regional Consortium, City of Encinitas residents may receive assistance through the County of San Diego's HOME programs. The County-TBRA programs are developed to provide rental assistance to former foster youth between the ages of 18 and 24 and those that are attempting to reunify with their children while in substance abuse recovery.

11.22 Quality of Housing

1999 HE Program 8, 2005 HE Program 5A: Equal Opportunity Housing Marketing/Fair Housing

The City proposed to continue to require that, as a condition of approval of any new housing development, units be marketed and sold according to procedures designed to promote equal housing opportunities. The City also proposed to continue to contract with a non-profit fair housing organization to provide outreach, counseling, education, testing for discrimination and assistance regarding fair housing issues.

Program Accomplishments: The City disseminated information about fair housing in its housing brochure and on the City website. Brochures also were distributed at libraries, grocery stores, community centers, and other public places. The City contracted with North County Lifeline to provide fair housing counseling and education. The City referred to the Regional Analysis of Impediments (AI) to Fair Housing (completed in 2004 and updated in 2011) as part of its analysis of potential impediments to affordable housing, and the Housing Element addresses the recommendations of that study as part of its program to reduce governmental constraints.

Program Evaluation: The program has been successful and should be continued in the 2013-2021. The City will address the impediments to fair housing identified in the AI.

1999 HE Program 9, 2005 HE Program 5B and 5C: Emergency Shelter/Transitional Housing Development Assistance

The City proposed to continue to sponsor or assist emergency shelter and transitional housing facilities, inside City limits or outside within a reasonable proximity. The City encouraged and/or supported facilities by providing siting opportunities, grants, or low cost loans, to operator agencies, grants. The City also proposed to provide financial assistance to the Community Resource Center (a nonprofit service agency based in Encinitas) for case management and the YMCA-Oz North Coast for emergency shelter for homeless and runaway youth. The City will participate in winter homeless assistance programs, either through motel voucher funding and a temporary winter shelter.

Program Accomplishments: The City provided funding to several non-profit organizations that provide shelter and emergency assistance. The Community Resource Center (CRC) expanded and renovated its transitional housing program for battered women and their children. The group living program was

expanded from 11 to 24 beds. With annual funding from the City, the CRC provides case management, emergency assistance, food assistance, and employment preparation services. The agency also administers a motel voucher program.

The City continued to support other agencies that provide services to homeless persons, including YMCA of North Coast, Fraternity House, and North County Solutions for Change. The latter organization developed a 32-unit regional transitional housing facility in Vista; all six cities in North San Diego County and the County of San Diego contributed funding to the $4.5 million project. The Family Solutions Center opened in October 2004. The Interfaith Shelter Network operated their annual winter shelter program at area churches. In addition, the City facilitated the use of the Scout Center, located on public property, for the temporary winter shelter.

Program Evaluation: The City will continue to support efforts to end and prevent homelessness in the community. SB 2 was passed in 2008 mandating jurisdictions to address housing opportunities for the homeless. The 2013-2021 Housing Element includes a program to the Zoning Code to address the provision of emergency shelters, transitional housing, and supportive housing consistent with SB 2.

1999 HE Program 10, 2005 HE Program 5D: Enforcement of Accessible Housing Regulations

The City proposed to continue to maintain accessible housing regulations and implement California Title 24 provisions for development review and approval.

Program Accomplishments: Through its building permit and code enforcement programs, the City enforced the provisions of California Title 24 accessibility requirements.

Program Evaluation: This program is ongoing and continued in the 2013-2021 Housing Element cycle in accordance with State law.

11.23 Maintenance and Preservation of Housing Programs

1999 HE Program 11, 2005 HE Program 6A: Residential Rehabilitation Program

The existing affordable housing stock is a valuable resource to the City. The City proposed to continue to fund the County of San Diego residential rehabilitation program. This program provided assistance for low income households to upgrade units to decent, safe and sanitary conditions from a previous below-standard condition. The assistance was available to low-income homeowners and to owners of rental units that will rent to low income households.

Program Accomplishments: The County administered a residential rehabilitation program on behalf of the City of Encinitas for many years. Under the County of San Diego residential rehabilitation program, the County made two loans to low-income households in Encinitas.

In early 2009, the City Council approved its own City-administered residential rehabilitation program and opted out of the County program. The City immediately reached out to various community groups and commenced an aggressive marketing/advertising campaign throughout the City's mobile home parks. After two- years of implementation, the City rehabilitated nearly 100 mobile homes, and two single-family residences. The City continues to market/advertise this program to the City's eleven mobile home parks to advance one of the outcome goals of the mobile home park study (see 1999/2005 HE Program 1D: Mobile Home/Trailer Parks).

However, traditional funding appropriation streams have been significantly cut at a Federal level – leaving about $100,000 annually to fund activities under this program. City staff regularly seeks out additional funding opportunities for rehabilitation of ownership and rental units, including Community Development Block Grants, HOME, etc.; however, currently CDBG is the only funding administered locally. Encinitas will not be receiving funding from the County of San Diego to administer HOME programs.

Program Evaluation: As the City's housing stock ages, the need for housing rehabilitation to preserve neighborhood quality will continue to increase. Therefore, the City will continue to promote the rehabilitation programs offered through the City in the 2013-2021 Housing Element cycle. The future effectiveness of this program is derived by available resources and financing. It is estimated that current program funding levels will provide assistance to about five households on an annual basis.

1999 HE Program 12, 2005 HE Program 6B: Affordable Unit Policy

The City has a number of second dwelling units that were constructed or converted illegally (without required permits) and might not meet City codes. Many of these units provide affordable housing opportunities that might not otherwise be available. In response to this issue, the City developed a program for illegal unit conversion. This program allowed homeowners with illegally established second dwelling units on their property to apply for legalization. It allowed the illegal units to exist in perpetuity provided that the units:

- Were placed into service prior to City incorporation in 1986 and have been used as rentals since 1986;
- Complied with the current Uniform Building Code and meet City zoning and development standards to the maximum extent feasible;
- Met the minimum dwelling unit size standards; and
- Were rented to only very low or low-income households.

Program Accomplishments: About 40 units were legalized under this program, providing safe housing for lower income households.

Program Evaluation: This program will be continued and be made available to property owners in the 2013-2021 Housing Element period. It is anticipated that the number of applications will decrease over time, however, as it will become increasingly difficult to meet the pre-incorporation occupancy threshold. City Council recently revised the compliance program with less restrictive, more preferential terms…but the terms are only valid through 2015.

11.24 Financing

2005 HE Program 7A: Federal and State Financing

The City will facilitate or support the applications of experienced developers and homeless providers for financing to develop affordable housing.

Program Accomplishments: Under this 2005 Housing Element program, it was anticipated the City would meet with potential affordable housing developers, provide site information, assist in the entitlement process, and consider on a case-by- case basis other incentives to include fee waivers and modification of standards. City staff met with several non-profit and affordable housing developers over the course of the

2005-2012 planning period. In addition, the City partnered with several different groups to help construct a 20 unit, Iris Apartment complex. Five of the two-bedroom units and three of the three-bedroom units are at reserved for households at 50 percent of Area Median Income (AMI). Seven of the two-bedroom units, and five of the three-bedroom units are at reserved for households at 60 percent AMI. Through a competitive process, the project was awarded tax-credits totaling $4,655,490. The City contributed $350,000 total in loans from two sources; $194,466 in federal HOME Investment Partnership funds, and $155,534 in local City Affordable Housing Development funds. The project secured $1,146,759 in private loans/investments, including land donation. The total cost for the Iris Apartments was $8,332,699.

Program Evaluation: In order to make affordable housing development economically feasible, developers must layer financing from several State and Federal financing sources. The City will continue to facilitate this process under several different 2013- 2021 Housing Element programs.

2005 HE Program 7B: Local Financing

The City will investigate potential local sources that will generate dedicated housing revenue to augment the City's affordable housing trust fund.

Program Accomplishments: As part of the City activities associated with this program and Program 7A from the 2005 Housing Element, the City met with potential affordable housing developers.

Program Evaluation: Sources to augment the City's affordable housing fund include a couple of different funding opportunities. This updated Housing Element contains programmatic provisions to consider the inclusionary housing program and will consider other tools to achieve the stated purpose of increasing funding opportunities. While this updated Housing Element does not identify a program to evaluate a coastal replacement/conversion fee, it is anticipated that this provision will be addressed in the near future.

11.25 Quantified Objectives in Past Housing Element Cycles

Housing Element law required that quantified objectives be developed with regard to new construction, rehabilitation, conservation and preservation activities that will occur during the Housing Element cycle. **Table B-54** summarizes the City of Encinitas' quantified objectives for past Housing Elements, **Table B-55** summarizes the City's actual accomplishments in construction, and **Table B-56** summarizes the City's accomplishments in housing rehabilitation, preservation, and other assistance.

Table B-54: Historical Quantified Objectives

	Very Low Income	Low Income	Moderate Income	Above Moderate Income	Totals
1999-2004					
New Construction	441	340	366	437	1,584
Rehabilitation	-	7	n/a[1]	n/a[1]	7
Conservation					
Section 8	100	-	-	-	100
"At Risk" Units	-	40	-	-	40
Totals	**541**	**387**	**366**	**437**	**1,731**
2005-2010					
New Construction	392	299	324	697	1,712

Rehabilitation	-	25	n/a[1]	n/a[1]	25
Conservation					
Section 8	156	-	-	-	56
Totals	**448**	**324**	**324**	**697**	**1,793**

1. The City only set quantified objectives for very low and low income rehabilitation that occurred with assistance through the rehabilitation program. Moderate and above moderate income rehabilitation may still have occurred.

11.25.1 New Construction

Two overlapping RHNA cycles occurred within the period of 1999 through 2012. **Table B-55** summarizes the City's housing production during each RHNA cycle. While the RHNA adopted by SANDAG over these two time periods was consistent with SANDAG's projected growth for the City for the Series 10 and Series 11 Growth Forecasts, actual residential development from 2005-2012 fell below these forecasted levels. As shown in **Table B-55**, 1,621 new units were constructed during the 1999-2004 RHNA cycle. While the total number (1,621) nearly exceeded the City's RHNA (1,584), the production fell in the lower and moderate-income categories. Housing growth during the 2003-2010 RHNA cycle slowed, largely due to the severe downturn in the housing market. For this time period, the City did not meet its overall RHNA (1,712), and it did not meet its goal by income category.

Table B-55: Actual Units Constructed (1999-2012)		
7/1/99 - 6/30/04	**Regional Share Goal**	**New Construction**
Extremely Low	n/a	--
Very Low	441	21
Low	340	27
Moderate	366	--
Above Moderate	437	1,573
Totals	1,584	1,621
7/1/04 - 6/30/12	**Regional Share Goal**	**New Construction**
Extremely Low	n/a	--
Very Low	392	59
Low	299	37
Moderate	324	19
Above Moderate	697	965
Totals	**1,712**	**1,010**

Rehabilitation

Since 2009, the City funded rehabilitation of three single-family units (funding improvements to one extremely low-income household and two low-income households) and funded the rehabilitation of 96 mobile home/trailers, and one condominium. During the past ten years, low interest rates available on the market made it less attractive for homeowners to pursue the government-assisted loans due to the added eligibility, occupancy, and income restrictions. However, as the City's housing stock ages, the need for housing rehabilitation to preserve neighborhood quality will continue to increase. Therefore, the City will continue to promote the rehabilitation programs offered through the City during the next Housing Element cycle. Currently, two additional rehabilitation projects (mobile homes) are under consideration for funding.

Conservation

The City's quantified conservation objective was 140 households from 1999-2005 and 56 from 2005-2010. In 1999, this objective included 100 Section 8 Housing Choice Vouchers (rental assistance vouchers) and the conservation of 40 affordable units. In 2005, this objective included 56 Section 8 Housing Choice Vouchers. During the reporting period, the City retained all rental assistance budget authority (136 Section 8 and 20 HOME vouchers) and successfully conserved 16 affordable units through acquisition. Additionally, the City assisted six low income families in purchasing a home. Please note that **Table B-56** does not provide rehabilitation information on the mobile homes/trailers that have been assisted over the same time period.

Table B-56: Actual Rehabilitated and Assisted Units (1999-2013)

7/1/99 - 12/31/2012	Preservation	Homebuyer	Rent Assistance	Rehabilitation
Extremely Low	6	--		1
Very Low	156			
	7	--		--
Low	3	13	--	2
Moderate	--	--	--	--
Above Moderate	--	--	--	--
Totals	**16**	**13**	**156**	**3***

*The City only identifies quantified objectives for single-family and multi-family rehabilitation. The City also rehabilitated 96 mobile homes and trailers from 1999 to 2013. Moderate and above moderate income rehabilitation may still have occurred.

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Appendix C: Adequate Sites Analysis

Appendix C contains the site inventory and analysis for the sites proposed to meet the City of Encinitas' Regional Housing Needs Assessment (RHNA) allocation for the 2013-2021 planning period. The sites are organized to show how the City can meet the need for the four RHNA income categories (Very Low, Low, Moderate, and Above Moderate). That information is summarized in **Table C-1** below.

Table C-1: Adequacy of Sites Inventory

	Extremely Low/Very Low Income	Low Income	Moderate Income	Above Moderate Income	Total
RHNA (2013-2021)	587	446	413	907	2,353
RHNA Carryover (2003-2013)	253		--	--	~~250~~253
Units Built/Approved	33	33	4	892	962
Accessory Unit Production	~~50~~79		~~--~~54	--	~~50~~133
Remaining RHNA	~~1,170~~1,141		~~409~~355	15	~~1,594~~1,511
Candidate Site Unit Yield	~~1,621~~1,431		~~526~~492	~~187~~177	~~2,260~~2,100
Total Capacity Over RHNA Need	**~~451~~290**		**~~117~~137**	**~~172~~162**	**~~740~~589**

All sites were reviewed in order to ensure compliance with state law. The sites chosen meet that criteria and show the highest potential to redevelop for residential use within the planning period.

1.1 Availability of Water, Sewer, and Dry Utilities

The City of Encinitas has evaluated the availability of infrastructure from a Citywide and site-specific standpoint. In determining the feasibility of sites to accommodate the City's RHNA needs, infrastructure provision was a determining factor. As described in Appendix B under 'Environmental Constraints and Infrastructure,' the City has adequate water and sewer capacity to accommodate the planned increase in housing development. The City has reviewed the sites designated for development and has determined that each of the sites designated within each income category is adjacent to a public street that contains distribution facilities for water, sewer, and dry utilities (including cable and telephone). The availability and location of water, sewer and dry utilities and their distribution facilities do not pose a constraint to development.

C.1 Very Low and Low-Income Candidate Sites Inventory

SITES INVENTORY LIST

Very Low/Low Income RHNA Candidate Sites

Vacant

SITE 01: GREEK CHURCH PARCEL
SITE 02: CANNON PROPERTY (PIRAEUS)
~~SITE 03: L-7 PARCEL~~
SITE 05: ENCINITAS BLVD & QUAIL GARDENS PARCELS
SITE 07: JACKEL PROPERTIES
SITE AD1: SAGE CANYON
SITE AD2: BALDWIN & SONS PROPERTIES

Non-vacant

SITE 08: RANCHO SANTA FE PARCELS (GAFFNEY/GOODSEN)
SITE 09: ECHTER PROPERTY
SITE 10: STRAWBERRY FIELDS PARCEL
SITE 12: SUNSHINE GARDENS PARCELS
SITE AD8: VULCAN & LA COSTA

Net Acreage and Unit Yield Per Site				
Site Number	**Site Name**	**Gross Acreage**	**Net Acreage**	**Unit Yield (DU)**
Vacant				
01	Greek Church Parcel	2.50	2.00	50
02	Cannon Property (Piraeus)	6.93	6.93	173
~~03~~	~~L-7 Parcel~~	~~7.60~~	~~7.60~~	~~190~~
05	Encinitas Blvd & Quail Gardens Parcels	4.93	4.78	117
07	Jackel Properties	2.97	2.97	33*
AD1	Sage Canyon	5.23	2.40	60
AD2	Baldwin & Sons Properties	11.59	9.05	223
Subtotal		~~**41.75**~~ **34.15**	~~**35.73**~~ **28.13**	~~**846**~~ **656**
Non-vacant				
08	Rancho Santa Fe Parcels (Gaffney/Goodsen)	6.63	6.02	149
09	Echter Property	21.49	9.85	246
10	Strawberry Fields Parcel	16.90	9.85	246
12	Sunshine Gardens Parcels	3.39	3.39	84
AD8	Vulcan & La Costa	2.00	2.00	50
Subtotal		**50.41**	**31.11**	**775**
Total		~~**92.16**~~ **84.56**	~~**66.84**~~ **59.24**	~~**1,621**~~ **1,431**

* Unit Yield anticipates that this site will be developed for mixed-use.

Percentage of VL/L Sites by Site Type ~~(Excluding Low Priority Sites)~~		
Site Type	**# of Units**	**% of RHNA Allocation (including carryover)**
Vacant	~~846~~ 656	~~66%~~ 51%
Non-vacant	775	60%
Total	~~1,621~~ 1,431	~~126%~~ 111%
RHNA Allocation (including carryover) for VL/L Income Categories: **1,286**		

NET ACREAGE CALCULATIONS

Very Low/Low Income RHNA Candidate Sites

CALCULATION METHOD

The net acreage for each candidate site was calculated based on the gross acreage (for all parcels included in the site) minus the acreage deemed partially or completely undevelopable based on existing steep slopes and known environmental constraints. Environmental constraints were determined based on known site information for the parcels where that information was available and other sources, such as the City's Local Coastal Program and site observations. **The site capacity was determined by applying a 25 du/ac standard to the net acreage for each candidate site.**

The following calculation methods apply to slope constraints (Per the City of Encinitas Municipal Code for purposes of calculating density):

- All land in 0-25% slope of natural grade is allowed to use 100% of acreage.
- All land in 25-40% slope of natural grade is allowed to use 50% of acreage.
- All land in 40% + slope of natural grade is allowed to use 0% of acreage.

All acreages shown on the following sheets include any applicable acreage deducations from the gross acreage. The informational sheets include a note either stating that there were no known topographic or environmental constraints or detailing the acreage removed from the gross acreage and the reasoning.

WATER AND SEWER AVAILABILITY

As discussed in Appendix B, each site has been evaluated to ensure there is adequate access to water and sewer connections. Each site is situated adjacent to a public street that has the appropriate water and sewer mains and other infrastructure to service the candidate site.

DEFINITIONS

Vacant Parcel: Vacant parcels area generally completely free of structures except for temporary, non-permanent features located on-site. These may include storage containers or other non-permanent facilities. Vacant parcels may also have abandoned facilities where the owner has indicated no interest in reusing them or vacant, non-habitable structures slated for demolition.

Non-vacant Parcel: Non-vacant parcels are underutilized or developed parcels and contain existing development or established uses. These may include temporary structures associated with an active use (I.E. agricultural greenhouses) or other uses currently operating on the site.

Mixed-use Site Capacity: The mixed-use site capacity was calculated per Section 3.1.2.D of the Encinitas North 101 Corridor Specific Plan, which states a maximum lot utilization of 90% and that residential uses shall not exceed 50 percent of the gross building floor area for the development site. All parcels shown with fewer than 16 units are in common ownership with one or more adjacent parcels or show the potential to be consolidated with one or more adjacent parcels. In these cases, the parcels are considered one site that can accommodate at least 16 units.

Owner-Interest: Sites within owner interested listed in the description indicate where the City has been directly contacted by the property owner and received an acknowledgement of their interest in writing, either by email or by a formal letter.

GREEK CHURCH PARCEL

SITE NUMBER 01

SITE DESCRIPTION

This site is a portion of a property owned by the Greek Orthodox Church and part of a larger parcel with existing multi-family residential uses and an existing church. The owner has expressed interest in developing the site for residential uses.

SITE FEATURES

- Primarily vacant, open space
- Concrete pad

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

Owner has indicated they are interested in developing 2.00 acres of the 2.50 acre parcel.

APN(S) (Ownership)	2611506400 (STS CONSTANTINE & HELEN GREEK ORTHODOX CHURCH)	**PARCEL SIZE (AC) (GROSS/NET)**	2.50/2.00
SITE STATUS	Vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	3459 Manchester Avenue	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Cardiff-by-the-Sea	**UNIT CAPACITY**	50
GENERAL PLAN LAND USE	Rural Residential .51-1.00 (RR1)	**CONSTRAINTS**	None
ZONING	RR1		

CANNON PROPERTY (PIRAEUS)

SITE NUMBER 02

SITE DESCRIPTION

This site is a vacant property at the corner of Piraeus Street and Plato Place, both of which are 2-lane local streets. The southern portion of the site is flat due to previous grading, with the majority of the rest of the site sloping up towards a flat pad on the northeast corner. The owner has expressed interest in developing this site for residential uses.

SITE FEATURES

- Vacant, natural landscape
- Partially graded
- Some mature trees/vegetation on the northen portion of the site
- Slight topography change

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2541440100 (CANNON MARIA T)	**PARCEL SIZE (AC) (GROSS/NET)**	6.93/6.93
SITE STATUS	Vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	Piraeus Street	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**UNIT CAPACITY**	173
GENERAL PLAN LAND USE	Rural Residential 1.01-2.00 (RR2)	**CONSTRAINTS**	• Slight Topography (less than 25% slope, so no deductions)
ZONING	RR2		

L-7 PARCEL
SITE NUMBER 03

SITE DESCRIPTION

This site is a vacant property surrounded by low density single-family residential uses and agricultural greenhouses to the north. The site sits adjacent to a two-lane arterial with bicycle lanes in each direction and a raised center median. The site slopes gently from the east up to the west and has an existing concrete building pad in the southeast corner. This site is owned by the City of Encinitas.

Affordable housing developers have expressed interest in developing the site. If used for affordable housing, the site can be transferred directly to an affordable housing developer under G.C. Section 37364. The City is also exploring whether the site could be traded for another site where an equal number of housing units could be developed at possibly lower cost. If such a site is identified during the review period, the City may propose substituting that site for this one.

SITE FEATURES

- Vacant, natural landscape
- Existing concrete pad in the southeast corner
- Paved ingress/egress point
- Some mature trees and vegetation

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage.

APN(S) (Ownership)	2570111700 (CITY OF ENCINITAS)	**PARCEL SIZE (AC) (GROSS/NET)**	7.60/7.60
SITE STATUS	Vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	634 Quail Gardens Lane	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**UNIT CAPACITY**	190
GENERAL PLAN LAND USE	Rural Residential .51-1.00 (RR1)	**CONSTRAINTS**	None.
ZONING	RR1		

ENCINITAS BLVD & QUAIL GARDENS PARCELS

SITE NUMBER 05

SITE DESCRIPTION

Parcel 2581111600 is a vacant parcel adjacent to a 6-lane arterial with bicycle lanes in both directions and a raised concrete median. The property has an access road and an existing medical office use to the west. The site has a moderately steep slope from the southern portion of the site to the northern portion and contains existing walking paths and an unpaved access road.

Parcel 2581304500 is a narrow vacant property adjacent to a 6-lane arterial with bicycle lanes in each direction and a raised concrete median. The site rises steeply from the street.

Parcel 2581308100 is a vacant parcel adjacent to a 6-lane arterial with bicycle lanes in both directions and a raised concrete median. The site contains vehicular access points from Encinitas Blvd and Quail Gardens Dr. The site contains a moderate slope from the western portion up to the eastern portion of the site.

Parcel 2581303400 is landlocked by vacant parcels and contains an older, vacant single-family residential structure and private access road. The landowner has stated that the home is uninhabitable, and it is intended to be demolished.

The owner has expressed interest in developing all of these parcels for residential uses. All parcels are under one common ownership.

APN(S) (Ownership)	2581111600, 2581304500, 2581308100, 2581303400 (SHOWPROP DOWNEY LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	2581111600 - 2.20/2.20 2581304500 - 0.38/0.23 2581308100 - 1.31/1.31 2581303400 - 1.02/1.02 Total: 4.91/4.78
SITE STATUS	Vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	550 Encinitas Blvd, 696 Encinitas Blvd, Quail Gardens Dr	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Old Encinitas	**UNIT CAPACITY**	117
GENERAL PLAN LAND USE	Office Professional (OP)	**CONSTRAINTS**	• Steep topography on some portions. Acreage reduced per City code.
ZONING	OP		
LAND VALUE (2581303400)	$999,600	**TOTAL VALUE (2581303400)**	$1,020,000

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.

SITE FEATURES

- One vacant, 1-story single-family house
- Some manufactured slopes that are determined to not be a constraint on future development
- Primarily vacant, natural land
- Flat, graded area on the eastern portion

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas on the majority of the site. Therefore, the parcel size reflects the full gross acreage for the following parcels:

- 2581111600
- 2581308100
- 2581303400

Parcel 2581304500 contains 0.15 acres with slopes greater than 40% (Not developable per City of Encinitas Municipal Code). 0.15 acres was removed from the overall gross site acreage to get the 4.78 acre parcel size shown in the table on the preceding page.

Legend
>40% Slope
PRIVATE
QUAIL
PRIVATE
QUAIL GA
ENCINITAS
Sites Selected
0 50 100 200
Feet
NORTH

JACKEL PROPERTIES

SITE NUMBER 07

SITE DESCRIPTION

Parcel 2160412100 is a vacant property that sits between existing commercial uses and attached residential. The site has an approximately 55' wide driveway adjacent to North Highway 101, a four-lane arterial with bike lanes in each direction and a center median. The site slopes gently up from the east to the west with a slope of less than 25 percent.

Parcel 2160412000 is a vacant parcel adjacent to a four-lane arterial with bike lanes in each direction and a center median. The site contains a vacant restaurant and a large vacant surface parking lot with a single ingress/egress point. The owner states that there is no existing lease and he does not plan to re-let the building

The owner has expressed interest in developing both of these sites for residential and commercial uses. Both parcels are under one common ownership. (F C A Encinitas LLC) The planned multimodal improvements on Highway 101 will not impact the area of the site.

SITE FEATURES

- One vacant, natural parcel
- Existing 1-story vacant restaurant with outdoor patio
- Large surface parking lot
- Moderate slope adjacent to Highway 10 (less than 25%)
- Existing mature trees and vegetation

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage. However, the unit yield has been reduced to reflect the owner's interest in mixed use development.

APN(S) (Ownership)	2160412000, 2160412100 One Owner for all parcels: (F C A ENCINITAS LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	2160412000 - 1.91/1.91 2160412100 - 1.06/1.06 Total: 2.97/2.97
SITE STATUS	Vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	1950 HWY 101	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**UNIT CAPACITY**	33 (if developed at mixed-use ratio)
GENERAL PLAN LAND USE	Visitor Serving Commercial (VSC)	**CONSTRAINTS**	None.
ZONING	N-LVSC		

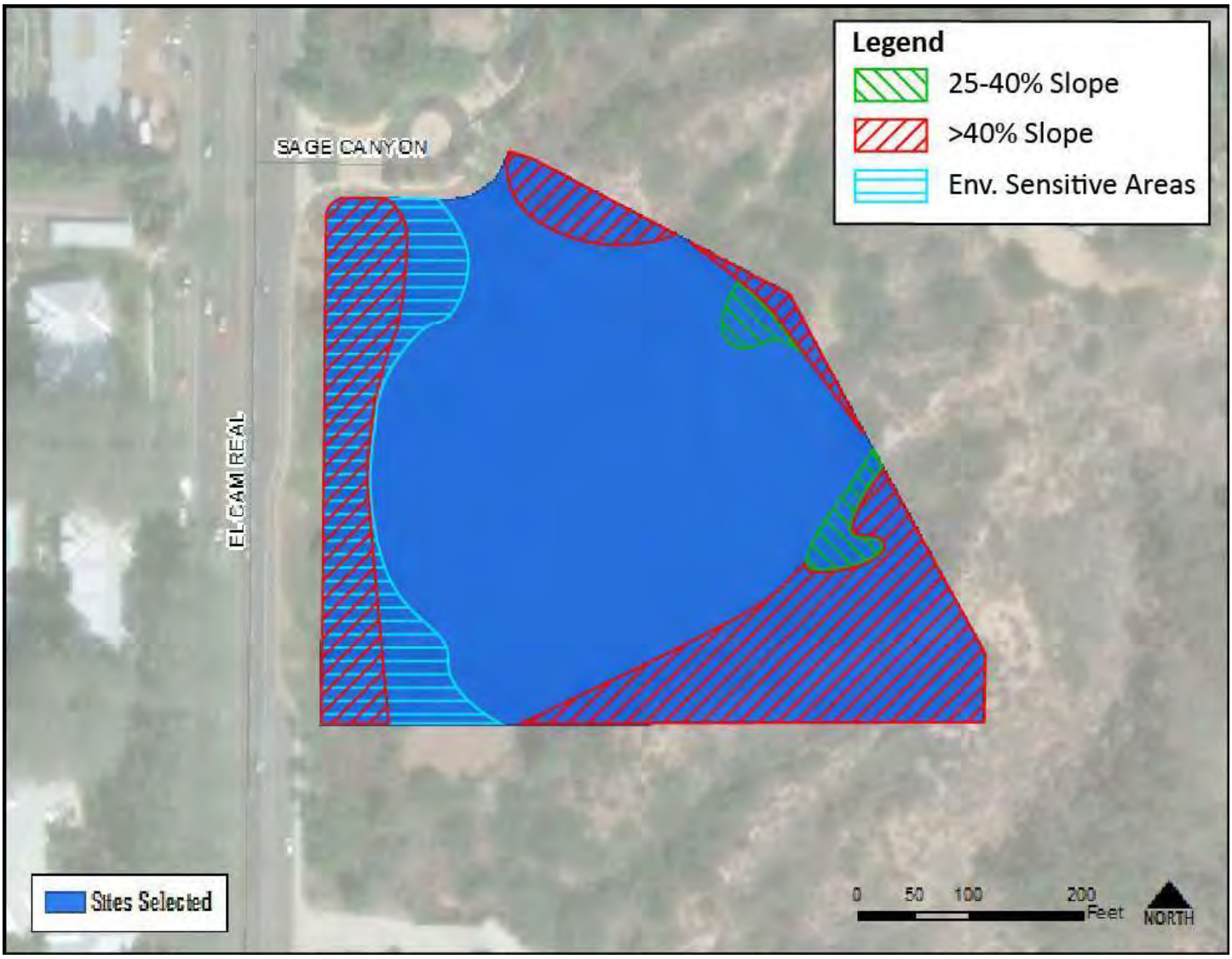
SAGE CANYON PARCEL
SITE NUMBER AD1

SITE DESCRIPTION
The site is a vacant property surrounded by natural open space and adjacent to a four-lane major road with a striped center turn lane, bicycle lanes going both directions, and parallel street parking along the west side of the road. The parcel is currently for sale by the owner. Based on previous development plans, there are some known environmental constraints that shrink the gross buildable area.

SITE FEATURES
- Existing mature trees and natural vegetation
- Some steep slopes adjacent to El Camino Real
- Previously graded, vacant area
- Private access point off a roundabout shared by a single-family residential neighborhood

PARCEL SIZE CALCULATION
Net acreage shown in the table under parcel size was determined from the net buildable area based on numerous studies of the topographic and environmental constraints by the owner.

APN(S) (Ownership)	2620618500 (PACIFIC CANYON LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	5.23/2.40
SITE STATUS	Vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	Sage Canyon Drive	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	New Encinitas	**UNIT CAPACITY**	60
GENERAL PLAN LAND USE	Residential 2.01-3.00 (R3)	**CONSTRAINTS**	• Steep Topography in some areas • Environmentally sensitive areas • Existing drainage canal
ZONING	R3		


Legend
25-40% Slope
>40% Slope
Env. Sensitive Areas
SAGE CANYON
EL CAMINO REAL
Sites Selected
0
50
100
200
Feet
NORTH

BALDWIN & SONS PROPERTIES

SITE NUMBER AD2

SITE DESCRIPTION

Parcels 2570203600, 2570203700, 2581308000, 2581308200, 2581308600 are vacant parcels adjacent to Quail Gardens Drive, a 2-lane arterial with bicycle lanes in each direction and a center turning lane. The owner has expressed interest in developing these parcels for residential uses in conjunction with three other properties under the same ownership.

Parcels 2581309100, 2581309300, 2581309400 are vacant parcels surrounded by other vacant parcels under the same ownership, single-family residential uses to the east, and commercial uses to the south. The parcels are landlocked with no direct access to a street. The owner has expressed interest in developing the property for residential uses in conjunction with five other properties under the same ownership.

All parcels associated with this site are under one common ownership. (Quail Meadows Properties LLC)

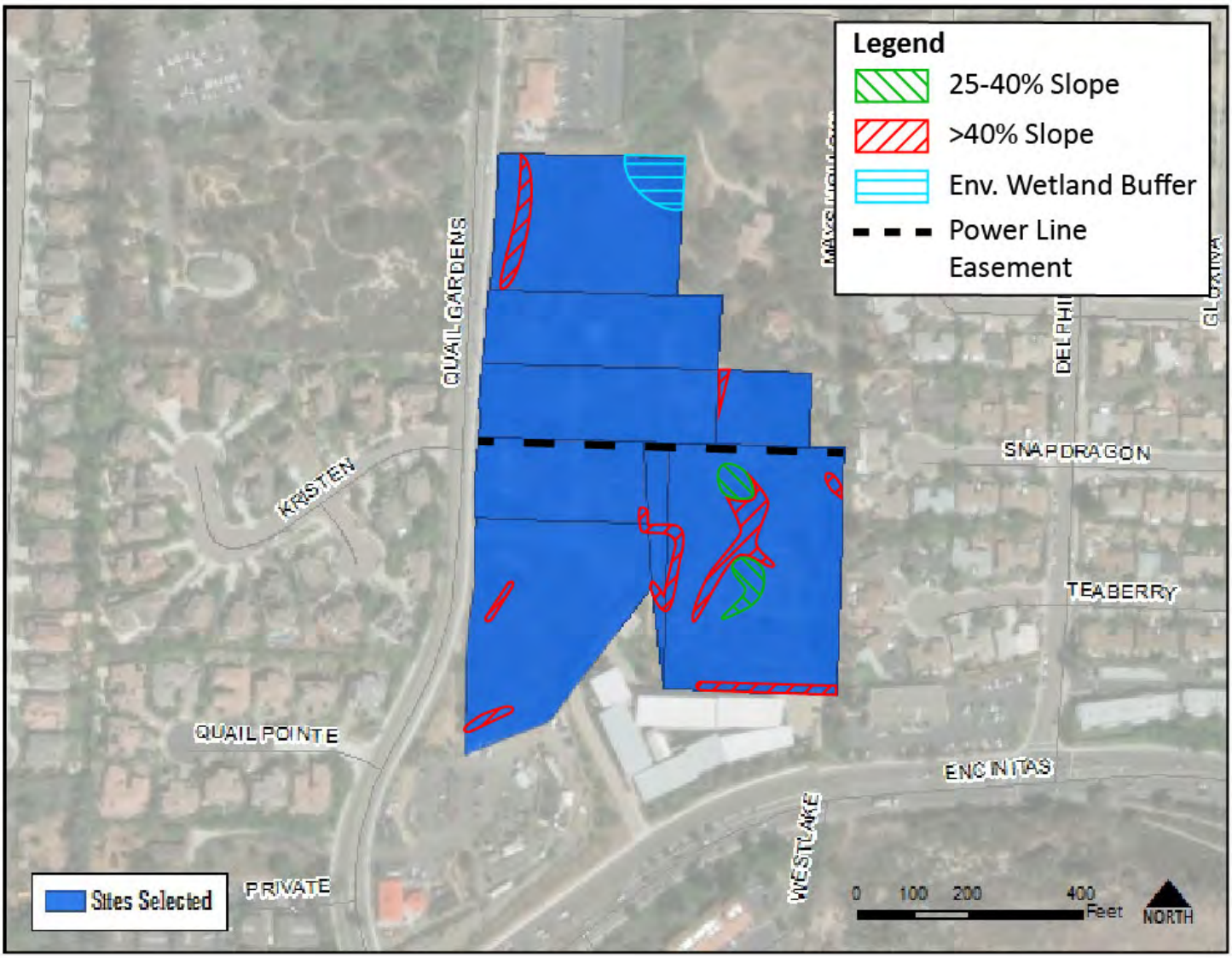
APN(S) (Ownership)	2581308000, 2581308200 2581308600, 2581309100 2581309300, 2581309400 2570203600, 2570203700 One Owner for all parcels: (QUAIL MEADOWS PROPERTIES LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	2581308000 - 1.00/1.00 2581308200 - 1.28/1.28 2581308600 - 2.24/2.24 2581309100 - 0.51/0.51 2581309300 - 3.15/0.61 2581309400 - 0.27/0.27 2570203600 - 1.87/1.87 2570203700 - 1.27/1.27 Total: 11.59/9.05
SITE STATUS	Vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	195 Quail Gardens Dr, 185 Quail Gardens Dr, Mays Hollow Ln, Encinitas Blvd, Quail Gardens Dr, 225 Quail Gardens Dr	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Old Encinitas	**UNIT CAPACITY**	223
GENERAL PLAN LAND USE	Residential 2.01-3.00 (R3) Residential 3.01-5.00 (R5)	**CONSTRAINTS**	• Some landlocked parcels • Utility easement
ZONING	R3, R5		

SITE FEATURES

- Mature trees and vegetation
- Paved concrete pads
- ~~Telephone~~ Power pole lines overhead

PARCEL SIZE CALCULATION

Net acreage shown in the table under parcel size was determined based on numerous studies of the topographic and environmental constraints and a 50' riparian buffer requirement for off-site wetlands that encroaches on Parcel 2570203600.


Legend
25-40% Slope
>40% Slope
Env. Wetland Buffer
Power Line Easement
QUAIL GARDENS
KRISTEN
SNAPDRAGON
TEABERRY
QUAIL POINTE
ENCINITAS
WESTLAKE
PRIVATE
Sites Selected
0 100 200 400 Feet
NORTH

RANCHO SANTA FE PARCELS (GAFFNEY/ GOODSEN)

SITE NUMBER 08

SITE DESCRIPTION

Parcel 2592313200 is a vacant parcel adjacent to a 2-lane arterial with bicycle lanes in each direction. The site is surrounded to the north and west by existing low density single-famly residential uses. There is a moderate slope on the site rising from the northeast portion of the site to the southern portion.

Parcel 2592312800 is a developed parcel with several 1-story residential structures. It contains a private access road that connects to an adjacent 4-lane major arterial. The site contains existing mature vegetation.

Parcel 2592313000 is a developed parcel with a single 2-story residential structure and is landlocked by low density single-family residential uses, a vacant parcel, and a strip commercial center. The site contains existing mature vegetation.

Parcel 2592313100 is a developed parcel with a single 1-story residential structure and is landlocked by low density single-family residential uses and a vacant parcel. The site contains existing mature vegetation.

Parcels 2592313200, 2592312800, and 2592313000 are under one common ownership. (Olivenhain Town Center 5.6 L P)

APN(S) (Ownership)	2592313200, 2592312800, 2592313000 One Owner for the above parcels: (OLIVENHAIN TOWN CENTER 5.6 L P) 2592313100 (GAFFNEY DAVID R & RICA G REVOCABLE TRUST 04-11)	**PARCEL SIZE (AC) (GROSS/NET)**	2592312800 - 3.88/3.57 (Non-vacant) 2592313000 - 0.54/0.54 (Non-vacant) 2592313100 - 0.46/0.46 (Non-vacant) 2592313200 - 1.75/1.45 (Vacant) Total: 6.63/6.02
SITE STATUS	One vacant Three non-vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	Rancho Santa Fe Dr, 2220 Encinitas Boulevard, 2230 Encinitas Boulevard, 2228 Encinitas Boulevard	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Olivenhain	**UNIT CAPACITY**	Vacant: 36 Non-vacant: 113
GENERAL PLAN LAND USE	Rural Residential 1.01-2.00 (RR2)	**CONSTRAINTS**	• Multiple owners • Some landlocked parcels • Slight topography
ZONING	RR2		

Parcel 2592313100 is under a separate ownership (Gaffney David R & Rica G Revocable Trust 04-11). This parcel is landlocked by parcels with separate ownership but could be developed as part of a larger project.

The owners have expressed interest in developing this site (all parcels) for residential uses.

SITE FEATURES

- One vacant, natural parcel
- Moderate slopes on the vacant parcel
- Approximately five residential structures ranging from 1-2 stories and spread across multiple parcels
- Existing mature trees and vegetation
- Paved access road

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas on Parcels 2592313000 and 2592313100. Therefore, the parcel's net acreage equals the full gross acreage for this parcel.

The net acreage shown for Parcel 2592312800 reflects the following deductions from the gross acreage:

- 0.61 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)

The net acreage shown for Parcel 2592313200 reflects the following deductions from the gross acreage:

- 0.59 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)

0.60 acres (50% of the overall 1.20 acre reduction due to slopes) was removed from the overall gross acreage to get the parcel size shown in the adjacent table.

Legend
25-40% Slope
PRIVATE
AVENIDA ESPERANZA
PRIVATE
RANCHO SANTA FE
MELROSE
PEPPERTREE
ENCINITAS
CANDY
Sites Selected
0 70 140 280
Feet
NORTH

ECHTER PROPERTY
SITE NUMBER 09

SITE DESCRIPTION

This site is a large parcel containing mostly temporary greenhouse agricultural structures along with an existing single-family residential structure. The site sits at the junction of a major 4-lane arterial and a local 2-land road. The owner has expressed interest in developing 250 residential units in conjunction with a working agricultural practice. The owner has completed conceptual renderings and a written description of potential future "Agri-hood" housing and agricultural concept. See attached letters.

The Agricultural Zone provisions of the Encinitas Ranch Specific Plan in which the site is located encourage the continued agricultural use of portions of the Specific Plan Area and the provision of a favorable setting in which to continue agricultural operations. The "agrihood" concept proposed allows for the continued viability of an agricultural business on the site.

SITE FEATURES

- Several buildings serving the agricultural practice on-site
- Temporary covered structures and greenhouses
- Large service tanks
- Interior roads
- Single-family residence in southwest corner

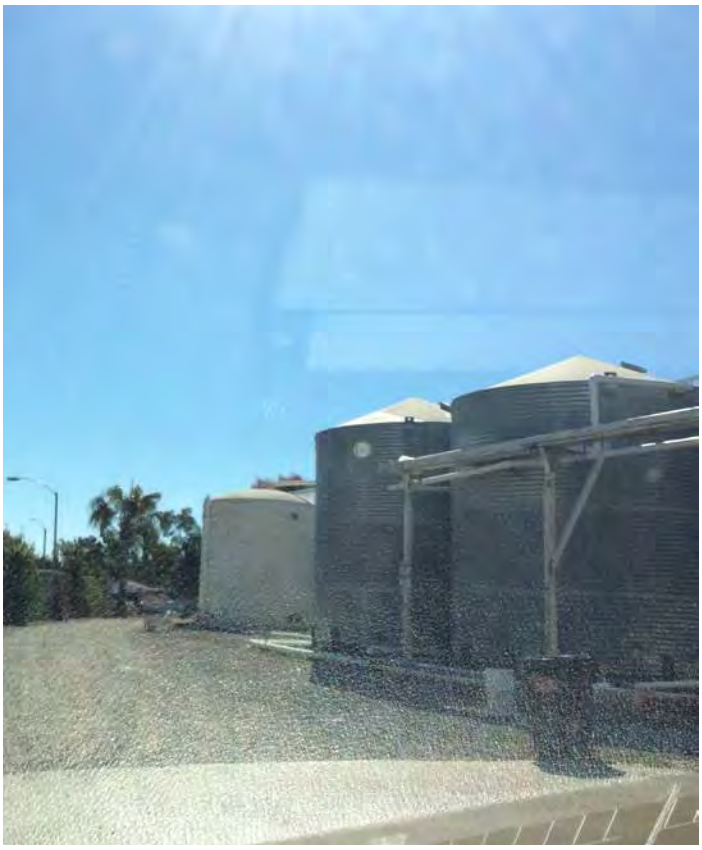
PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. ~~Therefore, the parcel's net acreage equals the full gross acreage for this parcel.~~

However, only 9.85 acres of the ~~16.90~~ 21.49 gross acres are designated for housing, with the remaining site intended to remain in agricultural use as an 'agrihood'. This 9.85 is shown as the net acreage of developable area in the table below.

APN(S) (Ownership)	2546121200 (R E L S INC)	**PARCEL SIZE (AC) (GROSS/NET)**	21.49/9.85
SITE STATUS	Non-vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	1150 Quail Gardens Drive	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**UNIT CAPACITY**	246
GENERAL PLAN LAND USE	Specific Plan 3 (SP-3)	**CONSTRAINTS**	• Owner has indicated interest in only developing 250 units
ZONING	ER-AG		
LAND VALUE	$1,180,201	**TOTAL VALUE**	$1,736,450

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.



STRAWBERRY FIELDS PARCEL

SITE NUMBER 10

SITE DESCRIPTION

This site is a partially vacant site located along a major 4-lane arterial with bike lanes in each direction and a striped median. The site is primarily used for agricultural purposes and contains no existing permanent structures. The site slopes gently from the south up to the north and is located across the road from sensitive habitat in the San Elijo Lagoon.

As set forth in many policies of the General Plan the City favors maintaining agricultural uses in the City yet does not require the continued use of agricultural uses.

SITE FEATURES

- Graded site sloping gently away from Manchester Avenue
- Existing agricultural rows and temporary greenhouse structures
- Dirt roads, no paved roads on-site

PARCEL SIZE CALCULATION

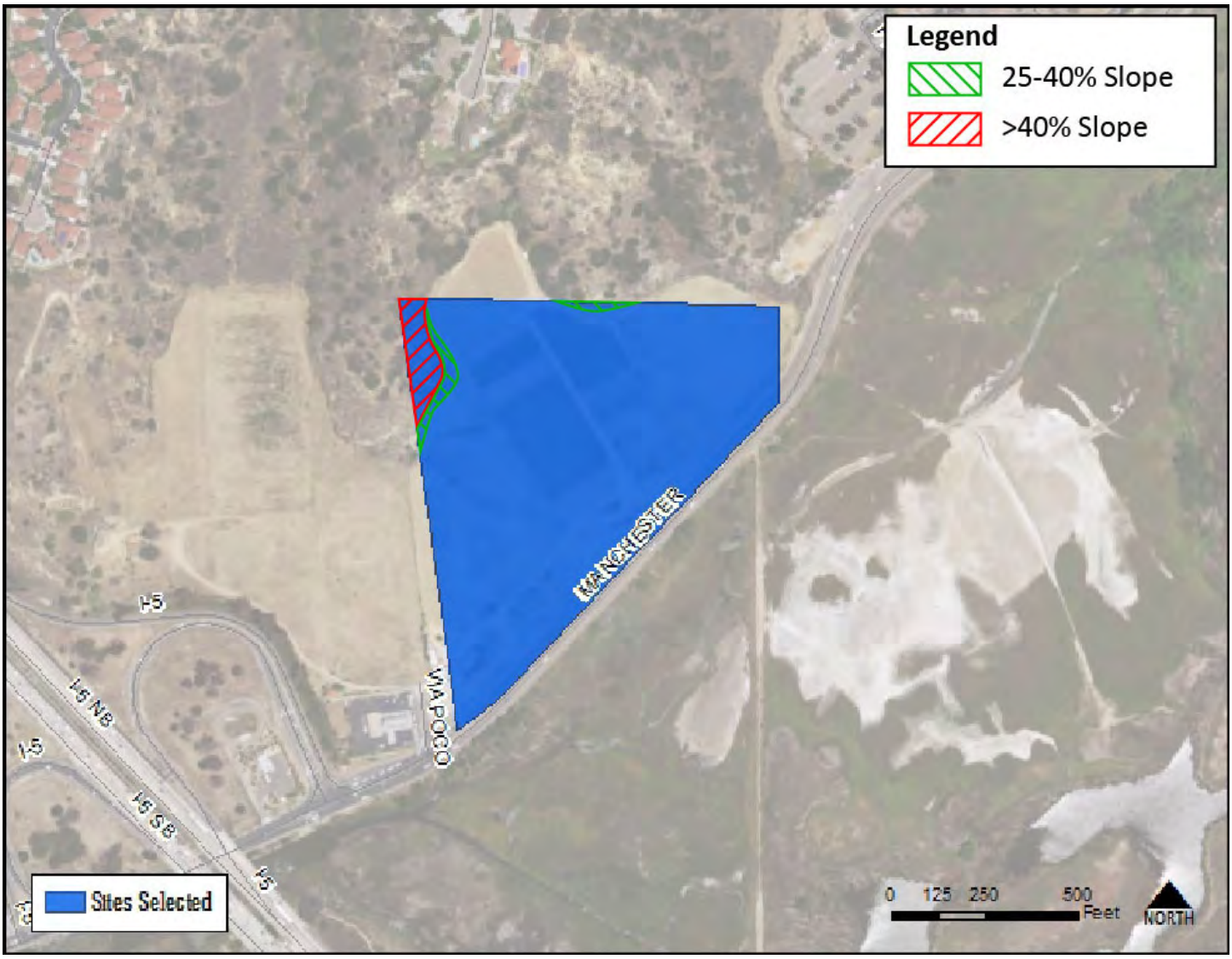
The net acreage shown for this parcel reflects the following deductions from the gross acreage:

- 0.86 acres contain slopes between 25 - 40% (developable at 50% per the City of Encinitas Municipal Code)
- 1.21 acres contain slopes greater than 40% (not developable per the City of Encinitas Municipal Code)

Only 9.85 acres of the 16.90 gross acres are designated for housing. This 9.85 is shown as the net acreage of developable area in the table below.

APN(S) (Ownership)	2612100100 (YASUDA FAMILY LLC)	**PARCEL SIZE (AC) (GROSS/NET)**	16.90/9.85
SITE STATUS	Non-vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	3111 Manchester Avenue	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Cardiff-by-the-Sea	**UNIT CAPACITY**	246
GENERAL PLAN LAND USE	Rural Residential 1.01-2.00 (RR2)	**CONSTRAINTS**	• Steep slopes
ZONING	RR2		
LAND VALUE	$1,226,836	**TOTAL VALUE**	$1,226,836

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.


Legend
25-40% Slope
>40% Slope
MANCHESTER
VIA POCO
I-5
I-5 NB
I-5 SB
Sites Selected
0 125 250 500
Feet
NORTH

SUNSHINE GARDENS PARCELS

SITE NUMBER 12

SITE DESCRIPTION

Parcel 2581309700 is an underutilized parcel comprised primarily of a paved surface parking lot and a variety of retail uses in both permanent and temporary structures. The site is adjacent to a 4-lane major arterial with bicycle lanes in each direction and a paved center median. The site has been graded to be mostly flat with moderate slopes directly adjacent to Encinitas Blvd.

Parcel 2581309900 is an underutilized parcel comprised primarily of a single-story commercial building, a paved surface parking lot, and a variety of retail uses in both permanent and temporary structures. The site is at the intersection of a 4-lane major arterial and a 2-lane collector role.

The owner has expressed interest in developing these sites for residential uses. Both parcels associated with this site are under one common ownership. (CAM-MAR Growers)

SITE FEATURES

- 1-story commercial building
- A variety of retail uses
- Several temporary agriculture and outdoor sales related structures
- Large paved surface parking lot
- Unpaved dirt areas

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage for this parcel.

APN(S) (Ownership)	2581309700, 2581309800 One Owner for all parcels: (CAM-MAR GROWERS)	**PARCEL SIZE (AC) (GROSS/NET)**	2581309700 - 2.04/2.04 2581309800 - 1.35/1.35 Total: 3.39
SITE STATUS	Non-vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	630 Encinitas Boulevard	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Old Encinitas	**UNIT CAPACITY**	84
GENERAL PLAN LAND USE	Office Professional (OP)	**CONSTRAINTS**	None.
ZONING	OP		
LAND VALUE	$3,448,000	**TOTAL VALUE**	$3,575,000

NOTE: Land value and total value comparison provided as additional information for all underutilized sites. "Total Value" includes the land value and any improvement value from development on the site.

VULCAN & LA COSTA

SITE NUMBER AD8

SITE DESCRIPTION

This site is a non-vacant parcel with existing agricultural uses and several 1-story structures related to agricultural sales. The property is adjacent to N Vulcan Avenue, a two-lane local arterial. The majority of the site is occupied by temporary agricultural structures such as greenhouses. The owner has expressed interest in developing this site for residential uses. The low intensity of existing uses makes it a suitable candidate for potential residential development. The owners has expressed interest in developing this site for residential uses.

As set forth in many policies of the General Plan the City favors maintaining agricultural uses in the City yet does not require the continued use of agricultural uses.

SITE FEATURES

- Greenhouse structures and frames
- 1-story structures related to agricultural uses (sales/storage)
- Small paved parking lot

PARCEL SIZE CALCULATION

There are no known physical constraints to development due to steep slopes or environmentally sensitive areas. Therefore, the parcel's net acreage equals the full gross acreage for this parcel.

APN(S) (Ownership)	2160520100 (RONHOLM CRAIG NICHOLS JOHN F)	**PARCEL SIZE (AC) (GROSS/NET)**	2.00/2.00
SITE STATUS	Non-vacant	**MAXIMUM DENSITY**	30 DU/AC
ADDRESS(ES)	1967 N Vulcan Ave	**MINIMUM DENSITY**	25 DU/AC
NEIGHBORHOOD	Leucadia	**UNIT CAPACITY**	50
GENERAL PLAN LAND USE	Residential 2.01-3.00 (R3)	**CONSTRAINTS**	• Existing operational business
ZONING	Residential 3 (N101SP)		

ATTESON'S
Flower Shop
ROSES
9.99

ROSES
9.99

C.2 Moderate and Above Moderate Candidate Sites Inventory

Calculation of Unit Capacity.

The City of Encinitas is a generally "built out" community, with minimal available land for residential development. The city understands the ability to accommodate future RHNA need is challenged by this lack of available land for residential development. Therefore, future growth needs must be accommodated through the recycling of current uses or the higher utilization of existing residential sites.

Encinitas has grown from its agricultural roots to a more modern, suburban community. As development continues to change throughout the region and demand outpaces supply of housing, Encinitas has begun to look at the reuse, recycling and intensification of land to accommodate anticipated future growth need. Once a traditional commercial corridor, Pacific Coast Highway has begun to evolve as a unique coastal urban infill opportunity area. The city's adoption of the Downtown Encinitas Specific Plan and the North Highway 101 Corridor Specific Plan provide the policy guidance for the transition to residential and mixed use development along this Corridor.

For properties in Mixed Use zones, unit capacity has been calculated with an assumed mid-range density, based on the assumption that a portion of the site may permit non-residential development. Therefore, a midrange density of 15 du/ac has been assumed for calculation purposes. While site development potential for residential can be much higher, the city assumes a mid-range calculation as a conservative estimate of development yield.

Process of Site Evaluation

The City conducted a review of sites that have recently converted to residential to accommodate Moderate and Above Moderate Income Households. Within the Downtown, Highway 101 and adjacent areas, there are constructed units or permits issued for 63 units in the Downtown and North Highway 101 areas. The 17 separate applications are for the demolition of and/or construction of residential units in previous commercial properties. Through the adoption of the Specific Plans in these area, the intent is to expand opportunities for residential and commercial activity in a more urban setting.

The following factors contribute to the evaluation of appropriate sites for moderate market-rate units:

1. **Access to Coast Highway –** sites with direct access to Coast Highway or directly adjacent it was deemed the ideal location for infill development
2. **Sites exhibiting adjacent changes or significant investment –** these including sites adjacent to major transportation facilities, new developments, mixed use development or major roadway improvements or planned improvements.
3. **Sites exhibiting substantial underutilization –** these sites are long term commercial retail, industrial or antiquated buildings that are deemed highly underutilized. These area typically smaller sites. These sites include sites zoned R11 and R25. The R11 and R25 sites are prime candidates of second units and subdivisions as they are substantially underutilized
4. **Accessibility to Water, Sewer and Utilities –** Adjacent infrastructure should be available and/or already served on the site.
5. **Sites exhibiting lot consolidation potential –** site that are perceived with potential to consolidate with adjacent parcels.

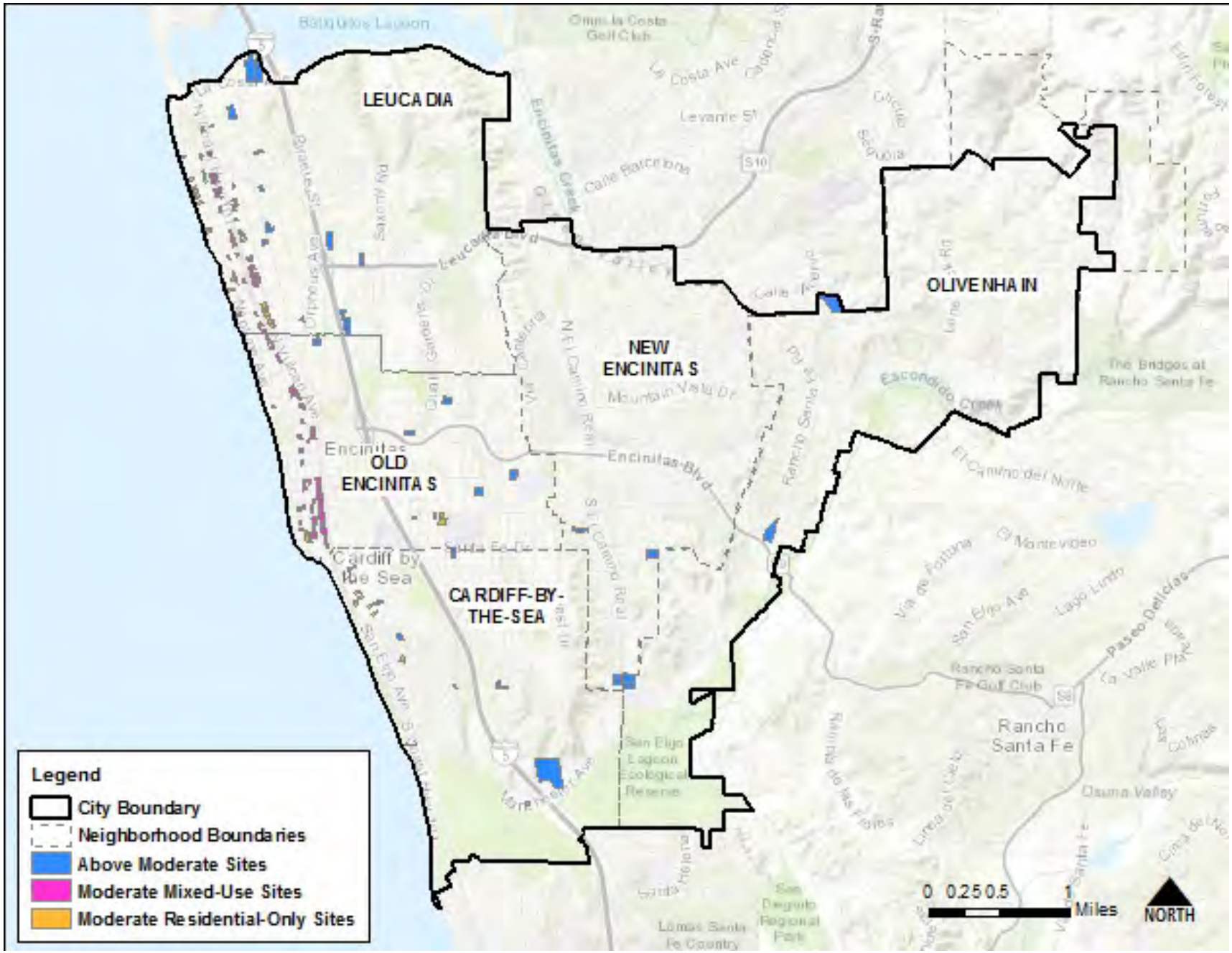
The recycling or reuse of existing developed sites has been a very successful means to accommodate growth in areas previously thought to be unavailable for growth. Table C-2 shows the listing of sites that have transitioned from commercial to residential of mixed use during the planning period.

Table C-2:
Infill Development Examples in RHNA Planning Period

Address	Acreage	Units	Comments
960 COAST HIGHWAY 101	0.18 ac	4	Condo units over retail
687 COAST HIGHWAY 101	1.39 ac	47	Large scale mixed use development
674 COAST HIGHWAY 101	0.09 ac	1	Small lot infill residential over commercial
686 COAST HIGHWAY 101	0.18 ac	1	Small lot infill residential over commercial
402 SECOND STREET	0.11 ac	2	Consolidation of three small lots for infill residential
207 C STREET	0.43 ac	1	Change from commercial to residential over retail – Rhino Arts
97 COAST HIGHWAY 101	0.18 ac	4	Four building mixed use development or commercial and residential
1202 COAST HIGHWAY 101	0.25 ac	3	Consolidation of four parcels into mixed use live/work units.
Total	2.84 ac	63 units	

Source: City of Encinitas Planning Department 2018

MAP OF MODERATE AND ABOVE MODERATE SITES



CALCULATION OF UNIT CAPACITY

The capacity of these sites was initially determined by multiplying the parcel size by the minimum or midrange density for that zoning designation.

In mixed-use areas (Downtown and North 101 Specific Plan Areas), only sites large enough to accommodate at least four dwelling units were included to identify those sites most likely to be redeveloped. The site capacity was then further reduced based on the likelihood of redevelopment, as described in Appendix B. In particular, only 50 percent of the capacity of the sites in the DCM-2, D-VSC and D-OM Zones of the Downtown Encinitas Specific Plan, as well as the N-CM1, N-CM2, N-CM3, N-CRM1, and N-CRM2 Zones of the North 101 Corridor Specific Plan, has been counted to recognize constraints posed by existing uses. Because redevelopment is most likely in the DCM-1 Zone, 75 percent of the capacity of the DCM- 1 Zone has been counted. These deductions have resulted in a very conservative estimate of the development potential of the mixed use area.

SELECTION OF SITES

The sites contained in this inventory of moderate and above-moderate income sites were previously presented to HCD as part of the Housing Element placed on the ballot as Measure T. This Appendix C contains a selection of those sites that are most likely to be developed. Sites have been removed that have already been developed, and those that could accommodate fewer than four units, in mixed use zones, or only one unit, in residential zones. The City has relied on the detailed analysis contained in the Measure T Element regarding the development potential of these sites.

WATER AND SEWER AVAILABILITY

As discussed in Appendix B, each site has been evaluated to ensure there is adequate access to water and sewer connections. Each site is situated adjacent to a public street that has the appropriate water and sewer mains and other infrastructure to service the candidate site.

Moderate Income Sites - Mixed Use										
APN	Address	Community	GP Land Use	Zoning	Parcel Size (AC)	Maximum Density	Minimum or Midrange Density	Unit Capacity	Description (Existing Use)	Parcel Specific Comments
2580360900	335 S Coast Highway 101	Old Encinitas	GC	D-CM1	0.81	n.a.	15	12	Commercial	Existing commercial center with 1 and 2-story structures with multiple tentants and large surface parking lot.
2580361700	345 S Coast Highway 101 Q	Old Encinitas	GC	D-CM1	0.33	n.a.	15	4	Commercial	Multiple two-story commercial structures with multiple tenants.
2580361800	345 S Coast Highway 101 O2	Old Encinitas	GC	D-CM1	0.47	n.a.	15	7	Commercial	Parking associated with commercial uses on parcel 2580361800.
2581901300	1031 S Coast Highway 101	Old Encinitas	GC	D-CM1	0.82	n.a.	15	12	Commercial	Older 1-story commercial building part of a larger commercial center with adjacent surface parking. Multiple tenants.
2581901400	967 S Coast Highway 101 B102	Old Encinitas	GC	D-CM1	0.88	n.a.	15	13	Commercial	Older 1-story commercial building part of a larger commercial center with adjacent surface parking. Multiple tenants.
2581901500	927 S Coast Highway 101	Old Encinitas	GC	D-CM1	1.01	n.a.	15	15	Commercial	Multiple older 1 and 2-story commercial buildings part of a larger commercial center. Multiple tenants.
2581901600	897 S Coast Highway 101 F103	Old Encinitas	GC	D-CM1	0.92	n.a.	15	13	Commercial	Older 1-story commercial building part of a larger commercial center with adjacent surface parking. Multiple tenants.
2581901700	851 S Coast Highway 101	Old Encinitas	GC	D-CM1	0.55	n.a.	15	8	Commercial	Older 1-story commercial building part of a larger commercial center with adjacent surface parking. Multiple tenants.
2581901800	765 S Coast Highway 101 106	Old Encinitas	GC	D-CM1	0.89	n.a.	15	13	Commercial	Older 1-story commercial building part of a larger commercial center with adjacent surface parking. Multiple tenants.
2581901900	745 S Coast Highway 101	Old Encinitas	GC	D-CM1	0.9	n.a.	15	13	Commercial	Older 1-story commercial building part of a larger commercial center with adjacent surface parking. Multiple tenants.
2581902000	725 S Coast Highway 101 C	Old Encinitas	GC	D-CM1	0.66	n.a.	15	9	Commercial	2-story commercial office buliding.
2583120900	1057 S Coast Highway 101	Old Encinitas	GC	D-CM1	0.63	n.a.	15	9	Commercial	Multiple 1-story commercial office buildings and used car sales lot with temporary structures.
2583121500	1205 S Coast Highway 101	Old Encinitas	GC	D-CM1	0.95	n.a.	15	14	Commercial	Multiple small 1 and 2-story commercial buildings and large surface parking lot.
2583121600	1105 S Coast Highway 101	Old Encinitas	GC	D-CM1	1.15	n.a.	15	17	Commercial	Multiple renovated 1 and 2-story commercial buildings and large surface parking lot.
2583170500	1055 Second St	Old Encinitas	GC	D-CM1	0.28	n.a.	15	4	Commercial	Existing surface parking lot
2583170800	1010 S Coast Highway 101 101	Old Encinitas	GC	D-CM1	1.02	n.a.	15	15	Commercial	Large 2-story commercial/office/restaurant structure with rear parking and multiple tenants.
2580850500	200 W D St	Old Encinitas	GC	D-CM2	0.46	25	15	6	Commercial	Multiple older 1-story commercial (converted residential) structures and adjacent surface parking lot.
2580862000	580 Second St	Old Encinitas	GC	D-CM2	0.35	25	15	5	Commercial	2-story office building with surface lot and small 2-story residential structure.
2581631000	751 Second St	Old Encinitas	GC	D-CM2	0.46	25	15	6	Commercial/Office	Older 2-story office buliding with surface parking lot, single tenant.
2581641700	700 Second St C	Old Encinitas	GC	D-CM2	0.34	25	15	5	Commercial/Office	Older 2-story office buliding with surface parking lot.

Moderate Income Sites - Mixed Use										
APN	Address	Community	GP Land Use	Zoning	Parcel Size (AC)	Maximum Density	Minimum or Midrange Density	Unit Capacity	Description (Existing Use)	Parcel Specific Comments
2581641900	750 Second St 101	Old Encinitas	GC	D-CM2	0.59	25	15	8	Commercial/Office	1-story commercial/office structure with underground parking and rear surface parking row.
2581821700	901 Second St A	Old Encinitas	GC	D-CM2	0.34	25	15	5	Recreation/Commercial	2-story residential/office mixed-use structures and 1-story autobody parking garage.
2582941100	1130 Second St	Old Encinitas	GC	D-CM2	0.34	25	15	5	Commercial	2-story office structure with adjacent surface parking lot.
2583161700	1133 Second St C	Old Encinitas	GC	D-CM2	0.7	25	15	10	Commercial	Older 2-story large office building with adjacent surface parking lot.
2580521200	364 Second St 4	Old Encinitas	VSC	D-VCM	0.67	n.a	15	10	Commercial/Office	Existing 2-story office building and adjacent parking row.
2542922300	1076 N Coast Highway 101 101	Leucadia	GC	N-CM1	0.73	25	15	10	Commercial	Existing 2-story hotel structure with on-site surface parking lot.
2543030300	1002 N Coast Highway 101 5	Leucadia	GC	N-CM1	0.27	25	15	4	Commercial	Existing 1-story buildings in a strip commercial center.
2543242900	120 Leucadia Blvd	Leucadia	GC	N-CM1	0.4	25	15	6	Commercial	Existing 1-story buildings in a small commercial center.
2543243000	102 Leucadia Blvd	Leucadia	GC	N-CM1	0.47	25	15	7	Commercial	Existing 1-story buildings in a small commercial center.
2560141100	828 N Coast Highway 101 D	Leucadia	GC	N-CM1	0.35	25	15	5	Commercial	Existing 2-story building in a small commercial center with limited parking.
2560303700	101 Leucadia Blvd	Leucadia	GC	N-CM1	0.37	25	15	5	Commercial	Existing 1-story building in a small commercial center.
2560813600	542 N Coast Highway 101 B	Leucadia	GC	N-CM1	0.32	25	15	4	Commercial/Office	Existing 1-story commercial building with rear surface parking lot.
2560813700	560 N Coast Highway 101 8	Leucadia	GC	N-CM1	0.37	25	15	5	Commercial/Office	Existing 1-story commercial center with rear surface parking lot.
2560822600	616 N Coast Highway 101	Leucadia	GC	N-CM1	0.34	25	15	5	Commercial	Existing 2-story school building with small surface parking lot.
2560831700	510 N Coast Highway 101	Leucadia	GC	N-CM1	0.33	25	15	4	Commercial	Existing 2-story restaurant/commercial building with small rear alley and surface parking lot.
2562721100	434 N Coast Highway 101	Old Encinitas	GC	N-CM1	0.27	25	15	4	Commercial	Existing 1-story commercial buildings with surface parking lot.
2562721400	466 N Coast Highway 101 4	Old Encinitas	GC	N-CM1	0.52	25	15	7	Commercial	Existing 1-story commercial center with surface parking lot.
2562721500	410 N Coast Highway 101	Old Encinitas	GC	N-CM1	0.53	25	15	7	Commercial	Existing 2-story hotel with small surface parking lot and ground level pool adjacent to the street.
2562910300	374 N Coast Highway 101 C	Old Encinitas	GC	N-CM1	0.64	25	15	9	Commercial/Office	Existing 1-story office building with adjacent surface parking lot.
2563920300	204 N Coast Highway 101	Old Encinitas	GC	N-CM2	0.56	25	15	8	Commercial	Existing 1-story automobile repair use buildings with surface parking lot.
2563920400	161 Melrose Ave D	Old Encinitas	GC	N-CM2	0.68	25	15	10	Commercial	Existing 1-story commercial center with surface parking lot.
2563920600	158 N Coast Highway 101	Old Encinitas	GC	N-CM2	0.47	25	15	7	Commercial	Older existing 1-story restaurant with adjacent surface parking lot.

Moderate Income Sites - Mixed Use										
APN	Address	Community	GP Land Use	Zoning	Parcel Size (AC)	Maximum Density	Minimum or Midrange Density	Unit Capacity	Description (Existing Use)	Parcel Specific Comments
2563921000	140 Hwy 101	Old Encinitas	GC	N-CM2	0.55	25	15	8	Commercial	Existing 1-story commercial building for auto sales and warehouse structures for auto repair with surface parking lot.
2563921100	186 N Coast Highway 101	Old Encinitas	GC	N-CM2	0.42	25	15	6	Commercial	Existing 2-story hotel with minimal ground level parking.
2563921200	184 N Coast Highway 101	Old Encinitas	GC	N-CM2	0.5	25	15	7	Commercial	Existing 1-story commercial buildings with surface parking lot.
2580320800	140 N Coast Highway 101 C	Old Encinitas	GC	N-CM2	0.51	25	15	7	Commercial	Small 1-story commercial building on a large lot with warehouse structures for auto repair and surface parking.
2580341900	233 Second St	Old Encinitas	GC	N-CM3	0.37	25	15	5	Commercial	3-story motel structure on a small parcel with steep slopes and a surface parking lot.
2540545300	1528 N Coast Highway 101	Leucadia	GC	N-CRM1	0.49	25	15	7	Vacant Commercial Uses	Vacant lot with temporary agricultural uses.
2540545500	1508 N Coast Highway 101	Leucadia	GC	N-CRM1	0.72	25	15	10	Commercial	Multiple 1-story buildings relating to autobody uses and existing parking/service lot.
2540546400	1542 N Coast Highway 101	Leucadia	GC	N-CRM1	0.67	25	15	10	Commercial	Existing 1-story commercial uses and on-site parking lot.
2540546600	1468 N Coast Highway 101	Leucadia	GC	N-CRM1	0.37	25	15	5	Commercial	Existing 1-story commercial uses and on-site parking lot.
2540547700	1444 N Coast Highway 101	Leucadia	GC	N-CRM1	0.83	25	15	12	Commercial	Existing 2-story hotel structure with on-site surface parking lot.
2542212300	1410 N Coast Highway 101 C	Leucadia	GC	N-CRM1	0.69	25	15	10	Commercial	Small lot with existing 1-story commercial uses and on-site parking lot.
2542421300	1114 N Coast Highway 101 1	Leucadia	GC	N-CRM1	0.49	25	15	7	Commercial	Existing 1-story buildings in a strip commercial center.
2560301900	775 N Vulcan Ave	Leucadia	GC	N-CRM2	0.39	15	15	4	Commercial	2 small 1-story structures and a small surface parking lot.
2560302100	807 N Vulcan Ave	Leucadia	GC	N-CRM2	0.81	15	15	9	Commercial	Existing 1-story commercial buildings and a single-family residence adjacent to the street.
2560302200	835 N Vulcan Ave B	Leucadia	GC	N-CRM2	0.66	15	15	7	Commercial	Existing 1-story commercial uses and on-site parking lot.
2560303600	847 N Vulcan Ave	Leucadia	GC	N-CRM2	0.74	15	15	8	Commercial	Existing 1-story commercial uses and on-site parking lot.

Moderate Income Sites - Residential Only										
APN	Address	Community	GP Land Use	Zoning	Parcel Size (AC)	Maximum Density	Minimum or Midrange Density	Unit Capacity	Description (Existing Use)	Parcel Specific Comments
2540211900	150 Grandview St	Leucadia	R11	R11	0.29	11	9.5	2	Single-Family Residential	Single-family residence, large lot.
2540402000	1472 Neptune Ave	Leucadia	R11	R11	0.32	11	9.5	2	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2542100200	1448 Neptune Ave	Leucadia	R11	R11	0.33	11	9.5	2	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2542100300	1444 Neptune Ave	Leucadia	R11	R11	0.35	11	9.5	2	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2542211800	1415 Coop St	Leucadia	R11	R11	0.27	11	9.5	2	Single-Family Residential	Single-family residence, large lot.
2542411400	1200 Neptune Ave	Leucadia	R11	R11	0.37	11	9.5	2	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2543020700	180 Jasper St	Leucadia	R11	R11	0.3	11	9.5	2	Single-Family Residential	Single-family residence.
2560120600	819 Neptune Ave	Leucadia	R11	R11	0.31	11	9.5	2	Single-Family Residential	Single-family residence, large lot.
2580232200	104 Fifth St	Old Encinitas	R11	R11	0.28	11	9.5	2	Single-Family Residential	Single-family residence.
2582710400	1031 Regal Rd	Old Encinitas	R11	R11	0.32	11	9.5	2	Single-Family Residential	Single-family residence with rear unit.
2582735000	633 Melba Rd	Old Encinitas	R11	R11	0.33	11	9.5	2	Single-Family Residential	Duplex on large lot.
2604141400	471 Chesterfield Dr	Cardiff-by-the-Sea	R11	R11	0.29	11	9.5	2	Single-Family Residential	Single-family residence, large lot.
2606201500	1345 San Elijo Ave	Cardiff-by-the-Sea	R11	R11	0.27	11	9.5	2	Single-Family Residential	Single-family residence, narrow long lot.
2606203300	1388 Summit Ave	Cardiff-by-the-Sea	R11	R11	0.27	11	9.5	2	Single-Family Residential	Single-family residence, narrow long lot.
2606300600	1511 San Elijo Ave	Cardiff-by-the-Sea	R11	R11	0.29	11	9.5	2	Single-Family Residential	Single-family residence, large lot.
2606300700	1525 San Elijo Ave	Cardiff-by-the-Sea	R11	R11	0.3	11	9.5	2	Single-Family Residential	Single-family residence, large lot.
2540400100	1692 Neptune Ave	Leucadia	R11	R11	0.4	11	9.5	3	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2540401300	1550 Neptune Ave	Leucadia	R11	R11	0.44	11	9.5	3	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2540402500	1488 Neptune Ave	Leucadia	R11	R11	0.41	11	9.5	3	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2540546200	167 Edgeburt Dr	Leucadia	R11	R11	0.36	11	9.5	3	Single-Family Residential	Single-family residence, large lot.
2542100100	1470 Neptune Ave	Leucadia	R11	R11	0.31	11	9.5	3	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2542103200	1210 Neptune Ave	Leucadia	R11	R11	0.34	11	9.5	3	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2542221300	132 W Jason St	Leucadia	R11	R11	0.41	11	9.5	3	Single-Family Residential	Single-family residence, large lot.
2560120800	168 Europa St	Leucadia	R11	R11	0.38	11	9.5	3	Single-Family Residential	Single-family residence, large narrow lot.
2560121600	153 W Leucadia Blvd	Leucadia	R11	R11	0.35	11	9.5	3	Vacant	Large vacant parcel adjacent to parcel 2560120800.
2560511800	652 Neptune Ave	Leucadia	R11	R11	0.39	11	9.5	3	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2582740100	661 Melba Rd	Old Encinitas	R11	R11	0.44	11	9.5	3	Residential	Single-family residence, large lot.
2600830600	1535 Summit Ave	Cardiff-by-the-Sea	R11	R11	0.41	11	9.5	3	Single-Family Residential	Single-family residence, large lot.
2600831100	1605 Summit Ave	Cardiff-by-the-Sea	R11	R11	0.41	11	9.5	3	Single-Family Residential	Single-family residence, large lot.
2606202700	1452 Summit Ave	Cardiff-by-the-Sea	R11	R11	0.43	11	9.5	3	Single-Family Residential	Single-family residence, large lot.
2606300300	1480 Summit Ave	Cardiff-by-the-Sea	R11	R11	0.45	11	9.5	3	Single-Family Residential	Single-family residence, large lot.
2540302200	159 Avocado St	Leucadia	R11	R11	0.49	11	9.5	4	Single-Family Residential	Vacant lot used for a community garden with temporary structures.
2542100600	1410 Neptune Ave	Leucadia	R11	R11	0.46	11	9.5	4	Single-Family Residential	Single-family residence, large lot, beach adjacent.
2603511300	225 Mozart Ave	Cardiff-by-the-Sea	R11	R11	0.66	11	9.5	5	Single-Family Residential	Single-family resicence, large lot.

Moderate Income Sites - Residential Only										
APN	Address	Community	GP Land Use	Zoning	Parcel Size (AC)	Maximum Density	Minimum or Midrange Density	Unit Capacity	Description (Existing Use)	Parcel Specific Comments
2606200700	1310 Summit Ave	Cardiff-by-the-Sea	R11	R11	0.65	11	9.5	5	Single-Family Residential	2-story single-family home on a large lot.
2612003300	2959 Manchester Ave	Cardiff-by-the-Sea	R11	R11	0.65	11	9.5	5	Storage Yard	1-story commercial building with temporary structures and a surface parking lot.
2560211800	788 Neptune Ave	Leucadia	R11	R11	0.69	11	9.5	6	Single-Family Residential	Single-family residence on a large lot adjacent to the beach.
2582742500	1025 Arcadia Rd	Old Encinitas	R11	R11	1.2	11	9.5	10	Single-Family Residential	Two single-story detached houses on a large lot.
2561004100	625 N Vulcan Ave	Leucadia	R15	N-R15	0.24	15	12	2	Industrial/Residential	Single-story commercial office building and surface parking lot.
2561004300	615 N Vulcan Ave	Leucadia	R15	N-R15	0.22	15	12	2	Industrial/Residential	Single-story commercial office building and surface parking lot.
2560900600	571 N Vulcan Ave	Leucadia	R15	N-R15	0.25	15	12	3	Industrial/Residential	Single-story commercial office building and surface parking lot.
2561000900	607 N Vulcan Ave B	Leucadia	R15	N-R15	0.36	15	12	4	Industrial/Residential	Single-story commercial structure with auto repair garages in rear.
2560900700	555 N Vulcan Ave	Leucadia	R15	N-R15	0.58	15	12	6	Industrial/Residential	Single-story commercial office building and surface parking lot.
2560901700	577 N Vulcan Ave	Leucadia	R15	N-R15	1.09	15	12	13	Industrial/Residential	Single-story commercial office uses with large surface parking lot.
2581720100	906 Third St	Old Encinitas	R25	D-R25	0.11	25	20	2	Single-Family Residential	Single-family residence, small lot.
2581720200	912 Third St	Old Encinitas	R25	D-R25	0.11	25	20	2	Single-Family Residential	Single-family residence, small lot.
2581720500	926 Third St	Old Encinitas	R25	D-R25	0.12	25	20	2	Single-Family Residential	Single-family residence, small lot.
2581831400	917 Third St	Old Encinitas	R25	D-R25	0.12	25	20	2	Residential/Commercial	Single-family residence, small lot.
2581831600	225 W H St	Old Encinitas	R25	D-R25	0.12	25	20	2	Residential/Commercial	Single-family residence, small lot.
2582920900	1058 Third St	Old Encinitas	R25	D-R25	0.11	25	20	2	Single-Family Residential	Single-family residence, small lot.
2582921300	1026 Third St	Old Encinitas	R25	D-R25	0.11	25	20	2	Single-Family Residential	Single-family residence, small lot.
2582921500	1010 Third St	Old Encinitas	R25	D-R25	0.11	25	20	2	Single-Family Residential	Single-story single-family residence.
2542533400	1223 N Vulcan Ave	Leucadia	R25	N-R20	0.15	25	15	3	Single-Family Residential	Single-family resicence, small lot.
2582941300	1111 Third St	Old Encinitas	R25	D-R25	0.23	25	20	4	Vacant	Vacant besides an old standalone garage located on the alley.
2542544800	1325 N Vulcan Ave	Leucadia	R25	N-R20	0.2	25	15	4	Single-Family Residential	1-story single-family home with rear detached garage.
2543243500	979 N Vulcan Ave	Leucadia	R25	N-R20	0.21	25	15	4	Single-Family Residential	1-story single-family home with rear detached garage.
2540531700	145 Sanford St	Leucadia	R25	N-R20	0.26	25	15	5	Single-Family Residential	Single-family resident with rear garage/unit.
2542532700	1105 N Vulcan Ave	Leucadia	R25	N-R20	0.25	25	15	5	Single-Family Residential	Single story residence, small lot.
2542541100	1379 N Vulcan Ave	Leucadia	R25	N-R20	0.25	25	15	5	Single-Family Residential	Single story residence, small lot.
2542544100	1305 N Vulcan Ave	Leucadia	R25	N-R20	0.27	25	15	5	Single-Family Residential	Single-family home plus additional unit.
2543244600	1077 N Vulcan Ave	Leucadia	R25	N-R20	0.29	25	15	5	Residential	Two single-story detached houses on a small lot.
2543244700	1093 N Vulcan Ave D	Leucadia	R25	N-R20	0.29	25	15	5	Single-Family Residential	Duplex on small lot.
2543245700	961 N Vulcan Ave	Leucadia	R25	N-R20	0.28	25	15	5	Single-Family Residential	Single story residence, small lot.
2543243300	951 N Vulcan Ave F	Leucadia	R25	N-R20	0.38	25	15	7	Residential	Converted single-family residential structure for commercial uses with rear parking lot.
2542540900	1337 N Vulcan Ave	Leucadia	R25	N-R20	0.42	25	15	8	Single-Family Residential	Converted single-family residential structure for commercial uses with rear parking lot.
2543244300	1063 N Vulcan Ave	Leucadia	R25	N-R20	0.41	25	15	8	Single-Family Residential	2-story duplex on a large lot.

Moderate Income Sites - Residential Only										
APN	Address	Community	GP Land Use	Zoning	Parcel Size (AC)	Maximum Density	Minimum or Midrange Density	Unit Capacity	Description (Existing Use)	Parcel Specific Comments
2582941700	1136 Second St 5	Old Encinitas	R25	D-R25	0.55	25	20	11	Commercial	Parcel includes three vacant areas, three single-family homes, and a 12 unit apartment complex with an alley dividing the parcel.

Above Moderate Income Sites										
APN	Address	Community	GP Land Use	Zoning	Parcel Size (AC)	Maximum Density	Minimum or Midrange Density	Unit Capacity	Description (Existing Use)	Parcel Specific Comments
2160301000	514 La Costa Ave A	Leucadia	R3	R3	4.99	3	2.5	11	Nursery/Greenhouse	Large agricultural farmland.
2160304600	512 La Costa Ave	Leucadia	R3	R3	8.58	3	2.5	20	Nursery/Greenhouse	Large agricultural farmland.
2160530700	241 Andrew Ave	Leucadia	R3	R3	3.07	3	2.5	7	Greenhouse/Single-Family Residential	Single story single-family home, greenhouses.
2542700700	695 Normandy Rd	Leucadia	R3	R3	2.66	3	2.5	6	Nursery/Greenhouse	Large parcel with greenhouse temporary structures.
2543621400	782 Leucadia Blvd	Leucadia	R3	R3	2.07	3	2.5	4	Nursery/Greenhouse	Large parcel with greenhouse temporary structures.
2561712400	556 Union St	Leucadia	R3	R3	2.98	3	2.5	7	Greenhouse/Single-Family Residential	Large parcel with agricricultural uses and temporary greenhouse structures
2563144800	351 Union St	Old Encinitas	R3	R3	1.95	3	2.5	4	Vacant/Single-Family Residential	Large parcel with agricricultural uses and temporary greenhouse structures
2570203100	749 Mays Hollow Ln	Old Encinitas	R3	R3	1.73	3	2.5	4	Vacant/Single-Family Residential	Single-family residence on a large lot.
2583502800	754 Bonita Dr A	Old Encinitas	R3	R3	2.3	3	2.5	5	Single-Family Residential	Single-family residence on a large lot.
2593111000	690 Balour Dr	Old Encinitas	R3	R3	1.87	3	2.5	4	Vacant	Large lot with two small single-family detached residences.
2595607400	1083 Crest Dr	New Encinitas	R3	R3	1.92	3	2.5	4	Single-Family Residential	Multiple single-family residences and potential commercial structures.
2620621300	3615 Manchester Ave	Olivenhain	R3	R3	2.17	3	2.5	5	Single-Family Residential	Large lot with single story SFD with a few shed-like structures.
2620621400	1935 S El Camino Real	Olivenhain	R3	R3	2.85	3	2.5	6	Single-Family Residential	Small single-family residence on a large lot.
2621602700	1920 S El Camino Real	New Encinitas	R3	R3	2.09	3	2.5	5	Residential/Commercial	Two small single-family residence on a large lot.
2561711500	662 Clark Ave	Leucadia	R5	R5	1.43	5	4	5	Residential	Large triangle shaped parcel with small buildings and surface parking lot.
2581111700	141 Quail Dr	Old Encinitas	R5	R5	1.07	5	4	4	Single-Family Residential	Single-family residence on a large lot.
2620510900	515 Cerro St	New Encinitas	R5	R5	3.02	5	4	12	Greenhouse/Single-Family Residential	Large lot with two single-family structures and vacant land.
2541020400	299 Hillcrest Dr	Leucadia	R8	R8	0.84	8	6.5	5	Single-Family Residential	Single story single-family home, some sheds, three mobile-home/trailer buildings, one concrete basketball half-court.
2541126100	1375 Hygeia Ave	Leucadia	R8	R8	0.63	8	6.5	4	Single-Family Residential	Interior lot, single story single-family home with carriage unit.
2542624700	1095 Hygeia Ave	Leucadia	R8	R8	1.69	8	6.5	10	Single-Family Residential	Single-family residence on a large lot.
2543250500	1044 Hygeia Ave	Leucadia	R8	R8	0.84	8	6.5	5	Single-Family Residential	Large mostly empty lot with small single-family residence.
2562513000	505 Hygeia Ave	Leucadia	R8	R8	0.69	8	6.5	4	Single-Family Residential	Single-family residence on a large lot.
2600835800	1500 Rubenstein Ave	Cardiff-by-the-Sea	R8	R8	0.78	8	6.5	4	Single-Family Residential	Single-family residence on a large lot.
2601310200	735 Santa Fe Dr	Cardiff-by-the-Sea	R8	R8	1.2	8	6.5	7	Single-Family Residential	Small commercial structure on a large, mostly vacant lot with temporary parking.
2602730100	1745 Rubenstein Dr	Cardiff-by-the-Sea	R8	R8	0.87	8	6.5	5	Single-Family Residential	Single-family residence on a large lot.
2605730700	1005 Hurstdale Ave	Cardiff-by-the-Sea	R8	R8	0.67	8	6.5	4	Single-Family Residential	Single-family residence on a large lot.
2605731300	1974 Freda Ln	Cardiff-by-the-Sea	R8	R8	0.65	8	6.5	4	Single-Family Residential	Single-family residence on a large lot.
2592215700	105 S Rancho Santa Fe Rd	Olivenhain	RR2	RR2	5.06	2	1.5	5	Residential	Large vacant parcel across Rancho Santa Fe Road one of the low-income category designated sites.
2640102700	1335 Desert Rose Way	Olivenhain	RR2	RR2	7.99	2	1.5	7	Greenhouse/Single-Family Residential	Vacant lot with temporary structures related to agricultural/farming uses and the raising of animals.

Approved Units Without Building Permits								
Case	Address	APN	GP Land Use	Zoning	Parcel Size (AC)	Units Approved	Income Category	Single-family (SFR) or Multi-family (MFR)
13-056	825 & 837 Orpheus Ave	256-121-03-06	Residential 3	R3	1.88	4	Above Moderate	SFR
13-187	348 Fulvia, 356 Fulvia, 374 Fulvia, 378 Fulvia, 386 Fulvia	257-331-24	Residential 3	R3	2.25	9	1 - Very Low 8 - Above Moderate	SFR
13-241	1234 Orpheus Ave	254-382-04	Residential 3	R3	9,600 SF	1	Above Moderate	Accessory Unit
13-096	432 Sheffield	260-281-29	Residential 8	R8	6,263 SF	1	Above Moderate	SFR
14-172 TPM/CDP	710 Wood Dr	254-413-18-00		RR2	1.24	2		SFR
14-209 TPM/CDP	1386 Tennis Club Dr	262-080-17-00	Residential 3	R3	1.01	1		SFR
14-256 TPM/CDP	none	262-080-16-00	Residential 3	R3	2.05	2		SFR
14-007 TPM/CDP	1255 Berryman Cyn	262-080-36-00	Residential 3	R3	1.99	3		SFR
	1259 Berryman Cyn	262-080-37-00	Residential 3	R3				SFR
	1267 Berryman Cyn	262-080-39-00	Residential 3	R3				SFR
14-069 TPM	782 Leucadia Blvd	254-362-13/14/45	Residential 3	R3	3.09	13	1- Very Low 12 - Above Moderate	13 Lot Subdivision
14-111 TM/DR	1412 Mackinnon	260-580-29-00	Residential 5	R5	1.25	8	1 - Very Low 7- Above Moderate	8 Lot Subdivision
	1416 Mackinnon	260-580-28-00	Residential 5	R5				SFR
	1420 Mackinnon	260-580-35	Residential 5	R5				SFR
	1424 mackinnon	260-580-34	Residential 5	R5				SFR
	1428 Mackinnon	260-580-33	Residential 5	R5				SFR
	1432 Mackinnon	260-580-32	Residential 5	R5				SFR
	1436 mackinnon	260-580-31	Residential 5	R5				SFR
	1440 mackinnon	260-580-30	Residential 5	R5				SFR
14-168 DR/PMW	2176 glasgow av	260-412-19	Residential 11	R11	0.34	4	Above Moderate	2 Twin Homes, 1 SFR
	2180 glasgow	260-412-19	Residential 11	R11				SFR
	2184 glasgow	260-412-19	Residential 11	R11				SFR
	2188 glasgow	260-412-17	Residential 11	R11				SFR
14-275 CDP/PMW	444 Neptune ave	256-282-21-00	Residential 8	R8	0.24	1	Above Moderate	SFR
15-064	710 and 712 Clark Avenue	256-122-45, 46, 48, 49, 53	Residential 5	R5	2.65	1	Very Low	SFR
15-064	710 and 712 Clark Avenue	256-122-45, 46, 48, 49, 53	Residential 5	R5		1	Above Moderate	SFR
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15-133	1268 Berryman Canyon	260-080-34	Residential 3	R3	7.08	1	Above Moderate	SFR
15-133	1272 Berryman Canyon	260-080-35	Residential 3	R3		2	Above Moderate	SFR
15-134	1441 Enclave Court	262-081-11	Residential 3	R3	4.23	1	Above Moderate	SFR

Approved Units Without Building Permits								
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15-179	1255 Berryman Canyon	260-080-36	Residential 3	R3		2	Above Moderate	SFR
15-179	1259 Berryman Canyon	260-080-37	Residential 3	R3	1.99	2	Above Moderate	SFR
15-179	1267 Berryman Canyon	262-080-39	Residential 3	R3		2	Above Moderate	SFR
16-316	437 Fulvia St.	256-252-08-00	Residential 3	R3	22,507 SF	2	Above Moderate	SFR W/ADU
16-281	472 Arroyo Dr.	256-420-55-00	Residential 3	R3	19,457 SF	1	Above Moderate	SFR
16-235	233/239 Fourth St	258-053-10-00	Residential 15	R15	5,019 SF	2	Above Moderate	MFR
16-211	710 Requeza St.	258-141-36-00	Residential 3	R3	4.60	13	1 Very Low 12 Above Moderate	SFR
16-184	1229 Rubenstein Av.	260-072-36-00	Residential 3	R3	14,375 SF	2	Above Moderate	SFR W/ADU
16-164	2549/2551 Montgomery Av.	261-145-16-00	Residential 11	R11	8,062 SF	1	Above Moderate	SFR
16-161	2464 Manchester Av.	261-103-27-00	Residential 11	R11	5,007 SF	1	Above Moderate	SFR
16-156	956/960/964/968 Urania Av.	254-363-10-00	Residential 3	R3	N/A	3	Above Moderate	SFR
16-120	1459 Bella Azul Ct.	216-122-48-00	Rural Residential 1	RR1	6.39	1	Above Moderate	SFR
16-62	100/104 Fifth St	258-023-21-00	Residential 11	R11	16,053 SF	1	Above Moderate	SFR
16-09	767 Munevar Rd.	260-141-09-00	Residential 8	R8	7,001 SF	1	Above Moderate	ADU
17-163	184,185,188,189 Pacific View Lane	258-111-42, 43, 44, &45			60,984 SF	4	Above Moderate	SFR
17-152	1569 Lorraine Drive	254-030-27			8,287 SF	1	Above Moderate	ACCESSORY
17-147	535 Fourth St/545 Fourth St	258-072-20, 19			5,029 SF	1	Above Moderate	SFR
17-121	889 CHANNEL ISLAND DR	256-440-71			21,662 SF	2	Above Moderate	SFR/ACCESSORY
17-109	367 LIVERPOOL DR	260-404-26			4,996 SF	1	Above Moderate	SFR
17-081	2329 & 2333 NEWCASTLE AVE	261-053, 06 &07			2,500 SF	2	Above Moderate	TWINHOME
17-016	630 OCEAN VIEW AVE	256-151-27			32,417 SF	1		SFR (existing SFR converted to accessory unit & one new SFR being built-only counted new SFR)

C.3 Approved Units Without Building Permits

Table C-3: Approved Units Without Building Permits

Case	Address	APN	GP Land Use	Zoning	Parcel Size (AC)	Units Approved	Income Category	Single-family (SFR) or Multi-family (MFR)
13-056	825 & 837 Orpheus Ave	256-121-03-06	Residential 3	R3	1.88	4	Above Moderate	SFR
13-187	348 Fulvia, 356 Fulvia, 374 Fulvia, 378 Fulvia, 386 Fulvia	257-331-24	Residential 3	R3	2.25	9	1 - Very Low 8 - Above Moderate	SFR
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14-007 TPM/CDP	1255 Berryman Cyn	262-080-36-00	Residential 3	R3	1.99	3		SFR
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17-147	535 Fourth St/545 Fourth St	258-072-20, 19			5,029 SF	1	Above Moderate	SFR
17-121	889 CHANNEL ISLAND DR	256-440-71			21,662 SF	2	Above Moderate	SFR/ACCESSORY
17-109	367 LIVERPOOL DR	260-404-26			4,996 SF	1	Above Moderate	SFR
17-081	2329 & 2333 NEWCASTLE AVE	261-053, 06 &07			2,500 SF	2	Above Moderate	TWINHOME
17-016	630 OCEAN VIEW AVE	256-151-27			32,417 SF	1		SFR (existing SFR converted to accessory unit & one new SFR being built-only counted new SFR)

C.4 Letters of Interest From Property Owners for Very Low and Low-Income Candidate Sites

Saints Constantine and Helen Greek Orthodox Church

Metropolis of San Francisco

Cardiff by the Sea California

January 11, 2018

Ms. Diane Langager
Principal Planner, Housing Element
505 South Vulcan Avenue
Encinitas, CA 92024

Dear Ms. Langager;

We are so pleased to be a part of Affordable Housing Element in Encinitas. Saints Constantine and Helen Greek Orthodox Church has been committed to affordable housing for seniors for more than three decades. As you are aware we have 30 apartment units on our property, all of which fall under affordable housing guidelines. (I believe our rents are the lowest in the city). We consider these apartments and any future apartments to be a Ministry of our Church and are committed to serving the senior population of the community.

If the Affordable Housing Element is passed, we plan to build 40 to 50 senior housing units, all of which will be affordable housing. The apartments will be built on a portion of the undeveloped land on the church property. They will be built across the back portion of the land adjacent to the existing apartments and will be architecturally similar to the existing buildings. We are planning to start the building process as soon as feasible once the housing element passes.

Thank you for the opportunity to continue to serve the seniors in our community through offering affordable housing.

Sincerely,

Fr. Michael Sitaras
Pastor

Anne Panagakos
Parish Council President

Saints Constantine and Helen Greek Orthodox Church, 3459 Manchester Ave., Cardiff-by-the-Sea, CA, 92007
3459 Manchester Ave., Cardiff-by-the-Sea, CA, 92007 • Tel: (760) 942-0920 • Fax: (760) 942-3606
Email: office@stsconstantinehelen.com • Web: www.stsconstantinehelen.com

METROPOLIS OF SAN FRANCISCO

SAINTS CONSTANTINE AND HELEN GREEK ORTHODOX CHURCH

NEW LETTER OF INTEREST

May 3, 2018

Ms. Diane Langager
505 South Vulcan Avenue
Encinitas, CA

Dear Ms. Langager:

We at Saint Constantine and Helen Greek Orthodox Church are pleased to be considered as part of the City of Encinitas Affordable Housing Program. We have had affordable senior housing on the church property for over thirty years. Our 30 existing units and the units that we propose to build are and will be available for tenancy to the general public, there is not and will not be a religious or church membership requirement for tenancy.

Thank you for your kind attention.

Sincerely,

Anne Panagakos
President
Parish Council

3459 Manchester Avenue, Cardiff-by-the-Sea, CA 92007
Office: (760) 942-0920 ·Website: www.stsconstantinehelen.com

Brandi Lewis

From: Bo Havlik <bhavlik@lee-associates.com>
Sent: Monday, November 27, 2017 5:30 PM
To: Diane Langager
Cc: Bo Havlik; 'mrs.teresacannon@gmail.com'
Subject: CANNON PROPERTY : PIRAEUS / PLATO HOUSING ELEMENT SITE ANALYSIS
Attachments: ENCINITAS HOUSING ELEMENT SITE ANALYSIS.pdf

Diane:

This letter is to advise you that the Cannon Family desires to have their property referenced above considered in the Encinitas Housing Element Site Analysis for upzoning to 30 DU per the ongoing discussions with the City Planning Department.

This site is shown in the Leucadia -Vacant portion of the Site Analysis planning and is also known as APN 254-144-01 comprising approximately 6.93 acres.

Thank you for your time last week explaining these efforts / directions by the City of Encinitas.

We shall stay in touch and continue to follow the planning.

Best regards,

Bo Havlik
Real Estate Consultant
Cannon Family Properties

CC: Harrington Cannon

Bo Havlik
Principal
Lee & Associates | North San Diego County

C 858.335.3637
D 760.448.2454
O 760.929.9700
bhavlik@lee-associates.com

LEE & ASSOCIATES
COMMERCIAL REAL ESTATE SERVICES

Corporate ID 01096996 | License ID 00799087
1900 Wright Place | Suite 200
Carlsbad, CA 92008

FORGIVENESS….. MAN'S GREATEST NEED AND GOD'S GREATEST DEED.

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Leucadia - Vacant

- **Address:** Piraeus St
- **APN:** 2541440100
- **Zoning:** Rural Residential 2
- **Size:** 6.93 AC
- **Unit Yield:** 207 DU
- **Notes:**
  - Steep Topography

2017-12-16 Special Meeting Item 01 145 of 149

GEORGE KRIKORIAN

March 29, 2018

Ms. Diane S. Langager
Principal Planner
City of Encinitas
505 S. Vulcan Avenue
Encinitas, CA 92024

RE: Encinitas Blvd & Quail Gardens 4,92 AC vacant land, for Housing Element Review

Dear Diane,

We wanted to re-express our interest in moving forward with a multi-family residential development immediately upon a successful rezone from Office Professional Zone to a Residential Zone of R25-R30. Our interest is contingent upon the City of Encinitas finalizing development standards that adequately support this level of density. Currently, we do not believe that the current zoning limitations of two-stories and 30 foot height maximum will achieve this.

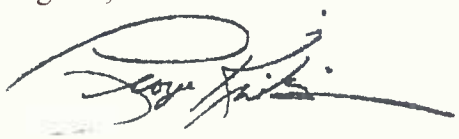
We would like to retain our right to develop under the current Office Professional Zone, as this will be the direction we will pursue In the event that acceptable development standards cannot be approved for the R25-R30 zone.

We believe this property should be moved to the "Vacant Land" category, as the current single family dwelling is uninhabitable and has been effectively boarded up and vacant for years. If it helps your cause, we will be willing to demolish the dwelling.

Please also be advised that we will plan on processing plans to develop the property soon after a successful rezone to Residential.

Please feel free to call me if you would like to set up a meeting to discuss this further or need further clarification regarding our intentions.

Best regards,



George Krikorian

2275 W. 190th Street, Suite 201 Torrance, CA 90504
Ph: 310.856.1270 www.kptmovies.com Fax: 310.856.1299

FENWAY
CAPITAL ADVISORS
Larry Jackel, Managing Partner
ljackel@fenwayca.com
674 Via de la Valle, Suite 310
Solana Beach, CA 92075
858.436.3600

April 12, 2018

Ms. Diane S. Langager
Principal Planner
City of Encinitas
505 S. Vulcan Avenue
Encinitas, CA 92024

RE: APNs 216-041-20 and -21 for Housing Element Review

Dear Diane:

As you know, we recently purchased the approved and entitled approximately 4 acres Encinitas Beach Resort hotel site at the north end of Leucadia (APN 216-041-26) as well as the adjacent approximately 3.5 acres (APNs 216-041-20 and -21) that are currently not part of the entitled project. As a follow-up to my January 4, 2018 message, regarding the adjacent 3.5 acres, I wanted to express our further interest in moving forward with a rezone from the current LVSC designation to NCRM-1, with the addition of the R-25-R-30 density which would allow for a mixed-use project on the site and allows the required standards for the Housing Element Plan.

As you may be aware, we are in the process of moving forward and commencing construction on the currently entitled project. We want to insure the City of Encinitas that development can begin on the adjacent parcels as soon as the zoning is approved, and plans are processed and approved.

Worth mentioning, is that the existing "Cabo Grill" building has been boarded up and fenced off. We plan to demolish this building upon commencing construction of the adjacent parcels.

Please feel free to call me if you would like to set up a meeting to discuss this further or need additional clarification regarding our intentions.

Best regards,

Larry Jackel

Diane Langager

From: Keith Harrison <keithharrison@sbcglobal.net>
Sent: Wednesday, April 04, 2018 4:08 PM
To: Diane Langager
Subject: Housing Element Update - Sage Canyon (site #AD1)

Diane,

I have entered into a purchase agreement to acquire the 5.23 acre vacant parcel of land located on El Camino Real just south of Sage Canyon Drive. The site is currently entitled for a residential subdivision consistent with the existing R-3 zoning. Please be advised that I would be interested in modifying the existing plans to create additional housing units should the City choose to increase the allowable density as part of the Housing Element Update.

Regards,

Keith Harrison

Diane Langager

From: Diane Langager
Sent: Thursday, March 01, 2018 6:01 PM
To: Nick.Chen@kimley-horn.com
Subject: FW: Quail Gardens Dr site
Attachments: RE: Quail Gardens Dr site

Fyi…

Diane S. Langager
Principal Planner
Development Services Department
505 South Vulcan Ave, Encinitas, CA 92024
(760) 633-2714 | dlangager@encinitasca.gov
www.encinitasca.gov

From: Maria Miller [mailto:mmiller@baldwinsons.com]
Sent: Thursday, March 01, 2018 5:27 PM
To: Diane Langager
Subject: RE: Quail Gardens Dr site

Hi Diane,

Yes, I'd like to confirm that we are interested in having this site considered for upzoning to higher density residential.

I sent you another email with a smaller file attachment. Please let me know if you have not received it.

Thank you,

Maria Miller, AICP
BALDWIN & SONS
610 West Ash, Suite 1500, San Diego, CA 92101
O: (619) 515-9114 | C: (619) 597-6350

From: Diane Langager [mailto:DLangager@encinitasca.gov]
Sent: Thursday, March 1, 2018 4:43 PM
To: Maria Miller <mmiller@baldwinsons.com>
Subject: RE: Quail Gardens Dr site

Maria: Our email can not accept emails 10MB or larger are you able to give a reduced copy of the TM.

Please confirm in writing that you are interested in having us consider the referenced property as part of the Housing Element Update in order to be upzoned to higher density residential.

Thanks.

Diane S. Langager
Principal Planner
Development Services Department
505 South Vulcan Ave, Encinitas, CA 92024
(760) 633-2714 | dlangager@encinitasca.gov
www.encinitasca.gov

From: Maria Miller [mailto:mmiller@baldwinsons.com]
Sent: Thursday, March 01, 2018 3:34 PM
To: Diane Langager
Subject: Quail Gardens Dr site

Hi Diane,

I've attached our draft TM for the site, it has the information about the property on the title sheet.

APNS are 258-130-80, 82, 86, 91, 93 & 94, and 257-020-36 & 37. Gross site acreage 11.9 ac., net 9.05 ac.

Let me know what else I need to provide.

Thank you,

Maria Miller, AICP
BALDWIN & SONS
610 West Ash, Suite 1500, San Diego, CA 92101
O: (619) 515-9114 | C: (619) 597-6350

20171-08 10A Handout

November 8, 2017

City of Encinitas
Attention: Planning Department
505 South Vulcan Avenue
Encinitas, CA 92024-3633

Re: Housing Element Update 2017 - APN's (259-231-28, 30, 31 & 32)

Dear Mayor and Council:

We are the owners of approximately 6.59 acres of land with the potential for 198 affordable senior citizen apartments built if the property is zoned consistent with the City's 2016 Housing Element Update. This property was analyzed by Staff based on extensive criteria as having the qualities necessary for it to be placed on the Environmentally Superior Map that was approved by the City Council last year.

These properties are contiguous, have all utilities to site, have gentle topography allowing maximum development, are mostly vacant (currently with only three homes over forty years old on 6.63 acres), are adjacent to commercial property, within a short walk to shopping, restaurants, mass transit and a pharmacy. Equally important is that these properties have access for ingress and egress to both Encinitas Blvd and Rancho Santa Fe Road thus minimizing traffic impacts on either of the Major Regional Collector Roads.

This letter is intended to clarify the record provided by City Staff and its consultants at the recent City Council Housing Element Subcommittee hearings. Our properties have the street addresses of 2220, 2228, and 2230 Encinitas Blvd. These properties should be classified as either "Almost vacant" or at the very least "Underutilized".

The County's tax assessor has determined that the land value comprises about 75% of the total property value clearly demonstrating that the property is mostly vacant. The Tax Assessor has determined that other properties identified in the Kimley Horn reports as "Almost vacant" have land value percentages as low as 19.76% and some of the properties identified as "Underutilized" have land value percentages of 77% and 85%. Clearly, the properties referenced herein should be included in the "Almost vacant" category.

The report prepared by Goldfarb Lipman, a consultant to the City, dated September 21, 2017 on page 4 that the City would have an advantage if it could rezone properties to meet "Fifty percent of the City's lower income RHNA" or 643 units. The document went on the state "Even with the most generous interpretation of site capacity ..."vacant" sites designated for lower income housing can accommodate only 525 units. It will therefore be

presumed that the existing uses on these sites impede additional residential development. To overcome this presumption, HCD will likely require evidence such as letter from owners showing an intent to redevelop the site..." This letter is just such a letter and **More Importantly**, the inclusion of these properties (excluding the one already included in the City's calculations) an additional 148 units can be constructed creating 673 housing units on "Vacant" and "Almost Vacant" sites and with letters from property owners showing intent, this letter. As a result, with just this one correction to the City's analysis the City will exceed the 50% threshold of 643 units by 5%.

To confirm, per the above and as we have represented to City Staff many times in the past, we have an agreement to develop our properties together and are focusing on the construction of an apartment community for Senior Citizens. Providing our Senior Citizens a classy place to retire with dignity, amenities and services is good for the Encinitas Community in many ways, including: a) Reduces the demand on City Services; b) Provides affordable housing to our longest residents; c) Allows our Senior Citizens and Grandparents to remain in their community with their loved ones and support network as they need us most; d) Provides more local affordable housing when the older homes vacated become available to new families, and e) Satisfies the laws requiring the provision of housing built at thirty homes per acre.

There is another issue to clear up. The Kimley Horn analysis of various sites for development presented to the Subcommittee on October 16th on page 38, attached, states that our sites have "Steep Topography" constraints. This is not accurate. In fact, topography was analyzed by the City in the adopted 2016 HEU EIR Vialble Housing Site ALT-4 stating "Some 10-25% slopes in sections of the property with 20% to 40% in others", attached. In fact, only about 10% of the property exceeds 25% in slope. The EIR also determined that slope was not factor that would eliminate sites from consideration even if it was extensive, which again it is not.
Please correct this erroneous representation.

Most importantly, the EIR included our property on the Environmentally Superior Alternative because "it focuses the change in land use to only one of the "four corners" of Olivenhain and supports the viability of the adjacent new mixed use site, O-3", which are the commercial properties between our property and Encinitas Blvd.

Please accept this letter as confirmation that we, the owners of this property, will redevelop the property immediately upon approval of the zoning necessary for such new community and that such project will have a minimal impact on views as determined by the Certified Environmental Impact Report prepared and approved by the City Council in 2016. Based upon this letter, the City and HCD must agree that these sites: a) are "Almost Vacant"; b) Have minimal slope impacts resulting in the property having a excellent development potential; and c) Have a realistic and demonstrated potential for redevelopment during the planning period for this Housing Element Update. Lastly, these

properties remain the "Least Environmentally Impactful" alternative for new housing in the City and allow for a balance of housing throughout the City's five Communities.

Sincerely,

David R. Gaffney

R. Randy Goodson

goldfarb lipman attorneys

1300 Clay Street, Eleventh Floor
Oakland, California 94612
510 836-6336

M David Kroot
Lynn Hutchins
Karen M. Tiedemann
Thomas H. Webber
Dianne Jackson McLean
Michelle D. Brewer
Jennifer K. Bell
Robert C. Mills
Isabel L. Brown
James T. Diamond, Jr.
Margaret F. Jung
Heather J. Gould
William F. DiCamillo
Amy DeVaudreuil
Barbara E. Kautz
Erica Williams Orcharton
Luis A. Rodriguez
Rafael Yaquián
Celia W. Lee
Dolores Bastian Dalton
Joshua J. Mason
L. Katrine Shelton
Eric S. Phillips
Elizabeth Klueck
Daniel S. Maroon
Justin D. Bigelow
Nahal Hamidi Adler

September 21, 2017

To

Encinitas City Council Housing Element Subcommittee

From

Barbara E. Kautz

RE

IMPACT OF STATE LEGISLATION ON ENCINITAS HOUSING ELEMENT

In this year's session of the California Legislature, a package of fifteen bills related to housing were passed and sent to Governor Jerry Brown for signature. The Governor has stated publicly that he will sign all fifteen bills. Two of the bills (AB 1397 and AB 879) directly affect the contents of local housing elements. A third bill (SB 166) may affect how many 'surplus' sites the City of Encinitas wishes to include in its Housing Element.

The bills will become effective January 1, 2018. The housing element requirements will then apply to Encinitas because the City's Housing Element has still not been adopted; other San Diego County cities must comply when they update their elements in 2020. Given the need for HCD review and the changes needed in the City's Element even under current law, the City cannot realistically adopt a Housing Element and place it on the ballot before January 1.

The major substantive changes will:

- Make it more difficult to designate non-vacant sites as housing sites; and
- Require more justification for the number of units shown as being accommodated on each site.

Because the majority of the sites shown for upzoning in the Measure T Housing Element were non-vacant sites, the City will likely need to designate additional vacant

San Francisco
415 788-6336
Los Angeles
213 627-6336
San Diego
619 239-6336
Goldfarb & Lipman LLP

sites for upzoning. Some of the non-vacant sites previously proposed for upzoning may also not be able to meet the new requirements.

This memo divides the new housing element requirements into: (1) substantive requirements related to designating adequate sites, and (2) additional required analysis. A copy of the bills showing the amendments is attached.

A. New Adequate Sites Requirements.

Background. Each city in California is required to identify enough suitable housing sites to meet its fair share of the region's housing need, which is quantified as the RHNA. (Gov't Code §65583(c).[1]) The RHNA is separated into an allocation for very low and low income housing, moderate income housing, and above moderate-income housing. The City's RHNA for the 2013-2021 Housing Element is as follows:

Income Category	RHNA (Housing Units)
Very Low and Low	1,286*
Moderate	413
Above Moderate	907

*Includes 253-unit carryover from 1998-2005 when City did not adopt a Housing Element.

The City's Housing Element must designate specific sites that can meet its RHNA in each of the three income categories: very low and low; moderate; and above moderate. (§ 65583.2.) In Encinitas, sites suitable for very low or low income housing must be zoned to allow at least 30 units per acre, unless the City can demonstrate that sites zoned at lower density are suitable or that affordable units have actually been constructed. (§§65583.2(c)(3)(A), (c)(3)(B)(iv).).

Measure T Sites. The City's existing zoning can accommodate its share of moderate-income and above moderate-income housing. Measure T proposed to provide sites suitable for lower income housing as follows:

Lower Income RHNA	1,286 Units
New Construction	47*
Accessory Dwelling Units (ADUs)	146**
Rezoned Sites (30 units/acre)	1,987
Total Units Accommodated	**2,180 Units**
Excess Units ("Buffer")	**894 Units**

*Lower income units constructed or approved through 12/31/12.
**Based on 271 new ADUs and 25 legally converted ADUs in 8-year planning period, 296 total; half assumed to be affordable to lower income households.

Almost all of the 200+ sites designated by Measure T to be rezoned to be suitable for lower income housing were non-vacant sites. In field work, Kimley-Horn identified

[1] All future references are to the Government Code unless otherwise stated.

Previously the City was required to justify the use of non-vacant sites by considering the extent to which existing uses might be an impediment to residential development, development trends, market conditions, and regulatory incentives. The City must now additionally analyze:

- The City's past experience with converting existing uses to higher densities;
- Current market demand for the existing use; and
- Any leases or other contracts that would perpetuate the existing use or prevent redevelopment for additional residential development. (Proposed §65583.2(g)(1).)

This will require substantial additional analysis of *all* non-vacant sites, *at all income levels.*

Additionally, if the City is relying on non-vacant sites to accommodate 50 percent or more of its housing need for lower income households, an "*existing use shall be presumed to impede additional residential development*, absent findings based on substantial evidence that the use is likely to be discontinued during the planning period." (Proposed § 65583.2(g)(2).)

525
+148 -OTC
673

Fifty percent of the City's lower income RHNA equals 643 units. Even with the most generous interpretation of site capacity and "vacant," vacant sites designated for lower income housing can accommodate only 525 units. It will therefore be presumed that the existing uses on these sites impede additional residential development. To overcome this presumption, HCD will likely require evidence such as letters from owners showing an intent to redevelop the site; abandonment of use and a site for sale; etc.

It is our understanding that owners of many of the non-vacant sites are not particularly interested in residential development. If this is correct, it would be prudent for the City to ensure that vacant sites can accommodate at least half the lower income housing need. Even without this additional presumption, it may be difficult for the City to show that some non-vacant sites designated in Measure T are likely to be redeveloped.

Additional Analysis of Site Capacity. For each site shown as suitable for housing the City's Housing Element must show the 'capacity' of the site: how many units can actually be built on the site and at what income level. The units shown within each income category are totaled to demonstrate that the sites designated can accommodate the City's RHNA.

The determination of site capacity is a two-step process:

- If there is a *minimum* density for the site, HCD must accept it; or, the City can demonstrate the capacity of the site (§ 65583.2(c)(1)).

- Then, the City must adjust (i.e., reduce) the number of units based on land use controls and requirements for site improvements. (§ 65583.2(c)(2).) AB 1397 also requires 'adjustment' for:
    - 'Realistic capacity;'
    - Densities of approved projects at a similar affordability level; and
    - Availability of utilities. (Proposed § 65583.2(c)(2).)

Kimley-Horn has proposed showing the capacity of each site based on 30 units per acre, which is the *maximum* density permitted, not the minimum density. The Measure T Housing Element showed, for purpose of site capacity, 20 units per acre. It also contained statements that a height limit of two stories could not accommodate 30 units per acre.

To maximize the capacity of each site, and minimize the number of sites needed, the City will need to convince HCD that each site can actually accommodate 30 units per acre within two stories. If HCD does not agree that this is supportable, despite zoning at 30 units per acre, it will demand that the City reduce the capacity of each site as shown in the Housing Element, and upzone more sites for lower income housing. Examples of densities of 30 units per acre accomplished within two stories in other communities may be most convincing.

Conclusion: Adequate Sites Requirements. The non-vacant sites included in Measure T should be reviewed to determine if they will be considered feasible for redevelopment given the additional analysis required. To the extent possible, the City should seek vacant sites to upzone to be suitable for lower income housing so that these comprise more than 50 percent of the sites designated for lower income housing. It should also give preference to non-vacant sites whose owners are willing to represent to HCD that they desire to develop housing. The City will also need substantial evidence to convince HCD that 30 units per acre can be accomplished in two stories.

B. Additional Required Analysis.

Requirements for additional analysis will increase the length and cost of the Housing Element and may result in demands for additional actions by the City, but will have no direct impact on sites designated for housing. These additional analyses include:

- Constraints posed by "locally adopted ordinances that directly impact the cost and supply of residences" (Proposed § 65583(a)(5));
- Nongovernmental constraints, including requests to develop housing below the densities shown in the housing element; length of time between project approval and submittal of applications for building permits; and

Olivehain Vacant Sites
Analysis of Development Potential

ASSESSOR'S PARCEL NUMBER	2017 Assessed Value TOTAL	LAND	GROSS ACRES	YIELD @ 30 DU/AC
259-231-32	$ 430,000	$ 430,000	1.75	53
259-231-28	$ 1,130,000	$ 1,041,000	3.88	116
259-231-30	$ 900,000	$ 595,000	0.54	16
259-231-31	$ 849,841	$ 381,863	0.46	14
TOTAL	$ 3,309,841	$ 2,447,863	6.63	199
Land Value as % of Total Value		74%		

Olivenhain

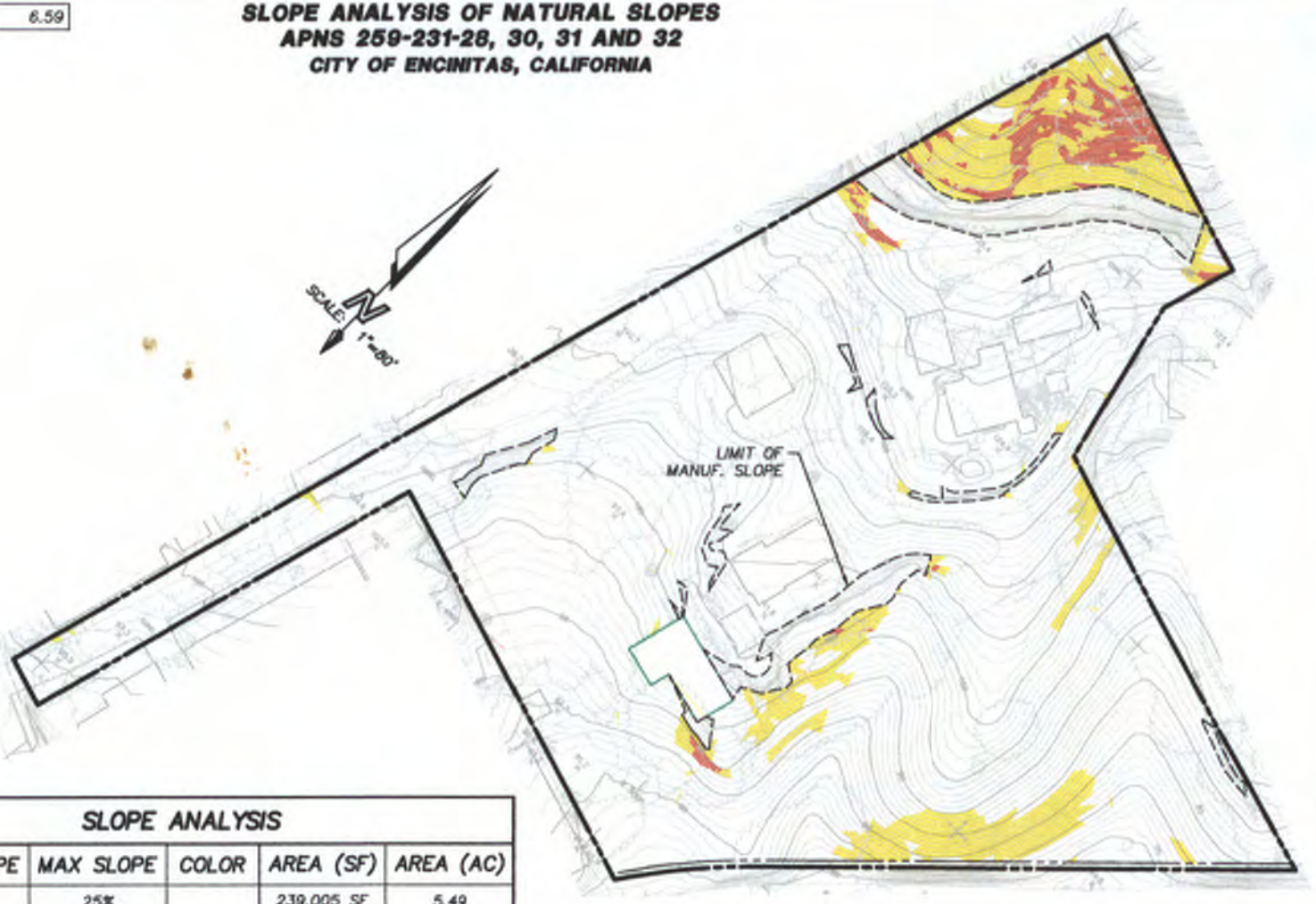
ALT-4: Housing site Alt-4 was included in the SMUP Alternative because it focuses the change in land use to only one of the "four corners" of Olivenhain and supports the viability of the adjacent new mixed use site, O-3.

O-3: Housing site O-3 was included in the SMUP Alternative because it reduces traffic trips and provides a mixed use walkable place for Olivenhain.

An issue by issue comparison of the Reduced Constraints Alternative and the HEU housing

GROSS ACRES	6.59

SLOPE ANALYSIS OF NATURAL SLOPES
APNS 259-231-28, 30, 31 AND 32
CITY OF ENCINITAS, CALIFORNIA



SLOPE ANALYSIS					
NO.	MIN SLOPE	MAX SLOPE	COLOR	AREA (SF)	AREA (AC)
1	0%	25%		239,005 SF	5.49
2	25%	40%		24,021 SF	0.55
3	40%	250%		5,889 SF	0.14
4	MANUFACTURED SLOPE				0.41
				TOTAL	6.59

LANDMARK CONSULTING
Planning Engineering Surveying
9665 Genesee Avenue, Suite 200
San Diego, CA 92121, (858) 587-9270

P:\103-1 COLINA VISTA\REPORTS & ANALYSIS\SLOPE ANALYSIS\103-1 SA NET ACREAGE.DWG 10/25/2017 10:55 AM

Olivenhain - Vacant

- **Address:** Rancho Santa Fe Rd
- **APN:** 2592313200
- **Zoning:** Rural Residential 2
- **Size:** 1.71 AC
- **Unit Yield:** 51 DU
- **Notes:**
  - Steep Topography
  - Measure T Site

Viable Housing Site Summary ALT-4

Profile for Olivenhain - Alternative Site #4

What you need to know about this site

- Address Location: 2220 – 2230 Encinitas Blvd.
- Assessor Parcel Numbers:
  259-231-28 and 30 to 32
- Study Area Size: 4 parcels with 6.49 gross acres (6.3 net) and includes Viable Housing Site O-4
- Topography: Some 10-25% slopes in sections of the property with 25% to 40% in others
- Zoning: Rural Residential-2 (RR-2), which allows two units per acre
- Site Description: The study area is predominately vacant with three homes, located along a local collector, two-lane roadway. One home serves as a care facility with six or fewer persons.
- Year Constructed: 1950s and mid-1970s
- Site amenities and/or proximity:
  - More than a 3/4 mile to the nearest public school;
  - One block to commercial goods and services;
  - Just over a 3/4 mile to Wiro Park;
  - Adjacent to limited transit (bus service route 304 alt. to San Marcos)

Location Aerial Map and Site

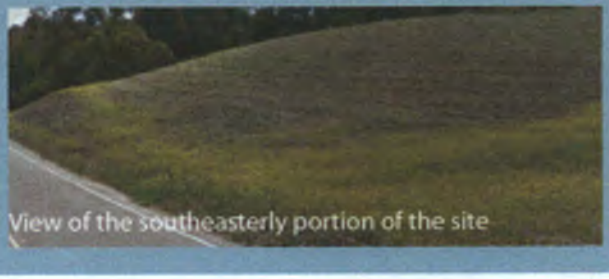
Existing Land Use Map and Site

Street view images

Traveling on Rancho Santa Fe Rd., looking west

Southbound view of Rancho Santa Fe Rd.

Northbound view of Rancho Santa Fe Rd.



View of the southeasterly portion of the site

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

November 7, 2017

Robert Echter
R.E.L.S., Inc.
1150 Quail Gardens Drive
Encinitas, CA 92024

Subject: ***Fox Point Farms – Agrihood Concept Plan***

Dear Mr. Echter,

Dudek understands that you are very interested in having your property (1150 Quail Gardens Drive) included as one of several Housing Element sites identified for high density/affordable housing in the City of Encinitas. While your property has not yet been identified as part of the Housing Element Task Force's site selection effort to date, Dudek believes that a strong argument can be made for its inclusion based on the lack of site constraints, location adjacent to a major roadway with access to utilities and existing services, development potential, and your willingness to convert a portion of your current agricultural operation to residential uses. All of these criteria meet or exceed The State Department of Housing and Community Development (HCD) requirements for inclusion as a Housing Element site.

Located at the northwest corner of Leucadia Boulevard and Quail Gardens Drive in the Leucadia neighborhood of the City of Encinitas, your approximately 20-acre property is an ideal location for an "agrihood" development. Like accessory dwelling units and multigenerational housing, the agrihood is an old idea made new again. The Urban Land Institute defines an agrihood as a single-family, multifamily, or mixed-use community built with a working farm as a focus. We understand that small-scale commercial farms, such as yours, struggle to compete with large scale industrial agriculture, and there is an opportunity to shift our urban farms from commercial production hubs toward a more community orientation. The agrihood concept provides a mechanism that allows for development-subsidized agriculture that is protected from the larger global economy, ensuring in perpetuity agriculture.

Agrihood Concept Plan Overview

In close coordination with Farmer D Consulting and Schmidt Design Group, Dudek has prepared an Agrihood Concept Plan for Fox Point Farms (Attachment 1). The plan pays homage to the

agricultural heritage of the site and the City of Encinitas by providing a roughly 50/50 split of residential and agricultural uses in a way that does not segregate either use, but rather encourages intermingling of the two uses in a way that is mutually beneficial. Developing communities in this way can support the growth of urban agriculture and promote a hyperlocal food system that provides Encinitas residents with locally-grown fresh and healthy food.

Source: KTGY

The concept plan has been developed in a way that is sensitive to the surrounding communities. Substantial buffers have been designed along the perimeter of the property, in the form of orchard paseos (on the west), vineyards (on the south), agricultural uses and parking (on the east), and organic farm fields (on the north). Edible paseos, vertical gardens, greenhouses, community gardens, an event barn, and vineyards are designed into the community and serve as an asset to residents while at the same time respecting the agricultural history of the site.

The bulk and scale of the concept plan is set back from the existing residential development to the west (Fox Point), and pedestrian connections have been made to allow surrounding residents access to the community's resources (farm stands, event garden, education garden, farm-to-table dining area, and trail access to the east via Quail Gardens). Views from Encinitas Ranch Golf Course are maintained by concentrating the development to the south of the site, leaving the northern portion for organic farm fields and programmed open spaces.

Local Agriculture

As mentioned previously (and detailed in Attachment 2), small-scale farms struggle to compete with large scale industrial agriculture, because they lack economies of scale and access to expensive equipment and technology. Development pressure drives up land costs, pushing farms further and further away from their markets. This results in higher transportation costs and lack of connectivity to the consumer. A high percentage of consumer profits are captured by middle men such as distributors, processors and retailers. Trends are moving in the direction of more competition in the distribution channel with companies such as Amazon buying Whole Foods that will likely drive down the price farmers are paid for their products.

Community farms are provide a solution. Growing food, plants, and other crops that serve the

immediate community and provide opportunities for education, events, and agritourism is the type of agriculture we need in Encinitas. There is tremendous value that agriculture can bring in the form of open space, engagement and education while fostering a thriving local food system that improves the health and economic well-being of communities. These community farms can also provide a platform to educate consumers about the complex issues in agriculture and our food system.

Housing and Site Design

Source: KTGY

In keeping with the "Residential Infill (Medium to Large Sites)" neighborhood prototype defined as part of the public outreach program for At Home in Encinitas, this prototype incorporates multi-family of larger scale with single-family attached as the site transitions into the existing single-family. A variety of dense housing types allow for diversity in unit size and income.

The concept plan includes the following housing types (see Attachment 1 for graphic representation):

- Single-family small lot homes with detached garage
- Zero Net Energy Townhomes over artist studios
- Zero Net Energy Row Townhomes with balconies
- Zero Net Energy Flats

The concept plan has been designed at a pedestrian scale, encouraging residents to walk along edible paseos in their front yard rather than driving straight into their garages. Townhomes and single-family small lot homes are all alley-loaded, such that these homes front onto pedestrian walkways or into the main courtyard, overlooking community gardens and the community recreation area. All surface parking areas are located along the edges of the site, giving the plan a "car-less" feel once you are home.

At this concept level, densities are proposed in the range of 20 to 30 units per acre on the approximately 10 acres of land designated for residential uses. The ultimate unit count will be dependent upon how the City and the Housing Element Task Force decide to structure the development standards in the Housing Element.

Proximity to Community Resources

The site is within walking/biking distance to Capri Elementary School (0.75 miles), shopping centers on El Camino Real (0.75 miles), Paul Ecke Sports Park and the YMCA (0.85 miles), and is 0.7 miles from the Leucadia Boulevard/Interstate 5 interchange. Transit stops are located on Leucadia Boulevard immediately adjacent to the site, providing residents with an affordable means of transportation to these community resources and jobs. Indian Head Canyon, a community resource for open space and trails, is located immediately north of the property.

Commitments

Source: KTGY

The property is zoned for agricultural uses, and we understand based on past experience there is always an expectation that agricultural-zoned land should remain as agriculture in perpetuity. However, as local agriculture faces greater challenges in the global market, the long-term feasibility of any agriculture depends on finding creative solutions. The agrihood concept is one such solution, and definitely the most appropriate solution for this site. Based on our discussions, Dudek understands that you are committed to ensuring in perpetuity agricultural use of approximately 50 percent of the site, and are willing enter into such an agreement if the City is so inclined. As part of this, any future development of the site would be conditioned to structure a program whereby the agricultural uses are partially subsidized through the HOA, or other mechanism, in perpetuity. You will also limit the residential development of the site at 250 units, as a message to the public that you are committed to this conceptual site design and are not interested in allowing outside interests to sacrifice the integrity of this proposal.

Summary

This concept plan exhibits a true agrihood concept. The site design is highly-amenitized, pedestrian-oriented, sustainable, and provides a mix of housing types, creating opportunities for attainably-priced housing for all income groups. In an era where traditional high-density housing tends to lack open space, amenities, and overall livability, this concept plan strives to serve as an innovative example for other cities to follow. In addition to serving as a benefit to the community, inclusion of the property would assist the City in developing an HCD-compliant Housing Element, while maintaining the historical integrity of Encinitas as a City committed to agriculture.

Please contact me if you have any questions.

Sincerely,

Brian Grover, AICP
Development Services

cc: *Sean Kilkenny, Dudek*
Daron Joffe, Farmer D Consulting
Jennifer Montgomery, Schmidt Design Group

Attachments: *Attachment 1 – Fox Point Farms Agrihood Concept Plan*
Attachment 2 – Farmer D Consulting, Fox Point Farms Agrihood Concept

ATTACHMENT 1

Fox Point Farms

Encinitas, CA

LEGEND

1. PRIMARY SITE ACCESS WITH ENTRY TRELLIS
2. FARMSTAND & POTENTIAL FARM STORE AND CAFE
3. GREENHOUSE
4. PARKING WITH OPTION FOR SOLAR CANOPIES
5. ORCHARD PASEO
6. EGRESS ONLY ACCESS
7. SECONDARY SERVICE ACCESS
8. PEDESTRIAN ACCESS ONLY
9. COMMUNITY COMMONS
10. COMMUNITY GARDENS
11. PATIO/ FARM TO TABLE DINNING AREA
12. COMMUNITY RECREATION CENTER
13. EVENT BARN
14. PLAY GARDEN
15. VERTICAL GARDENS ON BUILDINGS (TYPICAL)
16. SMALL ANIMAL PETTING AREA
17. FARM OPERATIONS/ POST HARVEST CENTER AND COMPOST AREA
18. STAGING AREA
19. CONNECTION TO EXISTING TRAIL SYSTEM
20. VINEYARD

RESIDENTIAL LEGEND

- A. SINGLE-FAMILY SMALL LOT HOMES WITH DETACHED GARAGE
- B. ZERO NET ENERGY TOWNHOMES OVER ARTIST STUDIOS
- C. ZERO NET ENERGY ROW TOWNHOMES WITH BALCONIES
- D. ZERO NET ENERGY FLATS

Agrihood Concept Plan

11.06.2017

DUDEK

SCHMIDT DESIGN GROUP, INC.

FARMER D CONSULTING
LEICHTAG FOUNDATION

VILLAGE HABITAT DESIGN

Fox Point Farms

Encinitas, CA

LEGEND

1. PRIMARY SITE ACCESS WITH ENTRY TRELLIS
2. FARMSTAND & POTENTIAL FARM STORE AND CAFE
3. GREENHOUSE
4. PARKING WITH OPTION FOR SOLAR CANOPIES
5. ORCHARD PASEO
6. EGRESS ONLY ACCESS
7. SECONDARY SERVICE ACCESS
8. PEDESTRIAN ACCESS ONLY
9. COMMUNITY COMMONS
10. COMMUNITY GARDENS
11. PATIO/ FARM TO TABLE DINNING AREA
12. COMMUNITY RECREATION CENTER
13. EVENT BARN
14. PLAY GARDEN
15. VERTICAL GARDENS ON BUILDINGS (TYPICAL)
16. SMALL ANIMAL PETTING AREA
17. FARM OPERATIONS/ POST HARVEST CENTER AND COMPOST AREA
18. STAGING AREA
19. CONNECTION TO EXISTING TRAIL SYSTEM
20. VINEYARD

RESIDENTIAL LEGEND

- A SINGLE-FAMILY SMALL LOT HOMES WITH DETACHED GARAGE
- B ZERO NET ENERGY TOWNHOMES OVER ARTIST STUDIOS
- C ZERO NET ENERGY ROW TOWNHOMES WITH BALCONIES
- D ZERO NET ENERGY FLATS

Agrihood Concept Plan

11.06.2017

DUDEK · Schmidt Design Group, Inc. · Farmer D Consulting · Leichtag Foundation · Village Habitat Design

ATTACHMENT 2

TO: BOB ECHTER, R.E.L.S., INC.

FROM: DARON JOFFE, FARMER D CONSULTING

CC: BRIAN GROVER, DUDEK

SUBJECT: FOX POINT FARMS AGRIHOOD

DATE: NOVEMBER 7, 2017

FOX POINT FARMS AGRIHOOD CONCEPT

The purpose of this memorandum is to present to the City of Encinitas the unique opportunity to create one of the first agrihoods in San Diego County. The site is the 20-acre Fox Point Farms, at the NW corner of Leucadia Boulevard and Quail Gardens Drive in the City of Encinitas. The site is zoned for agriculture; however, as part of the City's Housing Element Update, an exceptional opportunity has been identified to possibly rezone the property, while ensuring preservation of the agricultural uses onsite at the same time, through the development of an agrihood project. The intent is to design a 50/50 split of residential/agricultural uses on the site in a way that does not segregate either use, but rather encourages intermingling of the two uses in a way that is mutually beneficial. The site has approximately 19 acres of developable space and the initial concept consists of 9.5 acres of real estate and 9.5 acres of urban agriculture. Developing communities in this way can support the growth of urban agriculture and promote a hyperlocal food system that provides society with locally grown fresh and healthy food.

Challenges in Agriculture Today

In general, agriculture faces more challenges in today's global economy compared to other industries, which is exacerbated when farms are located in areas with high land, labor and water costs. Farming is inherently difficult and farmers face more uncertainty than other fields due to increasing challenges with unpredictable weather, pests, disease, and markets. These issues cause many farmers to go out of business and to be forced to sell.

Rising water costs and decreasing water quality are making it more expensive and difficult to farm. In general, the challenging regulatory environment including increased stormwater and strict permitting regulations make it very difficult and expensive to make critical improvements or changes to existing and new infrastructure.

While most agricultural jobs in California are low-paid farm laborers, there are high labor costs and strict labor laws associated with farming, in addition to a lack of affordable housing for farm workers. It is very difficult to find skilled labor with the average age of farmers being over the age of 60. As one of the most injury prone industries, agriculture presents very high insurance rates, especially for workers compensation.

There is also increased risk and regulations around food safety and post-harvest handling. Organic farmers face strict regulations and protocols for organic certification. In organic agriculture, there are increased pressures from insects, disease, pests and disease and more labor is required to maintain ecological homeostasis without the use of herbicides and pesticides. There is a low consumer tolerance for any but perfect produce and local farmers compete with other countries whom have the advantage of much lower labor costs and fewer regulations.

Small scale farms struggle to compete with large scale industrial agriculture, as they lack economies of scale and access to expensive equipment and technology. Development pressure drives up land costs, pushing farms

further and further away from their markets. This results in higher transportation costs and lack of connectivity to the consumer.

A high percentage of consumer profits are captured by middle men such as distributors, processors and retailers. Trends are moving in the direction of more competition in the distribution channel with companies such as Amazon buying Whole Foods that will likely drive down the price farmers are paid for their products.

Commercial farms operating in urban and suburban areas require large trucks for moving goods, which creates a tension between commercial and pedestrian traffic. Smaller scale community farms can be integrated into urban and suburban environments that support both the farmer, consumer and community as a whole.

Community Farms

There is a wonderful opportunity to shift our urban farms from commercial production hubs alone to a balance of less commercial and more community orientation. Growing food, plants and other crops that serve the immediate community and provide opportunities for education, events and agritourism is a much more complementary kind of agriculture for a community like Encinitas.

There is tremendous value that agriculture can bring in the form of open space, engagement and education while fostering a thriving local food system that improves the health and economic well-being of communities. These community farms can also provide a platform to educate consumers about the complex issues in agriculture and our food system. However, community farming has many of the same challenges as commercial farming, but is often less profitable. Challenges that community farmers face include competition for land use and that small farms can't take advantage of economies of scale due to small sizes of farms in urban areas.

Urban community farms rely on community support in the following ways:

- Community Supported Agriculture (CSA)
- Farm stand
- Agritourism
- Education and Events
- Volunteers and charitable support

Community farms are much more diversified in the variety of crops they grow. They often combine multiple farming systems like a vegetable, herb and flower gardens, animals, orchards and food forests, and vineyards. They are welcoming and in fact rely on visitors whereas commercial production farms are not places for public engagement. Community farms bring great value in serving as an urban oasis for ecological diversity, fresh local food, education for all ages and also preserve agriculture where people live.

Unique opportunity to be one of the first Agrihoods in San Diego County

Encinitas has the unique opportunity to create one of the first agrihoods in San Diego County, which can be a model to be followed by other agricultural property owners to ensure preservation of a portion of their agricultural uses in perpetuity. Like accessory dwelling units and multigenerational housing, the agrihood is an old idea made new again. The Urban Land Institute has identified over 200 agrihoods across the country and defines an agrihood as a single-family, multifamily, or mixed-use community built with a working farm as a focus. In their report "Cultivating Development: Trends and Opportunities at the Intersection of Food and Real Estate," they state:

"Real estate decision makers – developers, owners, property managers, designers, investors, and public officials – are increasing collaborating with an array of partners to leverage growing consumer interest in food. Partnerships with chefs, farmers, universities, private foundations, nonprofit organizations, and public health officials are supporting the creation of food-centric development projects that lead to multiple wins, including improved health outcomes, reduced pollution, and enhanced financial advantages for developers."

Agrihood residents can participate in all kinds of farm activities, including growing and harvesting produce under the tutelage of experienced farmers; buying shares in a community-supported agriculture (CSA) program, which ensures a steady supply of fresh and local produce to a homeowner's table every week; attending cooking classes and demonstrations; and shopping at the farmer's market.

A well-managed farm program also engages homeowners on a deeper level: their children's future. Kids learn about growing and preparing their own food, enriching soil fertility, and the importance of birds and insects in the food chain.

Fox Point Agrihood Design Program

Urban agricultural land set aside in relationship to integrated agricultural areas in urban spaces

Generally speaking, agricultural development as a percentage of a real estate project is thought of in terms of being maintained in perpetuity. For example, if X acres are committed to agriculture, then usually a substantive amount of that land is protected into the future and that is what is regarded as "set aside" for protected agriculture. Within that scope, a limited amount can be placed in the urban spaces between buildings and it is more for small scale applications and building character, which is more for perennials than annual production.

Agriculture managed in urban spaces is difficult to maintain in perpetuity, as those urban space uses will change over time as residents come and go, HOA's changes in composition, etc. Only limited amounts of area can be located for urban agriculture within urban spaces as there are other competing green space needs for gathering areas, greens, etc. Finally, the agriculture within urban spaces may require different ongoing management than the farmer working on the main farm area.

A rule of thumb for working out the amount of agricultural area within an agrihood would be a minimum of ag area represented within the urban spaces (ideally connecting to the farm), limited area on the periphery (integrating the surrounding neighborhood areas to the farm) and the vast majority as contiguous, protected land for the farm. In the case of Fox Point Farms, the breakdown of 9.85 acres consists of 7.5 acres in the contiguous farm area, 2 acres on the peripheral area in orchards, vineyards and other perennials and 0.35 acres within the urban spaces. Using this rule of thumb, the project proposes the following uses:

Uses within 7.5 acre contiguous farm area

- Event Green
- Event Barn
- Operations center/post harvest center
- Back of house/services/equipment storage, etc.
- Small animal area
- Farm fields- annual production
- Education gardens
- Greenhouses/hoop houses
- Pond - surface water and water storage areas
- Wildlife areas/pollinator gardens, nut trees

Uses within 2 acre peripheral perennial area

- Orchards
- Vineyards
- Wildlife areas/pollinator gardens, nut trees

Gardens/Perennials within urban spaces - 0.35 acres

- Trellis grapes
- Vertical landscaping
- Kitchen gardens
- Community gardens
- Edible landscaping

Farm Character

The open farm areas adjacent to the real estate development are what give it its farm character (looking out over the farm). And since it is community agriculture, the farm open area is designed to be broken up into a number of pieces that residents can immerse themselves into (the farm becomes a bit of a village in that sense - where the community can immerse and have a number of different rich experiences with berries, flowers, pollinator gardens, orchard boscs,, trellised grapes, pavilions..... not just production fields).

Farm Markets

Food grown and produced on the farm is for a CSA program designed for resident and surrounding neighbors, farm stand/store/cafe, clubhouse dining and value-added goods.

Pedestrian/Car relationship

Success is more immanent within an agrihood when there are no streets/parking to cross between the majority of the homes and the farm aspects using alley loaded homes and edge parking lots.

Water/Irrigation

Buying water is expensive for irrigation and particularly during droughts - better to supplement with surface rainwater collection and by well water when applicable.

Case for Rezoning

We are moving from a single use, industrial model of agricultural operations to a community-oriented agricultural model that will preserve 1/2 the land for agriculture, offer fresh produce and food products to the surrounding neighborhood as well as unending opportunities for education, events, etc. The project would respect and preserve the agricultural heritage of Encinitas, while also providing for a mix of housing types to meet the needs of all Encinitas residents.

CAM-MAR GROWERS
SUNSHINE GARDENS

155 QUAIL GARDENS DR.
ENCINITAS, CA 92025
760-436-3244
760-436-8612 FAX

March 29, 2018

Ms. Diane S. Langager
Principal Planner
City of Encinitas
505 S. Vulcan Avenue
Encinitas, CA 92024

RE: *Sunshine Gardens Site at Encinitas Blvd & Quail Gardens, approximately 3 AC vacant land for Housing Element Review*

Dear Diane:

We wanted to express once again our interest and commitment in moving forward with a multi-family residential development immediately upon a successful rezone from Office Professional Zone to a Residential Zone of R25-R30.

Our commitment is contingent upon the City of Encinitas finalizing development standards that adequately support this level of density and we are concerned and do not believe that the current zoning limitations of two-stories and 30-foot height maximum will achieve the required results.

We want to insure the City of Encinitas that development can begin as soon as the zoning is approved by the Coastal Commission and plans are processed and approved. We own the Sunshine Gardens business and have short term leases with the other tenants that will all expire prior to the rezoning and entitlement process.

We would also like to stress that the structures on the property are temporary and can be demolished very easily.

Please feel free to call if you would like to set up a meeting to discuss this further or need further clarification regarding our intentions. Thank you.

Best regards,

Ron Martin
CAM-MAR GROWERS

Brandi Lewis

From: Cowboy Steve Morris <cowboystevemorris@gmail.com>
Sent: Monday, December 11, 2017 4:32 PM
To: Diane Langager; Catherine Blakespear; Tony Kranz
Subject: request for consideration for zone change. @ acres coastal Encinitas

Hello, Linda, Diane, and Tony

We would like to submit our land, 1967 N Vulcan Ave, Encinitas CA 92024, for consideration from the Houseing Element Task Force.

The subject property is 2 Acres and is currently under used, flower field, shop, old resident, etc...

Please let us know what to do in order to be under consideration for the future zoning changes,

Sincerely,

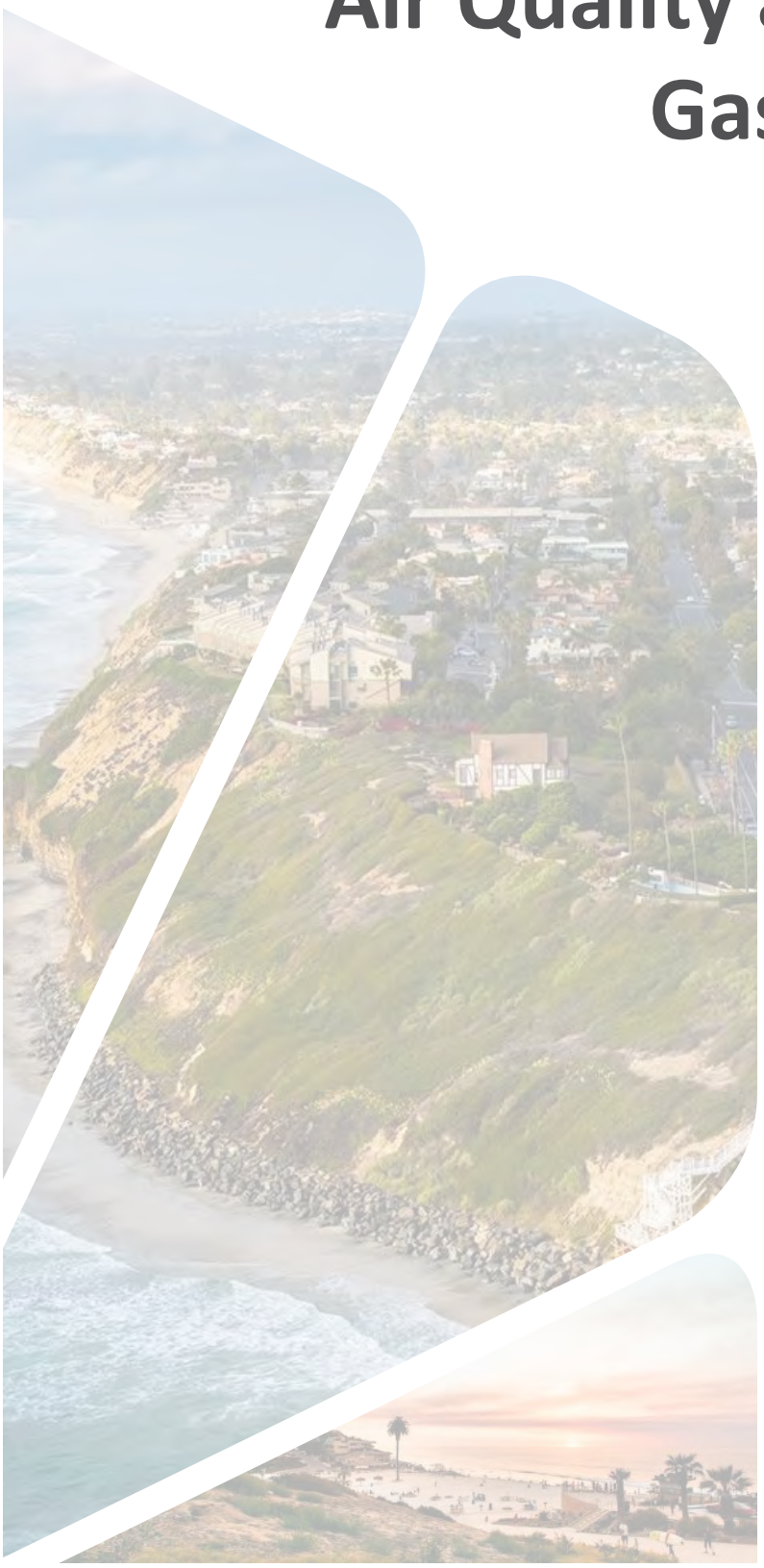
"Cowboy" Steve Morris,
(760) 525-4495
(760) 454-3066 eFax
511 S. Coast Highway 101, Suite 202A
Encinitas, CA 92024

Please consider the environment before printing this email

Any terms related to a real estate transaction that are discussed in this e-mail must be confirmed and signed by the parties under contract. Realtors cannot give legal or tax advice. Always consult a licensed attorney for legal questions and a licensed tax advisor for tax questions. Steve Morris is not licensed to practice law. BRE # 00955313.

Appendix D

Air Quality and Greenhouse Gas Emissions Data



Encinitas HE - #2 - San Diego County, Annual

Encinitas HE - #2

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	208.00	Dwelling Unit	6.90	208,000.00	595
Parking Lot	572.00	Space	5.15	228,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 2 = approx 6.9 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 2 = 6.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	181.00
tblConstructionPhase	NumDays	20.00	142.00
tblConstructionPhase	PhaseEndDate	6/15/2020	4/22/2019
tblConstructionPhase	PhaseEndDate	5/18/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	7/13/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	5/19/2020	3/26/2019
tblConstructionPhase	PhaseStartDate	3/26/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	6/16/2020	6/16/2019
tblLandUse	LotAcreage	13.00	6.90

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	3.8447	4.3554	3.6188	8.0600e-003	0.4684	0.2060	0.6745	0.1703	0.1930	0.3633	0.0000	728.7410	728.7410	0.1193	0.0000	731.7223
Maximum	**3.8447**	**4.3554**	**3.6188**	**8.0600e-003**	**0.4684**	**0.2060**	**0.6745**	**0.1703**	**0.1930**	**0.3633**	**0.0000**	**728.7410**	**728.7410**	**0.1193**	**0.0000**	**731.7223**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	3.8447	4.3554	3.6188	8.0600e-003	0.3297	0.2060	0.5357	0.1079	0.1930	0.3009	0.0000	728.7405	728.7405	0.1193	0.0000	731.7219
Maximum	**3.8447**	**4.3554**	**3.6188**	**8.0600e-003**	**0.3297**	**0.2060**	**0.5357**	**0.1079**	**0.1930**	**0.3009**	**0.0000**	**728.7405**	**728.7405**	**0.1193**	**0.0000**	**731.7219**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**29.62**	**0.00**	**20.57**	**36.63**	**0.00**	**17.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	1.5729	1.5729
2	4-1-2019	6-30-2019	1.2100	1.2100
3	7-1-2019	9-30-2019	2.6999	2.6999
		Highest	2.6999	2.6999

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	14.2594	0.2729	17.6652	0.0293		2.2674	2.2674		2.2674	2.2674	214.8552	92.6402	307.4954	0.2008	0.0169	317.5506
Energy	0.0126	0.1076	0.0458	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	439.2598	439.2598	0.0151	4.9000e-003	441.0978

Mobile	0.4527	2.0311	5.4485	0.0177	1.4767	0.0179	1.4945	0.3955	0.0168	0.4122	0.0000	1,633.6680	1,633.6680	0.0889	0.0000	1,635.8895
Waste						0.0000	0.0000		0.0000	0.0000	19.4222	0.0000	19.4222	1.1478	0.0000	48.1176
Water						0.0000	0.0000		0.0000	0.0000	4.2994	88.6898	92.9892	0.4452	0.0112	107.4456
Total	**14.7246**	**2.4115**	**23.1594**	**0.0477**	**1.4767**	**2.2939**	**3.7706**	**0.3955**	**2.2928**	**2.6883**	**238.5768**	**2,254.2578**	**2,492.8346**	**1.8977**	**0.0330**	**2,550.1011**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2231	0.1453	1.6090	8.9000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	149.9811	149.9811	5.3100e-003	2.7000e-003	150.9195
Energy	0.0126	0.1076	0.0458	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	439.2598	439.2598	0.0151	4.9000e-003	441.0978
Mobile	0.4527	2.0311	5.4485	0.0177	1.4767	0.0179	1.4945	0.3955	0.0168	0.4122	0.0000	1,633.6680	1,633.6680	0.0889	0.0000	1,635.8895
Waste						0.0000	0.0000		0.0000	0.0000	9.7111	0.0000	9.7111	0.5739	0.0000	24.0588
Water						0.0000	0.0000		0.0000	0.0000	3.4396	75.2637	78.7033	0.3563	8.9700e-003	90.2834
Total	**1.6883**	**2.2840**	**7.1033**	**0.0193**	**1.4767**	**0.0454**	**1.5221**	**0.3955**	**0.0443**	**0.4398**	**13.1506**	**2,298.1727**	**2,311.3233**	**1.0394**	**0.0166**	**2,342.2489**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**88.53**	**5.29**	**69.33**	**59.50**	**0.00**	**98.02**	**59.63**	**0.00**	**98.07**	**83.64**	**94.49**	**-1.95**	**7.28**	**45.23**	**49.74**	**8.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	3/25/2019	5	30	
4	Building Construction	Building Construction	4/23/2019	12/31/2019	5	181	
5	Paving	Paving	3/26/2019	4/22/2019	5	20	
6	Architectural Coating	Architectural Coating	6/16/2019	12/31/2019	5	142	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.15

Residential Indoor: 421,200; Residential Outdoor: 140,400; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	246.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	49.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**0.0000**	**0.0180**	**0.0180**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8672**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**0.0000**	**0.0180**	**0.0180**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8671**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.7000e-004	2.6300e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6737	0.6737	2.0000e-005	0.0000	0.6742
Total	**3.5000e-004**	**2.7000e-004**	**2.6300e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6737**	**0.6737**	**2.0000e-005**	**0.0000**	**0.6742**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0386	0.0000	0.0386	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0386**	**0.0120**	**0.0506**	**0.0212**	**0.0110**	**0.0322**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	3.5000e-004	2.7000e-004	2.6300e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.6737	0.6737	2.0000e-005	0.0000	0.6742
Total	**3.5000e-004**	**2.7000e-004**	**2.6300e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6737**	**0.6737**	**2.0000e-005**	**0.0000**	**0.6742**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.1301**	**0.0357**	**0.1658**	**0.0540**	**0.0329**	**0.0868**	**0.0000**	**83.5520**	**83.5520**	**0.0264**	**0.0000**	**84.2129**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1800e-003	9.1000e-004	8.7800e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2455	2.2455	7.0000e-005	0.0000	2.2473
Total	**1.1800e-003**	**9.1000e-004**	**8.7800e-003**	**2.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4200e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.2455**	**2.2455**	**7.0000e-005**	**0.0000**	**2.2473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0556	0.0000	0.0556	0.0231	0.0000	0.0231	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.0556**	**0.0357**	**0.0914**	**0.0231**	**0.0329**	**0.0559**	**0.0000**	**83.5519**	**83.5519**	**0.0264**	**0.0000**	**84.2128**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1800e-003	9.1000e-004	8.7800e-003	2.0000e-005	2.2800e-003	2.0000e-005	2.3000e-003	6.1000e-004	2.0000e-005	6.2000e-004	0.0000	2.2455	2.2455	7.0000e-005	0.0000	2.2473
Total	**1.1800e-003**	**9.1000e-004**	**8.7800e-003**	**2.0000e-005**	**2.2800e-003**	**2.0000e-005**	**2.3000e-003**	**6.1000e-004**	**2.0000e-005**	**6.2000e-004**	**0.0000**	**2.2455**	**2.2455**	**7.0000e-005**	**0.0000**	**2.2473**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.2137	1.9076	1.5533	2.4400e-003		0.1167	0.1167		0.1098	0.1098	0.0000	212.7693	212.7693	0.0518	0.0000	214.0651
Total	**0.2137**	**1.9076**	**1.5533**	**2.4400e-003**		**0.1167**	**0.1167**		**0.1098**	**0.1098**	**0.0000**	**212.7693**	**212.7693**	**0.0518**	**0.0000**	**214.0651**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0254	0.6816	0.1831	1.4800e-003	0.0360	4.7200e-003	0.0408	0.0104	4.5100e-003	0.0149	0.0000	144.2631	144.2631	0.0116	0.0000	144.5526
Worker	0.0878	0.0674	0.6514	1.8400e-003	0.1785	1.3000e-003	0.1798	0.0474	1.2000e-003	0.0486	0.0000	166.6378	166.6378	5.3600e-003	0.0000	166.7717
Total	**0.1132**	**0.7489**	**0.8345**	**3.3200e-003**	**0.2146**	**6.0200e-003**	**0.2206**	**0.0579**	**5.7100e-003**	**0.0636**	**0.0000**	**310.9009**	**310.9009**	**0.0169**	**0.0000**	**311.3243**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2137	1.9076	1.5533	2.4400e-003		0.1167	0.1167		0.1098	0.1098	0.0000	212.7690	212.7690	0.0518	0.0000	214.0649
Total	**0.2137**	**1.9076**	**1.5533**	**2.4400e-003**		**0.1167**	**0.1167**		**0.1098**	**0.1098**	**0.0000**	**212.7690**	**212.7690**	**0.0518**	**0.0000**	**214.0649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0254	0.6816	0.1831	1.4800e-003	0.0345	4.7200e-003	0.0392	0.0100	4.5100e-003	0.0145	0.0000	144.2631	144.2631	0.0116	0.0000	144.5526
Worker	0.0878	0.0674	0.6514	1.8400e-003	0.1693	1.3000e-003	0.1706	0.0452	1.2000e-003	0.0464	0.0000	166.6378	166.6378	5.3600e-003	0.0000	166.7717
Total	**0.1132**	**0.7489**	**0.8345**	**3.3200e-003**	**0.2038**	**6.0200e-003**	**0.2098**	**0.0552**	**5.7100e-003**	**0.0609**	**0.0000**	**310.9009**	**310.9009**	**0.0169**	**0.0000**	**311.3243**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	6.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0213**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	6.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0213**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.3333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0189	0.1303	0.1307	2.1000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	18.1281	18.1281	1.5300e-003	0.0000	18.1664
Total	**3.3522**	**0.1303**	**0.1307**	**2.1000e-004**		**9.1400e-003**	**9.1400e-003**		**9.1400e-003**	**9.1400e-003**	**0.0000**	**18.1281**	**18.1281**	**1.5300e-003**	**0.0000**	**18.1664**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0137	0.0105	0.1018	2.9000e-004	0.0279	2.0000e-004	0.0281	7.4100e-003	1.9000e-004	7.6000e-003	0.0000	26.0402	26.0402	8.4000e-004	0.0000	26.0611

Total	**0.0137**	**0.0105**	**0.1018**	**2.9000e-004**	**0.0279**	**2.0000e-004**	**0.0281**	**7.4100e-003**	**1.9000e-004**	**7.6000e-003**	**0.0000**	**26.0402**	**26.0402**	**8.4000e-004**	**0.0000**	**26.0611**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.3333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0189	0.1303	0.1307	2.1000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	18.1281	18.1281	1.5300e-003	0.0000	18.1664
Total	**3.3522**	**0.1303**	**0.1307**	**2.1000e-004**		**9.1400e-003**	**9.1400e-003**		**9.1400e-003**	**9.1400e-003**	**0.0000**	**18.1281**	**18.1281**	**1.5300e-003**	**0.0000**	**18.1664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0137	0.0105	0.1018	2.9000e-004	0.0265	2.0000e-004	0.0267	7.0600e-003	1.9000e-004	7.2500e-003	0.0000	26.0402	26.0402	8.4000e-004	0.0000	26.0611
Total	**0.0137**	**0.0105**	**0.1018**	**2.9000e-004**	**0.0265**	**2.0000e-004**	**0.0267**	**7.0600e-003**	**1.9000e-004**	**7.2500e-003**	**0.0000**	**26.0402**	**26.0402**	**8.4000e-004**	**0.0000**	**26.0611**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4527	2.0311	5.4485	0.0177	1.4767	0.0179	1.4945	0.3955	0.0168	0.4122	0.0000	1,633.6680	1,633.6680	0.0889	0.0000	1,635.8895
Unmitigated	0.4527	2.0311	5.4485	0.0177	1.4767	0.0179	1.4945	0.3955	0.0168	0.4122	0.0000	1,633.6680	1,633.6680	0.0889	0.0000	1,635.8895

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,370.72	1,489.28	1262.56	3,918,064	3,918,064
Parking Lot	0.00	0.00	0.00		
Total	1,370.72	1,489.28	1,262.56	3,918,064	3,918,064

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	314.6606	314.6606	0.0127	2.6200e-003	315.7581
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	314.6606	314.6606	0.0127	2.6200e-003	315.7581
NaturalGas Mitigated	0.0126	0.1076	0.0458	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.5993	124.5993	2.3900e-003	2.2800e-003	125.3397
NaturalGas Unmitigated	0.0126	0.1076	0.0458	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.5993	124.5993	2.3900e-003	2.2800e-003	125.3397

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.3349e+006	0.0126	0.1076	0.0458	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.5993	124.5993	2.3900e-003	2.2800e-003	125.3397
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0126**	**0.1076**	**0.0458**	**6.9000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.5993**	**124.5993**	**2.3900e-003**	**2.2800e-003**	**125.3397**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.3349e+006	0.0126	0.1076	0.0458	6.9000e-004		8.7000e-003	8.7000e-003		8.7000e-003	8.7000e-003	0.0000	124.5993	124.5993	2.3900e-003	2.2800e-003	125.3397
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0126**	**0.1076**	**0.0458**	**6.9000e-004**		**8.7000e-003**	**8.7000e-003**		**8.7000e-003**	**8.7000e-003**	**0.0000**	**124.5993**	**124.5993**	**2.3900e-003**	**2.2800e-003**	**125.3397**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	882748	288.4897	0.0116	2.4000e-003	289.4960
Parking Lot	80080	26.1709	1.0500e-003	2.2000e-004	26.2621
Total		**314.6606**	**0.0127**	**2.6200e-003**	**315.7581**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	882748	288.4897	0.0116	2.4000e-003	289.4960

Parking Lot	80080	26.1709	1.0500e-003	2.2000e-004	26.2621
Total		**314.6606**	**0.0127**	**2.6200e-003**	**315.7581**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2231	0.1453	1.6090	8.9000e-004		0.0188	0.0188		0.0188	0.0188	0.0000	149.9811	149.9811	5.3100e-003	2.7000e-003	150.9195
Unmitigated	14.2594	0.2729	17.6652	0.0293		2.2674	2.2674		2.2674	2.2674	214.8552	92.6402	307.4954	0.2008	0.0169	317.5506

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8271					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Hearth	13.0512	0.2549	16.1103	0.0292		2.2588	2.2588		2.2588	2.2588	214.8552	90.1071	304.9623	0.1983	0.0169	314.9554
Landscaping	0.0477	0.0180	1.5549	8.0000e-005		8.5400e-003	8.5400e-003		8.5400e-003	8.5400e-003	0.0000	2.5330	2.5330	2.4900e-003	0.0000	2.5952
Total	**14.2594**	**0.2729**	**17.6652**	**0.0293**		**2.2674**	**2.2674**		**2.2674**	**2.2674**	**214.8552**	**92.6402**	**307.4954**	**0.2008**	**0.0169**	**317.5506**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8271					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0149	0.1273	0.0542	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.4480	147.4480	2.8300e-003	2.7000e-003	148.3243
Landscaping	0.0477	0.0180	1.5549	8.0000e-005		8.5400e-003	8.5400e-003		8.5400e-003	8.5400e-003	0.0000	2.5330	2.5330	2.4900e-003	0.0000	2.5952
Total	**1.2230**	**0.1453**	**1.6090**	**8.9000e-004**		**0.0188**	**0.0188**		**0.0188**	**0.0188**	**0.0000**	**149.9811**	**149.9811**	**5.3200e-003**	**2.7000e-003**	**150.9195**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	78.7033	0.3563	8.9700e-003	90.2834
Unmitigated	92.9892	0.4452	0.0112	107.4456

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.552 / 8.54368	92.9892	0.4452	0.0112	107.4456
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**92.9892**	**0.4452**	**0.0112**	**107.4456**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Low Rise	10.8416 / 8.02251	78.7033	0.3563	8.9700e-003	90.2834
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**78.7033**	**0.3563**	**8.9700e-003**	**90.2834**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.7111	0.5739	0.0000	24.0588
Unmitigated	19.4222	1.1478	0.0000	48.1176

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Low Rise	95.68	19.4222	1.1478	0.0000	48.1176
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**19.4222**	**1.1478**	**0.0000**	**48.1176**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	47.84	9.7111	0.5739	0.0000	24.0588
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**9.7111**	**0.5739**	**0.0000**	**24.0588**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #2

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	208.00	Dwelling Unit	6.90	208,000.00	595
Parking Lot	572.00	Space	5.15	228,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 2 = approx 6.9 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 2 = 6.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	181.00
tblConstructionPhase	NumDays	20.00	142.00
tblConstructionPhase	PhaseEndDate	6/15/2020	4/22/2019
tblConstructionPhase	PhaseEndDate	5/18/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	7/13/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	5/19/2020	3/26/2019
tblConstructionPhase	PhaseStartDate	3/26/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	6/16/2020	6/16/2019
tblLandUse	LotAcreage	13.00	6.90

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	51.0101	54.5750	33.9956	0.0722	18.2141	2.3914	20.6055	9.9699	2.2001	12.1700	0.0000	7,216.2169	7,216.2169	1.9482	0.0000	7,238.0720
Maximum	**51.0101**	**54.5750**	**33.9956**	**0.0722**	**18.2141**	**2.3914**	**20.6055**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**7,216.2169**	**7,216.2169**	**1.9482**	**0.0000**	**7,238.0720**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	51.0101	54.5750	33.9956	0.0722	7.8635	2.3914	10.2549	4.2827	2.2001	6.4828	0.0000	7,216.2169	7,216.2169	1.9482	0.0000	7,238.0720
Maximum	**51.0101**	**54.5750**	**33.9956**	**0.0722**	**7.8635**	**2.3914**	**10.2549**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**7,216.2169**	**7,216.2169**	**1.9482**	**0.0000**	**7,238.0720**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.83**	**0.00**	**50.23**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	325.2107	6.4161	410.2102	0.7128		55.1880	55.1880		55.1880	55.1880	5,776.5200	2,453.6123	8,230.1323	5.3612	0.4544	8,499.5645
Energy	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Mobile	2.8438	11.7174	33.3894	0.1106	9.0174	0.1063	9.1237	2.4103	0.0997	2.5100		11,221.1811	11,221.1811	0.5885		11,235.8927
Total	**328.1234**	**18.7230**	**443.8504**	**0.8272**	**9.0174**	**55.3419**	**64.3594**	**2.4103**	**55.3354**	**57.7457**	**5,776.5200**	**14,427.3807**	**20,203.9007**	**5.9641**	**0.4682**	**20,492.5167**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.2519	3.3050	18.5975	0.0207		0.3460	0.3460		0.3460	0.3460	0.0000	3,995.2594	3,995.2594	0.1065	0.0727	4,019.5785
Energy	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Mobile	2.8438	11.7174	33.3894	0.1106	9.0174	0.1063	9.1237	2.4103	0.0997	2.5100		11,221.1811	11,221.1811	0.5885		11,235.8927
Total	**10.1647**	**15.6119**	**52.2377**	**0.1351**	**9.0174**	**0.4999**	**9.5173**	**2.4103**	**0.4933**	**2.9036**	**0.0000**	**15,969.0277**	**15,969.0277**	**0.7093**	**0.0865**	**16,012.5306**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.90**	**16.62**	**88.23**	**83.67**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-10.69**	**20.96**	**88.11**	**81.53**	**21.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	3/25/2019	5	30	
4	Building Construction	Building Construction	4/23/2019	12/31/2019	5	181	
5	Paving	Paving	3/26/2019	4/22/2019	5	20	
6	Architectural Coating	Architectural Coating	6/16/2019	12/31/2019	5	142	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.15

Residential Indoor: 421,200; Residential Outdoor: 140,400; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	9	246.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	49.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342

Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2762	7.4393	1.9206	0.0166	0.4062	0.0518	0.4579	0.1169	0.0495	0.1664		1,776.0998	1,776.0998	0.1371		1,779.5279
Worker	0.9659	0.6741	7.6115	0.0215	2.0208	0.0144	2.0352	0.5360	0.0133	0.5493		2,140.6911	2,140.6911	0.0684		2,142.4000
Total	**1.2421**	**8.1134**	**9.5321**	**0.0381**	**2.4270**	**0.0662**	**2.4932**	**0.6530**	**0.0628**	**0.7157**		**3,916.7909**	**3,916.7909**	**0.2055**		**3,921.9280**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.2762	7.4393	1.9206	0.0166	0.3888	0.0518	0.4406	0.1127	0.0495	0.1622		1,776.0998	1,776.0998	0.1371		1,779.5279
Worker	0.9659	0.6741	7.6115	0.0215	1.9155	0.0144	1.9299	0.5102	0.0133	0.5234		2,140.6911	2,140.6911	0.0684		2,142.4000
Total	**1.2421**	**8.1134**	**9.5321**	**0.0381**	**2.3043**	**0.0662**	**2.3704**	**0.6228**	**0.0628**	**0.6856**		**3,916.7909**	**3,916.7909**	**0.2055**		**3,921.9280**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.6747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1291**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.6747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1291**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.9480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**47.2144**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1924	0.1343	1.5161	4.2800e-003	0.4025	2.8700e-003	0.4054	0.1068	2.6400e-003	0.1094		426.3978	426.3978	0.0136		426.7382
Total	**0.1924**	**0.1343**	**1.5161**	**4.2800e-003**	**0.4025**	**2.8700e-003**	**0.4054**	**0.1068**	**2.6400e-003**	**0.1094**		**426.3978**	**426.3978**	**0.0136**		**426.7382**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.9480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**47.2144**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1924	0.1343	1.5161	4.2800e-003	0.3815	2.8700e-003	0.3844	0.1016	2.6400e-003	0.1043		426.3978	426.3978	0.0136		426.7382
Total	**0.1924**	**0.1343**	**1.5161**	**4.2800e-003**	**0.3815**	**2.8700e-003**	**0.3844**	**0.1016**	**2.6400e-003**	**0.1043**		**426.3978**	**426.3978**	**0.0136**		**426.7382**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.8438	11.7174	33.3894	0.1106	9.0174	0.1063	9.1237	2.4103	0.0997	2.5100		11,221.1811	11,221.1811	0.5885		11,235.8927

Unmitigated	2.8438	11.7174	33.3894	0.1106	9.0174	0.1063	9.1237	2.4103	0.0997	2.5100		11,221.1811	11,221.1811	0.5885		11,235.8927

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,370.72	1,489.28	1262.56	3,918,064	3,918,064
Parking Lot	0.00	0.00	0.00		
Total	1,370.72	1,489.28	1,262.56	3,918,064	3,918,064

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day					
NaturalGas Mitigated	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
NaturalGas Unmitigated	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6396.99	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0690**	**0.5895**	**0.2509**	**3.7600e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**752.5872**	**752.5872**	**0.0144**	**0.0138**	**757.0595**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6.39699	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0690**	**0.5895**	**0.2509**	**3.7600e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**752.5872**	**752.5872**	**0.0144**	**0.0138**	**757.0595**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.2519	3.3050	18.5975	0.0207		0.3460	0.3460		0.3460	0.3460	0.0000	3,995.2594	3,995.2594	0.1065	0.0727	4,019.5785
Unmitigated	325.2107	6.4161	410.2102	0.7128		55.1880	55.1880		55.1880	55.1880	5,776.5200	2,453.6123	8,230.1323	5.3612	0.4544	8,499.5645

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5322					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	318.3222	6.2165	392.9341	0.7119		55.0931	55.0931		55.0931	55.0931	5,776.5200	2,422.5882	8,199.1082	5.3308	0.4544	8,467.7788
Landscaping	0.5298	0.1997	17.2761	9.1000e-004		0.0949	0.0949		0.0949	0.0949		31.0241	31.0241	0.0305		31.7857
Total	**325.2107**	**6.4161**	**410.2102**	**0.7128**		**55.1880**	**55.1880**		**55.1880**	**55.1880**	**5,776.5200**	**2,453.6123**	**8,230.1323**	**5.3612**	**0.4544**	**8,499.5645**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5322					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3634	3.1053	1.3214	0.0198		0.2511	0.2511		0.2511	0.2511	0.0000	3,964.2353	3,964.2353	0.0760	0.0727	3,987.7928
Landscaping	0.5298	0.1997	17.2761	9.1000e-004		0.0949	0.0949		0.0949	0.0949		31.0241	31.0241	0.0305		31.7857
Total	**7.2519**	**3.3050**	**18.5975**	**0.0207**		**0.3460**	**0.3460**		**0.3460**	**0.3460**	**0.0000**	**3,995.2594**	**3,995.2594**	**0.1065**	**0.0727**	**4,019.5785**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #2

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	208.00	Dwelling Unit	6.90	208,000.00	595
Parking Lot	572.00	Space	5.15	228,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 2 = approx 6.9 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 2 = 6.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	181.00
tblConstructionPhase	NumDays	20.00	142.00
tblConstructionPhase	PhaseEndDate	6/15/2020	4/22/2019
tblConstructionPhase	PhaseEndDate	5/18/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	7/13/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	5/19/2020	3/26/2019
tblConstructionPhase	PhaseStartDate	3/26/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	6/16/2020	6/16/2019
tblLandUse	LotAcreage	13.00	6.90

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	51.1737	54.5817	33.9616	0.0702	18.2141	2.3914	20.6055	9.9699	2.2001	12.1700	0.0000	7,013.9253	7,013.9253	1.9479	0.0000	7,035.8938
Maximum	**51.1737**	**54.5817**	**33.9616**	**0.0702**	**18.2141**	**2.3914**	**20.6055**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**7,013.9253**	**7,013.9253**	**1.9479**	**0.0000**	**7,035.8938**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	51.1737	54.5817	33.9616	0.0702	7.8635	2.3914	10.2549	4.2827	2.2001	6.4828	0.0000	7,013.9253	7,013.9253	1.9479	0.0000	7,035.8938
Maximum	**51.1737**	**54.5817**	**33.9616**	**0.0702**	**7.8635**	**2.3914**	**10.2549**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**7,013.9253**	**7,013.9253**	**1.9479**	**0.0000**	**7,035.8938**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.83**	**0.00**	**50.23**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	325.2107	6.4161	410.2102	0.7128		55.1880	55.1880		55.1880	55.1880	5,776.5200	2,453.6123	8,230.1323	5.3612	0.4544	8,499.5645
Energy	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Mobile	2.7675	12.0809	32.8623	0.1049	9.0174	0.1070	9.1244	2.4103	0.1004	2.5107		10,640.4351	10,640.4351	0.5900		10,655.1840
Total	**328.0472**	**19.0866**	**443.3234**	**0.8214**	**9.0174**	**55.3426**	**64.3601**	**2.4103**	**55.3361**	**57.7463**	**5,776.5200**	**13,846.6347**	**19,623.1547**	**5.9656**	**0.4682**	**19,911.8080**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.2519	3.3050	18.5975	0.0207		0.3460	0.3460		0.3460	0.3460	0.0000	3,995.2594	3,995.2594	0.1065	0.0727	4,019.5785
Energy	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Mobile	2.7675	12.0809	32.8623	0.1049	9.0174	0.1070	9.1244	2.4103	0.1004	2.5107		10,640.4351	10,640.4351	0.5900		10,655.1840
Total	**10.0884**	**15.9754**	**51.7107**	**0.1294**	**9.0174**	**0.5006**	**9.5180**	**2.4103**	**0.4940**	**2.9043**	**0.0000**	**15,388.2817**	**15,388.2817**	**0.7108**	**0.0865**	**15,431.8220**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.92**	**16.30**	**88.34**	**84.25**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-11.13**	**21.58**	**88.08**	**81.53**	**22.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	3/25/2019	5	30	
4	Building Construction	Building Construction	4/23/2019	12/31/2019	5	181	
5	Paving	Paving	3/26/2019	4/22/2019	5	20	
6	Architectural Coating	Architectural Coating	6/16/2019	12/31/2019	5	142	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.15

Residential Indoor: 421,200; Residential Outdoor: 140,400; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	9	246.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	49.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359

Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2880	7.4453	2.1294	0.0162	0.4062	0.0527	0.4589	0.1169	0.0504	0.1673		1,731.0015	1,731.0015	0.1459		1,734.6484
Worker	1.0924	0.7571	7.1929	0.0202	2.0208	0.0144	2.0352	0.5360	0.0133	0.5493		2,009.6078	2,009.6078	0.0648		2,011.2289
Total	**1.3805**	**8.2023**	**9.3223**	**0.0363**	**2.4270**	**0.0671**	**2.4941**	**0.6530**	**0.0637**	**0.7166**		**3,740.6093**	**3,740.6093**	**0.2107**		**3,745.8773**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.2880	7.4453	2.1294	0.0162	0.3888	0.0527	0.4415	0.1127	0.0504	0.1631		1,731.0015	1,731.0015	0.1459		1,734.6484
Worker	1.0924	0.7571	7.1929	0.0202	1.9155	0.0144	1.9299	0.5102	0.0133	0.5234		2,009.6078	2,009.6078	0.0648		2,011.2289
Total	**1.3805**	**8.2023**	**9.3223**	**0.0363**	**2.3043**	**0.0671**	**2.3713**	**0.6228**	**0.0637**	**0.6865**		**3,740.6093**	**3,740.6093**	**0.2107**		**3,745.8773**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.6747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1291**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.6747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1291**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.9480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**47.2144**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2176	0.1508	1.4327	4.0200e-003	0.4025	2.8700e-003	0.4054	0.1068	2.6400e-003	0.1094		400.2877	400.2877	0.0129		400.6106
Total	**0.2176**	**0.1508**	**1.4327**	**4.0200e-003**	**0.4025**	**2.8700e-003**	**0.4054**	**0.1068**	**2.6400e-003**	**0.1094**		**400.2877**	**400.2877**	**0.0129**		**400.6106**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.9480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**47.2144**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2176	0.1508	1.4327	4.0200e-003	0.3815	2.8700e-003	0.3844	0.1016	2.6400e-003	0.1043		400.2877	400.2877	0.0129		400.6106
Total	**0.2176**	**0.1508**	**1.4327**	**4.0200e-003**	**0.3815**	**2.8700e-003**	**0.3844**	**0.1016**	**2.6400e-003**	**0.1043**		**400.2877**	**400.2877**	**0.0129**		**400.6106**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7675	12.0809	32.8623	0.1049	9.0174	0.1070	9.1244	2.4103	0.1004	2.5107		10,640.4351	10,640.4351	0.5900		10,655.1840

Unmitigated	2.7675	12.0809	32.8623	0.1049	9.0174	0.1070	9.1244	2.4103	0.1004	2.5107		10,640.4351	10,640.4351	0.5900		10,655.1840

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,370.72	1,489.28	1262.56	3,918,064	3,918,064
Parking Lot	0.00	0.00	0.00		
Total	1,370.72	1,489.28	1,262.56	3,918,064	3,918,064

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day					
NaturalGas Mitigated	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
NaturalGas Unmitigated	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6396.99	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0690**	**0.5895**	**0.2509**	**3.7600e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**752.5872**	**752.5872**	**0.0144**	**0.0138**	**757.0595**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6.39699	0.0690	0.5895	0.2509	3.7600e-003		0.0477	0.0477		0.0477	0.0477		752.5872	752.5872	0.0144	0.0138	757.0595
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0690**	**0.5895**	**0.2509**	**3.7600e-003**		**0.0477**	**0.0477**		**0.0477**	**0.0477**		**752.5872**	**752.5872**	**0.0144**	**0.0138**	**757.0595**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.2519	3.3050	18.5975	0.0207		0.3460	0.3460		0.3460	0.3460	0.0000	3,995.2594	3,995.2594	0.1065	0.0727	4,019.5785
Unmitigated	325.2107	6.4161	410.2102	0.7128		55.1880	55.1880		55.1880	55.1880	5,776.5200	2,453.6123	8,230.1323	5.3612	0.4544	8,499.5645

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5322					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	318.3222	6.2165	392.9341	0.7119		55.0931	55.0931		55.0931	55.0931	5,776.5200	2,422.5882	8,199.1082	5.3308	0.4544	8,467.7788
Landscaping	0.5298	0.1997	17.2761	9.1000e-004		0.0949	0.0949		0.0949	0.0949		31.0241	31.0241	0.0305		31.7857
Total	**325.2107**	**6.4161**	**410.2102**	**0.7128**		**55.1880**	**55.1880**		**55.1880**	**55.1880**	**5,776.5200**	**2,453.6123**	**8,230.1323**	**5.3612**	**0.4544**	**8,499.5645**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.8265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5322					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3634	3.1053	1.3214	0.0198		0.2511	0.2511		0.2511	0.2511	0.0000	3,964.2353	3,964.2353	0.0760	0.0727	3,987.7928
Landscaping	0.5298	0.1997	17.2761	9.1000e-004		0.0949	0.0949		0.0949	0.0949		31.0241	31.0241	0.0305		31.7857
Total	**7.2519**	**3.3050**	**18.5975**	**0.0207**		**0.3460**	**0.3460**		**0.3460**	**0.3460**	**0.0000**	**3,995.2594**	**3,995.2594**	**0.1065**	**0.0727**	**4,019.5785**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #3 - San Diego County, Annual

Encinitas HE - #3

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	228.00	Dwelling Unit	7.60	228,000.00	652
Parking Lot	627.00	Space	5.64	250,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 3 = approx 7.6ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	181.00
tblConstructionPhase	NumDays	20.00	142.00
tblConstructionPhase	PhaseEndDate	6/15/2020	4/22/2019
tblConstructionPhase	PhaseEndDate	5/18/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	7/13/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	5/19/2020	3/26/2019
tblConstructionPhase	PhaseStartDate	3/26/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	6/16/2020	6/16/2019
tblLandUse	LotAcreage	14.25	7.60

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	4.1780	4.4198	3.7080	8.3900e-003	0.4917	0.2066	0.6983	0.1766	0.1935	0.3701	0.0000	759.6774	759.6774	0.1208	0.0000	762.6981
Maximum	**4.1780**	**4.4198**	**3.7080**	**8.3900e-003**	**0.4917**	**0.2066**	**0.6983**	**0.1766**	**0.1935**	**0.3701**	**0.0000**	**759.6774**	**759.6774**	**0.1208**	**0.0000**	**762.6981**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	4.1780	4.4198	3.7080	8.3900e-003	0.3518	0.2066	0.5584	0.1139	0.1935	0.3074	0.0000	759.6770	759.6770	0.1208	0.0000	762.6976
Maximum	**4.1780**	**4.4198**	**3.7080**	**8.3900e-003**	**0.3518**	**0.2066**	**0.5584**	**0.1139**	**0.1935**	**0.3074**	**0.0000**	**759.6770**	**759.6770**	**0.1208**	**0.0000**	**762.6976**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.46**	**0.00**	**20.04**	**35.50**	**0.00**	**16.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	1.5731	1.5731
2	4-1-2019	6-30-2019	1.2546	1.2546
3	7-1-2019	9-30-2019	2.8757	2.8757
		Highest	2.8757	2.8757

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	15.6305	0.2991	19.3637	0.0321		2.4854	2.4854		2.4854	2.4854	235.5144	101.5479	337.0622	0.2201	0.0185	348.0843
Energy	0.0138	0.1179	0.0502	7.5000e-004		9.5400e-003	9.5400e-003		9.5400e-003	9.5400e-003	0.0000	481.4964	481.4964	0.0165	5.3800e-003	483.5110

Mobile	0.4962	2.2264	5.9724	0.0195	1.6187	0.0196	1.6382	0.4335	0.0184	0.4519	0.0000	1,790.7515	1,790.7515	0.0974	0.0000	1,793.1865
Waste						0.0000	0.0000		0.0000	0.0000	21.2897	0.0000	21.2897	1.2582	0.0000	52.7443
Water						0.0000	0.0000		0.0000	0.0000	4.7128	97.2177	101.9305	0.4880	0.0122	117.7770
Total	**16.1404**	**2.6434**	**25.3863**	**0.0523**	**1.6187**	**2.5145**	**4.1331**	**0.4335**	**2.5133**	**2.9468**	**261.5169**	**2,471.0134**	**2,732.5303**	**2.0801**	**0.0361**	**2,795.3031**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3407	0.1593	1.7637	9.8000e-004		0.0206	0.0206		0.0206	0.0206	0.0000	164.4023	164.4023	5.8200e-003	2.9600e-003	165.4309
Energy	0.0138	0.1179	0.0502	7.5000e-004		9.5400e-003	9.5400e-003		9.5400e-003	9.5400e-003	0.0000	481.4964	481.4964	0.0165	5.3800e-003	483.5110
Mobile	0.4962	2.2264	5.9724	0.0195	1.6187	0.0196	1.6382	0.4335	0.0184	0.4519	0.0000	1,790.7515	1,790.7515	0.0974	0.0000	1,793.1865
Waste						0.0000	0.0000		0.0000	0.0000	10.6449	0.0000	10.6449	0.6291	0.0000	26.3722
Water						0.0000	0.0000		0.0000	0.0000	3.7703	82.5006	86.2709	0.3906	9.8300e-003	98.9645
Total	**1.8506**	**2.5036**	**7.7863**	**0.0212**	**1.6187**	**0.0498**	**1.6684**	**0.4335**	**0.0485**	**0.4820**	**14.4151**	**2,519.1508**	**2,533.5659**	**1.1394**	**0.0182**	**2,567.4652**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**88.53**	**5.29**	**69.33**	**59.49**	**0.00**	**98.02**	**59.63**	**0.00**	**98.07**	**83.64**	**94.49**	**-1.95**	**7.28**	**45.23**	**49.72**	**8.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	3/25/2019	5	30	
4	Building Construction	Building Construction	4/23/2019	12/31/2019	5	181	
5	Paving	Paving	3/26/2019	4/22/2019	5	20	
6	Architectural Coating	Architectural Coating	6/16/2019	12/31/2019	5	142	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.64

Residential Indoor: 461,700; Residential Outdoor: 153,900; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	270.00	65.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	54.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**0.0000**	**0.0180**	**0.0180**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8672**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**0.0000**	**0.0180**	**0.0180**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8671**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.7000e-004	2.6300e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6737	0.6737	2.0000e-005	0.0000	0.6742
Total	**3.5000e-004**	**2.7000e-004**	**2.6300e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6737**	**0.6737**	**2.0000e-005**	**0.0000**	**0.6742**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0386	0.0000	0.0386	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0386**	**0.0120**	**0.0506**	**0.0212**	**0.0110**	**0.0322**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	3.5000e-004	2.7000e-004	2.6300e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.6737	0.6737	2.0000e-005	0.0000	0.6742
Total	**3.5000e-004**	**2.7000e-004**	**2.6300e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6737**	**0.6737**	**2.0000e-005**	**0.0000**	**0.6742**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5520	83.5520	0.0264	0.0000	84.2129
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.1301**	**0.0357**	**0.1658**	**0.0540**	**0.0329**	**0.0868**	**0.0000**	**83.5520**	**83.5520**	**0.0264**	**0.0000**	**84.2129**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1800e-003	9.1000e-004	8.7800e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2455	2.2455	7.0000e-005	0.0000	2.2473
Total	**1.1800e-003**	**9.1000e-004**	**8.7800e-003**	**2.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4200e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.2455**	**2.2455**	**7.0000e-005**	**0.0000**	**2.2473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0556	0.0000	0.0556	0.0231	0.0000	0.0231	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0711	0.8178	0.5007	9.3000e-004		0.0357	0.0357		0.0329	0.0329	0.0000	83.5519	83.5519	0.0264	0.0000	84.2128
Total	**0.0711**	**0.8178**	**0.5007**	**9.3000e-004**	**0.0556**	**0.0357**	**0.0914**	**0.0231**	**0.0329**	**0.0559**	**0.0000**	**83.5519**	**83.5519**	**0.0264**	**0.0000**	**84.2128**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1800e-003	9.1000e-004	8.7800e-003	2.0000e-005	2.2800e-003	2.0000e-005	2.3000e-003	6.1000e-004	2.0000e-005	6.2000e-004	0.0000	2.2455	2.2455	7.0000e-005	0.0000	2.2473
Total	**1.1800e-003**	**9.1000e-004**	**8.7800e-003**	**2.0000e-005**	**2.2800e-003**	**2.0000e-005**	**2.3000e-003**	**6.1000e-004**	**2.0000e-005**	**6.2000e-004**	**0.0000**	**2.2455**	**2.2455**	**7.0000e-005**	**0.0000**	**2.2473**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.2137	1.9076	1.5533	2.4400e-003		0.1167	0.1167		0.1098	0.1098	0.0000	212.7693	212.7693	0.0518	0.0000	214.0651
Total	**0.2137**	**1.9076**	**1.5533**	**2.4400e-003**		**0.1167**	**0.1167**		**0.1098**	**0.1098**	**0.0000**	**212.7693**	**212.7693**	**0.0518**	**0.0000**	**214.0651**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0276	0.7384	0.1984	1.6100e-003	0.0390	5.1100e-003	0.0442	0.0113	4.8900e-003	0.0162	0.0000	156.2851	156.2851	0.0125	0.0000	156.5986
Worker	0.0963	0.0739	0.7150	2.0200e-003	0.1960	1.4300e-003	0.1974	0.0521	1.3200e-003	0.0534	0.0000	182.8951	182.8951	5.8800e-003	0.0000	183.0422
Total	**0.1239**	**0.8123**	**0.9133**	**3.6300e-003**	**0.2350**	**6.5400e-003**	**0.2415**	**0.0633**	**6.2100e-003**	**0.0696**	**0.0000**	**339.1802**	**339.1802**	**0.0184**	**0.0000**	**339.6408**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2137	1.9076	1.5533	2.4400e-003		0.1167	0.1167		0.1098	0.1098	0.0000	212.7690	212.7690	0.0518	0.0000	214.0649
Total	**0.2137**	**1.9076**	**1.5533**	**2.4400e-003**		**0.1167**	**0.1167**		**0.1098**	**0.1098**	**0.0000**	**212.7690**	**212.7690**	**0.0518**	**0.0000**	**214.0649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0276	0.7384	0.1984	1.6100e-003	0.0374	5.1100e-003	0.0425	0.0109	4.8900e-003	0.0158	0.0000	156.2851	156.2851	0.0125	0.0000	156.5986
Worker	0.0963	0.0739	0.7150	2.0200e-003	0.1858	1.4300e-003	0.1872	0.0496	1.3200e-003	0.0509	0.0000	182.8951	182.8951	5.8800e-003	0.0000	183.0422
Total	**0.1239**	**0.8123**	**0.9133**	**3.6300e-003**	**0.2232**	**6.5400e-003**	**0.2297**	**0.0604**	**6.2100e-003**	**0.0667**	**0.0000**	**339.1802**	**339.1802**	**0.0184**	**0.0000**	**339.6408**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	7.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0219**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	7.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0219**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.6538					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0189	0.1303	0.1307	2.1000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	18.1281	18.1281	1.5300e-003	0.0000	18.1664
Total	**3.6727**	**0.1303**	**0.1307**	**2.1000e-004**		**9.1400e-003**	**9.1400e-003**		**9.1400e-003**	**9.1400e-003**	**0.0000**	**18.1281**	**18.1281**	**1.5300e-003**	**0.0000**	**18.1664**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0151	0.0116	0.1122	3.2000e-004	0.0308	2.2000e-004	0.0310	8.1700e-003	2.1000e-004	8.3800e-003	0.0000	28.6974	28.6974	9.2000e-004	0.0000	28.7204

Total	**0.0151**	**0.0116**	**0.1122**	**3.2000e-004**	**0.0308**	**2.2000e-004**	**0.0310**	**8.1700e-003**	**2.1000e-004**	**8.3800e-003**	**0.0000**	**28.6974**	**28.6974**	**9.2000e-004**	**0.0000**	**28.7204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.6538					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0189	0.1303	0.1307	2.1000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	18.1281	18.1281	1.5300e-003	0.0000	18.1664
Total	**3.6727**	**0.1303**	**0.1307**	**2.1000e-004**		**9.1400e-003**	**9.1400e-003**		**9.1400e-003**	**9.1400e-003**	**0.0000**	**18.1281**	**18.1281**	**1.5300e-003**	**0.0000**	**18.1664**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0151	0.0116	0.1122	3.2000e-004	0.0292	2.2000e-004	0.0294	7.7800e-003	2.1000e-004	7.9800e-003	0.0000	28.6974	28.6974	9.2000e-004	0.0000	28.7204
Total	**0.0151**	**0.0116**	**0.1122**	**3.2000e-004**	**0.0292**	**2.2000e-004**	**0.0294**	**7.7800e-003**	**2.1000e-004**	**7.9800e-003**	**0.0000**	**28.6974**	**28.6974**	**9.2000e-004**	**0.0000**	**28.7204**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4962	2.2264	5.9724	0.0195	1.6187	0.0196	1.6382	0.4335	0.0184	0.4519	0.0000	1,790.7515	1,790.7515	0.0974	0.0000	1,793.1865
Unmitigated	0.4962	2.2264	5.9724	0.0195	1.6187	0.0196	1.6382	0.4335	0.0184	0.4519	0.0000	1,790.7515	1,790.7515	0.0974	0.0000	1,793.1865

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,502.52	1,632.48	1383.96	4,294,800	4,294,800
Parking Lot	0.00	0.00	0.00		
Total	1,502.52	1,632.48	1,383.96	4,294,800	4,294,800

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	344.9164	344.9164	0.0139	2.8700e-003	346.1194
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	344.9164	344.9164	0.0139	2.8700e-003	346.1194
NaturalGas Mitigated	0.0138	0.1179	0.0502	7.5000e-004		9.5400e-003	9.5400e-003		9.5400e-003	9.5400e-003	0.0000	136.5800	136.5800	2.6200e-003	2.5000e-003	137.3916
NaturalGas Unmitigated	0.0138	0.1179	0.0502	7.5000e-004		9.5400e-003	9.5400e-003		9.5400e-003	9.5400e-003	0.0000	136.5800	136.5800	2.6200e-003	2.5000e-003	137.3916

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.55941e+006	0.0138	0.1179	0.0502	7.5000e-004		9.5400e-003	9.5400e-003		9.5400e-003	9.5400e-003	0.0000	136.5800	136.5800	2.6200e-003	2.5000e-003	137.3916
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0138**	**0.1179**	**0.0502**	**7.5000e-004**		**9.5400e-003**	**9.5400e-003**		**9.5400e-003**	**9.5400e-003**	**0.0000**	**136.5800**	**136.5800**	**2.6200e-003**	**2.5000e-003**	**137.3916**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.55941e+006	0.0138	0.1179	0.0502	7.5000e-004		9.5400e-003	9.5400e-003		9.5400e-003	9.5400e-003	0.0000	136.5800	136.5800	2.6200e-003	2.5000e-003	137.3916
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0138**	**0.1179**	**0.0502**	**7.5000e-004**		**9.5400e-003**	**9.5400e-003**		**9.5400e-003**	**9.5400e-003**	**0.0000**	**136.5800**	**136.5800**	**2.6200e-003**	**2.5000e-003**	**137.3916**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	967627	316.2291	0.0127	2.6300e-003	317.3321
Parking Lot	87780	28.6873	1.1500e-003	2.4000e-004	28.7873
Total		**344.9164**	**0.0139**	**2.8700e-003**	**346.1194**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	967627	316.2291	0.0127	2.6300e-003	317.3321

Parking Lot	87780	28.6873	1.1500e-003	2.4000e-004	28.7873
Total		**344.9164**	**0.0139**	**2.8700e-003**	**346.1194**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3407	0.1593	1.7637	9.8000e-004		0.0206	0.0206		0.0206	0.0206	0.0000	164.4023	164.4023	5.8200e-003	2.9600e-003	165.4309
Unmitigated	15.6305	0.2991	19.3637	0.0321		2.4854	2.4854		2.4854	2.4854	235.5144	101.5479	337.0622	0.2201	0.0185	348.0843

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9067					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Hearth	14.3061	0.2794	17.6594	0.0320		2.4760	2.4760		2.4760	2.4760	235.5144	98.7713	334.2856	0.2173	0.0185	345.2396
Landscaping	0.0523	0.0197	1.7044	9.0000e-005		9.3600e-003	9.3600e-003		9.3600e-003	9.3600e-003	0.0000	2.7766	2.7766	2.7300e-003	0.0000	2.8447
Total	**15.6305**	**0.2991**	**19.3637**	**0.0321**		**2.4854**	**2.4854**		**2.4854**	**2.4854**	**235.5144**	**101.5479**	**337.0622**	**0.2201**	**0.0185**	**348.0843**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9067					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0163	0.1396	0.0594	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	161.6257	161.6257	3.1000e-003	2.9600e-003	162.5862
Landscaping	0.0523	0.0197	1.7044	9.0000e-005		9.3600e-003	9.3600e-003		9.3600e-003	9.3600e-003	0.0000	2.7766	2.7766	2.7300e-003	0.0000	2.8447
Total	**1.3407**	**0.1593**	**1.7637**	**9.8000e-004**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**164.4023**	**164.4023**	**5.8300e-003**	**2.9600e-003**	**165.4309**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	86.2709	0.3906	9.8300e-003	98.9645
Unmitigated	101.9305	0.4880	0.0122	117.7770

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	14.8551 / 9.36518	101.9305	0.4880	0.0122	117.7770
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**101.9305**	**0.4880**	**0.0122**	**117.7770**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Low Rise	11.8841 / 8.79391	86.2709	0.3906	9.8300e-003	98.9645
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**86.2709**	**0.3906**	**9.8300e-003**	**98.9645**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.6449	0.6291	0.0000	26.3722
Unmitigated	21.2897	1.2582	0.0000	52.7443

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Low Rise	104.88	21.2897	1.2582	0.0000	52.7443
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**21.2897**	**1.2582**	**0.0000**	**52.7443**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	52.44	10.6449	0.6291	0.0000	26.3722
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**10.6449**	**0.6291**	**0.0000**	**26.3722**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #3

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	228.00	Dwelling Unit	7.60	228,000.00	652
Parking Lot	627.00	Space	5.64	250,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 3 = approx 7.6ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	181.00
tblConstructionPhase	NumDays	20.00	142.00
tblConstructionPhase	PhaseEndDate	6/15/2020	4/22/2019
tblConstructionPhase	PhaseEndDate	5/18/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	7/13/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	5/19/2020	3/26/2019
tblConstructionPhase	PhaseStartDate	3/26/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	6/16/2020	6/16/2019
tblLandUse	LotAcreage	14.25	7.60

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	55.6612	54.5750	33.9956	0.0761	18.2141	2.3914	20.6055	9.9699	2.2001	12.1700	0.0000	7,616.5831	7,616.5831	1.9482	0.0000	7,638.9254
Maximum	**55.6612**	**54.5750**	**33.9956**	**0.0761**	**18.2141**	**2.3914**	**20.6055**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**7,616.5831**	**7,616.5831**	**1.9482**	**0.0000**	**7,638.9254**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	55.6612	54.5750	33.9956	0.0761	7.8635	2.3914	10.2549	4.2827	2.2001	6.4828	0.0000	7,616.5831	7,616.5831	1.9482	0.0000	7,638.9254
Maximum	**55.6612**	**54.5750**	**33.9956**	**0.0761**	**7.8635**	**2.3914**	**10.2549**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**7,616.5831**	**7,616.5831**	**1.9482**	**0.0000**	**7,638.9254**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.83**	**0.00**	**50.23**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	356.4809	7.0331	449.6535	0.7813		60.4945	60.4945		60.4945	60.4945	6,331.9546	2,689.5366	9,021.4912	5.8767	0.4981	9,316.8303
Energy	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Mobile	3.1172	12.8440	36.5999	0.1213	9.8845	0.1165	10.0010	2.6420	0.1093	2.7514		12,300.1408	12,300.1408	0.6451		12,316.2670
Total	**359.6738**	**20.5233**	**486.5283**	**0.9067**	**9.8845**	**60.6633**	**70.5478**	**2.6420**	**60.6561**	**63.2981**	**6,331.9546**	**15,814.6288**	**22,146.5834**	**6.5376**	**0.5132**	**22,462.9510**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.9492	3.6228	20.3857	0.0227		0.3792	0.3792		0.3792	0.3792	0.0000	4,379.4189	4,379.4189	0.1167	0.0797	4,406.0764
Energy	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Mobile	3.1172	12.8440	36.5999	0.1213	9.8845	0.1165	10.0010	2.6420	0.1093	2.7514		12,300.1408	12,300.1408	0.6451		12,316.2670
Total	**11.1421**	**17.1130**	**57.2606**	**0.1481**	**9.8845**	**0.5480**	**10.4325**	**2.6420**	**0.5408**	**3.1828**	**0.0000**	**17,504.5112**	**17,504.5112**	**0.7775**	**0.0948**	**17,552.1970**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.90**	**16.62**	**88.23**	**83.67**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-10.69**	**20.96**	**88.11**	**81.53**	**21.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	3/25/2019	5	30	
4	Building Construction	Building Construction	4/23/2019	12/31/2019	5	181	
5	Paving	Paving	3/26/2019	4/22/2019	5	20	
6	Architectural Coating	Architectural Coating	6/16/2019	12/31/2019	5	142	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.64

Residential Indoor: 461,700; Residential Outdoor: 153,900; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	270.00	65.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	54.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342

Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2992	8.0592	2.0806	0.0180	0.4400	0.0561	0.4961	0.1267	0.0536	0.1803		1,924.1081	1,924.1081	0.1486		1,927.8219
Worker	1.0602	0.7399	8.3541	0.0236	2.2180	0.0158	2.2338	0.5883	0.0146	0.6029		2,349.5390	2,349.5390	0.0750		2,351.4147
Total	**1.3593**	**8.7991**	**10.4348**	**0.0415**	**2.6580**	**0.0719**	**2.7299**	**0.7150**	**0.0682**	**0.7832**		**4,273.6471**	**4,273.6471**	**0.2236**		**4,279.2366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.2992	8.0592	2.0806	0.0180	0.4212	0.0561	0.4773	0.1221	0.0536	0.1757		1,924.1081	1,924.1081	0.1486		1,927.8219
Worker	1.0602	0.7399	8.3541	0.0236	2.1023	0.0158	2.1181	0.5599	0.0146	0.5745		2,349.5390	2,349.5390	0.0750		2,351.4147
Total	**1.3593**	**8.7991**	**10.4348**	**0.0415**	**2.5235**	**0.0719**	**2.5954**	**0.6820**	**0.0682**	**0.7502**		**4,273.6471**	**4,273.6471**	**0.2236**		**4,279.2366**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1933**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1933**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	51.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**51.7287**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2120	0.1480	1.6708	4.7200e-003	0.4436	3.1600e-003	0.4468	0.1177	2.9100e-003	0.1206		469.9078	469.9078	0.0150		470.2829
Total	**0.2120**	**0.1480**	**1.6708**	**4.7200e-003**	**0.4436**	**3.1600e-003**	**0.4468**	**0.1177**	**2.9100e-003**	**0.1206**		**469.9078**	**469.9078**	**0.0150**		**470.2829**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	51.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**51.7287**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2120	0.1480	1.6708	4.7200e-003	0.4205	3.1600e-003	0.4236	0.1120	2.9100e-003	0.1149		469.9078	469.9078	0.0150		470.2829
Total	**0.2120**	**0.1480**	**1.6708**	**4.7200e-003**	**0.4205**	**3.1600e-003**	**0.4236**	**0.1120**	**2.9100e-003**	**0.1149**		**469.9078**	**469.9078**	**0.0150**		**470.2829**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.1172	12.8440	36.5999	0.1213	9.8845	0.1165	10.0010	2.6420	0.1093	2.7514		12,300.1408	12,300.1408	0.6451		12,316.2670

Unmitigated	3.1172	12.8440	36.5999	0.1213	9.8845	0.1165	10.0010	2.6420	0.1093	2.7514		12,300.1408	12,300.1408	0.6451		12,316.2670

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,502.52	1,632.48	1383.96	4,294,800	4,294,800
Parking Lot	0.00	0.00	0.00		
Total	1,502.52	1,632.48	1,383.96	4,294,800	4,294,800

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day					
NaturalGas Mitigated	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
NaturalGas Unmitigated	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	7012.09	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0756**	**0.6462**	**0.2750**	**4.1200e-003**		**0.0523**	**0.0523**		**0.0523**	**0.0523**		**824.9514**	**824.9514**	**0.0158**	**0.0151**	**829.8537**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	7.01209	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0756**	**0.6462**	**0.2750**	**4.1200e-003**		**0.0523**	**0.0523**		**0.0523**	**0.0523**		**824.9514**	**824.9514**	**0.0158**	**0.0151**	**829.8537**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.9492	3.6228	20.3857	0.0227		0.3792	0.3792		0.3792	0.3792	0.0000	4,379.4189	4,379.4189	0.1167	0.0797	4,406.0764
Unmitigated	356.4809	7.0331	449.6535	0.7813		60.4945	60.4945		60.4945	60.4945	6,331.9546	2,689.5366	9,021.4912	5.8767	0.4981	9,316.8303

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	348.9301	6.8142	430.7163	0.7803		60.3905	60.3905		60.3905	60.3905	6,331.9546	2,655.5294	8,987.4840	5.8433	0.4981	9,281.9883
Landscaping	0.5808	0.2189	18.9372	1.0000e-003		0.1040	0.1040		0.1040	0.1040		34.0072	34.0072	0.0334		34.8420
Total	**356.4809**	**7.0331**	**449.6535**	**0.7813**		**60.4945**	**60.4945**		**60.4945**	**60.4945**	**6,331.9546**	**2,689.5366**	**9,021.4912**	**5.8767**	**0.4981**	**9,316.8303**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3983	3.4039	1.4485	0.0217		0.2752	0.2752		0.2752	0.2752	0.0000	4,345.4118	4,345.4118	0.0833	0.0797	4,371.2344
Landscaping	0.5808	0.2189	18.9372	1.0000e-003		0.1040	0.1040		0.1040	0.1040		34.0072	34.0072	0.0334		34.8420
Total	**7.9492**	**3.6228**	**20.3857**	**0.0227**		**0.3792**	**0.3792**		**0.3792**	**0.3792**	**0.0000**	**4,379.4189**	**4,379.4189**	**0.1167**	**0.0797**	**4,406.0764**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #3

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	228.00	Dwelling Unit	7.60	228,000.00	652
Parking Lot	627.00	Space	5.64	250,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 3 = approx 7.6ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	181.00
tblConstructionPhase	NumDays	20.00	142.00
tblConstructionPhase	PhaseEndDate	6/15/2020	4/22/2019
tblConstructionPhase	PhaseEndDate	5/18/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	7/13/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	5/19/2020	3/26/2019
tblConstructionPhase	PhaseStartDate	3/26/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	6/16/2020	6/16/2019
tblLandUse	LotAcreage	14.25	7.60

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	55.8407	54.5817	33.9616	0.0740	18.2141	2.3914	20.6055	9.9699	2.2001	12.1700	0.0000	7,395.0804	7,395.0804	1.9479	0.0000	7,417.5439
Maximum	**55.8407**	**54.5817**	**33.9616**	**0.0740**	**18.2141**	**2.3914**	**20.6055**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**7,395.0804**	**7,395.0804**	**1.9479**	**0.0000**	**7,417.5439**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	55.8407	54.5817	33.9616	0.0740	7.8635	2.3914	10.2549	4.2827	2.2001	6.4828	0.0000	7,395.0804	7,395.0804	1.9479	0.0000	7,417.5439
Maximum	**55.8407**	**54.5817**	**33.9616**	**0.0740**	**7.8635**	**2.3914**	**10.2549**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**7,395.0804**	**7,395.0804**	**1.9479**	**0.0000**	**7,417.5439**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.83**	**0.00**	**50.23**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	356.4809	7.0331	449.6535	0.7813		60.4945	60.4945		60.4945	60.4945	6,331.9546	2,689.5366	9,021.4912	5.8767	0.4981	9,316.8303
Energy	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Mobile	3.0336	13.2425	36.0222	0.1149	9.8845	0.1173	10.0018	2.6420	0.1101	2.7521		11,663.5539	11,663.5539	0.6467		11,679.7210
Total	**359.5901**	**20.9218**	**485.9506**	**0.9004**	**9.8845**	**60.6641**	**70.5486**	**2.6420**	**60.6568**	**63.2989**	**6,331.9546**	**15,178.0418**	**21,509.9964**	**6.5392**	**0.5132**	**21,826.4049**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.9492	3.6228	20.3857	0.0227		0.3792	0.3792		0.3792	0.3792	0.0000	4,379.4189	4,379.4189	0.1167	0.0797	4,406.0764
Energy	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Mobile	3.0336	13.2425	36.0222	0.1149	9.8845	0.1173	10.0018	2.6420	0.1101	2.7521		11,663.5539	11,663.5539	0.6467		11,679.7210
Total	**11.0584**	**17.5115**	**56.6829**	**0.1418**	**9.8845**	**0.5487**	**10.4332**	**2.6420**	**0.5415**	**3.1836**	**0.0000**	**16,867.9242**	**16,867.9242**	**0.7792**	**0.0948**	**16,915.6510**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.92**	**16.30**	**88.34**	**84.25**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-11.13**	**21.58**	**88.08**	**81.53**	**22.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	3/25/2019	5	30	
4	Building Construction	Building Construction	4/23/2019	12/31/2019	5	181	
5	Paving	Paving	3/26/2019	4/22/2019	5	20	
6	Architectural Coating	Architectural Coating	6/16/2019	12/31/2019	5	142	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.64

Residential Indoor: 461,700; Residential Outdoor: 153,900; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	270.00	65.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	54.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359

Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3120	8.0657	2.3069	0.0175	0.4400	0.0571	0.4971	0.1267	0.0546	0.1813		1,875.2516	1,875.2516	0.1580		1,879.2024
Worker	1.1990	0.8309	7.8946	0.0222	2.2180	0.0158	2.2338	0.5883	0.0146	0.6029		2,205.6671	2,205.6671	0.0712		2,207.4464
Total	**1.5111**	**8.8966**	**10.2015**	**0.0397**	**2.6580**	**0.0729**	**2.7309**	**0.7150**	**0.0692**	**0.7841**		**4,080.9188**	**4,080.9188**	**0.2292**		**4,086.6488**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.3120	8.0657	2.3069	0.0175	0.4212	0.0571	0.4783	0.1221	0.0546	0.1766		1,875.2516	1,875.2516	0.1580		1,879.2024
Worker	1.1990	0.8309	7.8946	0.0222	2.1023	0.0158	2.1181	0.5599	0.0146	0.5745		2,205.6671	2,205.6671	0.0712		2,207.4464
Total	**1.5111**	**8.8966**	**10.2015**	**0.0397**	**2.5235**	**0.0729**	**2.5964**	**0.6820**	**0.0692**	**0.7511**		**4,080.9188**	**4,080.9188**	**0.2292**		**4,086.6488**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1933**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.7388					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1933**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	51.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**51.7287**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2398	0.1662	1.5789	4.4300e-003	0.4436	3.1600e-003	0.4468	0.1177	2.9100e-003	0.1206		441.1334	441.1334	0.0142		441.4893
Total	**0.2398**	**0.1662**	**1.5789**	**4.4300e-003**	**0.4436**	**3.1600e-003**	**0.4468**	**0.1177**	**2.9100e-003**	**0.1206**		**441.1334**	**441.1334**	**0.0142**		**441.4893**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	51.4622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**51.7287**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2398	0.1662	1.5789	4.4300e-003	0.4205	3.1600e-003	0.4236	0.1120	2.9100e-003	0.1149		441.1334	441.1334	0.0142		441.4893
Total	**0.2398**	**0.1662**	**1.5789**	**4.4300e-003**	**0.4205**	**3.1600e-003**	**0.4236**	**0.1120**	**2.9100e-003**	**0.1149**		**441.1334**	**441.1334**	**0.0142**		**441.4893**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0336	13.2425	36.0222	0.1149	9.8845	0.1173	10.0018	2.6420	0.1101	2.7521		11,663.5539	11,663.5539	0.6467		11,679.7210

Unmitigated	3.0336	13.2425	36.0222	0.1149	9.8845	0.1173	10.0018	2.6420	0.1101	2.7521		11,663.5539	11,663.5539	0.6467		11,679.7210

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,502.52	1,632.48	1383.96	4,294,800	4,294,800
Parking Lot	0.00	0.00	0.00		
Total	1,502.52	1,632.48	1,383.96	4,294,800	4,294,800

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day					
NaturalGas Mitigated	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
NaturalGas Unmitigated	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	7012.09	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0756**	**0.6462**	**0.2750**	**4.1200e-003**		**0.0523**	**0.0523**		**0.0523**	**0.0523**		**824.9514**	**824.9514**	**0.0158**	**0.0151**	**829.8537**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	7.01209	0.0756	0.6462	0.2750	4.1200e-003		0.0523	0.0523		0.0523	0.0523		824.9514	824.9514	0.0158	0.0151	829.8537
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0756**	**0.6462**	**0.2750**	**4.1200e-003**		**0.0523**	**0.0523**		**0.0523**	**0.0523**		**824.9514**	**824.9514**	**0.0158**	**0.0151**	**829.8537**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.9492	3.6228	20.3857	0.0227		0.3792	0.3792		0.3792	0.3792	0.0000	4,379.4189	4,379.4189	0.1167	0.0797	4,406.0764
Unmitigated	356.4809	7.0331	449.6535	0.7813		60.4945	60.4945		60.4945	60.4945	6,331.9546	2,689.5366	9,021.4912	5.8767	0.4981	9,316.8303

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	348.9301	6.8142	430.7163	0.7803		60.3905	60.3905		60.3905	60.3905	6,331.9546	2,655.5294	8,987.4840	5.8433	0.4981	9,281.9883
Landscaping	0.5808	0.2189	18.9372	1.0000e-003		0.1040	0.1040		0.1040	0.1040		34.0072	34.0072	0.0334		34.8420
Total	**356.4809**	**7.0331**	**449.6535**	**0.7813**		**60.4945**	**60.4945**		**60.4945**	**60.4945**	**6,331.9546**	**2,689.5366**	**9,021.4912**	**5.8767**	**0.4981**	**9,316.8303**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.9680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3983	3.4039	1.4485	0.0217		0.2752	0.2752		0.2752	0.2752	0.0000	4,345.4118	4,345.4118	0.0833	0.0797	4,371.2344
Landscaping	0.5808	0.2189	18.9372	1.0000e-003		0.1040	0.1040		0.1040	0.1040		34.0072	34.0072	0.0334		34.8420
Total	**7.9492**	**3.6228**	**20.3857**	**0.0227**		**0.3792**	**0.3792**		**0.3792**	**0.3792**	**0.0000**	**4,379.4189**	**4,379.4189**	**0.1167**	**0.0797**	**4,406.0764**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #9

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	296.00	Dwelling Unit	21.50	296,000.00	847
Parking Lot	814.00	Space	7.33	325,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 9 = approx 21.5 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 9 = 21.5 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	20.00
tblConstructionPhase	NumDays	440.00	146.00
tblConstructionPhase	NumDays	35.00	126.00
tblConstructionPhase	PhaseEndDate	3/8/2021	6/10/2019
tblConstructionPhase	PhaseEndDate	1/18/2021	12/31/2019
tblConstructionPhase	PhaseEndDate	4/26/2021	12/31/2019
tblConstructionPhase	PhaseStartDate	1/19/2021	5/14/2019
tblConstructionPhase	PhaseStartDate	5/14/2019	6/11/2019
tblConstructionPhase	PhaseStartDate	3/9/2021	7/9/2019
tblLandUse	LotAcreage	18.50	21.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	5.3228	5.3209	4.0255	0.0101	0.9909	0.2237	1.2147	0.3103	0.2089	0.5192	0.0000	923.7151	923.7151	0.1450	0.0000	927.3394
Maximum	**5.3228**	**5.3209**	**4.0255**	**0.0101**	**0.9909**	**0.2237**	**1.2147**	**0.3103**	**0.2089**	**0.5192**	**0.0000**	**923.7151**	**923.7151**	**0.1450**	**0.0000**	**927.3394**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	5.3228	5.3209	4.0255	0.0101	0.5872	0.2237	0.8109	0.1771	0.2089	0.3860	0.0000	923.7146	923.7146	0.1450	0.0000	927.3389
Maximum	**5.3228**	**5.3209**	**4.0255**	**0.0101**	**0.5872**	**0.2237**	**0.8109**	**0.1771**	**0.2089**	**0.3860**	**0.0000**	**923.7146**	**923.7146**	**0.1450**	**0.0000**	**927.3389**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.75**	**0.00**	**33.24**	**42.93**	**0.00**	**25.66**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2019**	**3-31-2019**	1.9465	1.9465
2	**4-1-2019**	**6-30-2019**	1.3519	1.3519
3	**7-1-2019**	**9-30-2019**	3.5419	3.5419
		Highest	3.5419	3.5419

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	20.2922	0.3883	25.1389	0.0417		3.2266	3.2266		3.2266	3.2266	305.7555	131.8341	437.5895	0.2857	0.0241	451.8990
Energy	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	625.1005	625.1005	0.0214	6.9800e-003	627.7161

Mobile	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965
Waste						0.0000	0.0000		0.0000	0.0000	27.6393	0.0000	27.6393	1.6334	0.0000	68.4751
Water						0.0000	0.0000		0.0000	0.0000	6.1184	126.2124	132.3308	0.6335	0.0159	152.9034
Total	**20.9543**	**3.4318**	**32.9576**	**0.0679**	**2.1014**	**3.2644**	**5.3658**	**0.5628**	**3.2628**	**3.8256**	**339.5132**	**3,207.9823**	**3,547.4955**	**2.7005**	**0.0469**	**3,628.9900**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.7405	0.2068	2.2898	1.2700e-003		0.0268	0.0268		0.0268	0.0268	0.0000	213.4346	213.4346	7.5600e-003	3.8500e-003	214.7700
Energy	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	625.1005	625.1005	0.0214	6.9800e-003	627.7161
Mobile	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965
Waste						0.0000	0.0000		0.0000	0.0000	13.8196	0.0000	13.8196	0.8167	0.0000	34.2375
Water						0.0000	0.0000		0.0000	0.0000	4.8947	107.1061	112.0008	0.5071	0.0128	128.4803
Total	**2.4026**	**3.2503**	**10.1085**	**0.0275**	**2.1014**	**0.0646**	**2.1660**	**0.5628**	**0.0630**	**0.6258**	**18.7144**	**3,270.4765**	**3,289.1908**	**1.4792**	**0.0236**	**3,333.2004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**88.53**	**5.29**	**69.33**	**59.49**	**0.00**	**98.02**	**59.63**	**0.00**	**98.07**	**83.64**	**94.49**	**-1.95**	**7.28**	**45.22**	**49.72**	**8.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Demolition	Demolition	1/1/2019	2/11/2019	5	30	
2	Site Preparation	Site Preparation	2/12/2019	3/11/2019	5	20	
3	Grading	Grading	3/12/2019	5/13/2019	5	45	
4	Building Construction	Building Construction	6/11/2019	12/31/2019	5	146	
5	Paving	Paving	5/14/2019	6/10/2019	5	20	
6	Architectural Coating	Architectural Coating	7/9/2019	12/31/2019	5	126	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 7.33

Residential Indoor: 599,400; Residential Outdoor: 199,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42

Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,757.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	350.00	85.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3020	0.0000	0.3020	0.0457	0.0000	0.0457	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0527	0.5367	0.3309	5.8000e-004		0.0269	0.0269		0.0250	0.0250	0.0000	51.9395	51.9395	0.0145	0.0000	52.3007
Total	**0.0527**	**0.5367**	**0.3309**	**5.8000e-004**	**0.3020**	**0.0269**	**0.3289**	**0.0457**	**0.0250**	**0.0708**	**0.0000**	**51.9395**	**51.9395**	**0.0145**	**0.0000**	**52.3007**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0121	0.4224	0.0922	1.0900e-003	0.0236	1.5800e-003	0.0252	6.4800e-003	1.5100e-003	7.9900e-003	0.0000	107.4671	107.4671	9.7300e-003	0.0000	107.7104
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	6.8000e-004	6.5800e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.6841	1.6841	5.0000e-005	0.0000	1.6855
Total	**0.0130**	**0.4231**	**0.0987**	**1.1100e-003**	**0.0254**	**1.5900e-003**	**0.0270**	**6.9600e-003**	**1.5200e-003**	**8.4800e-003**	**0.0000**	**109.1512**	**109.1512**	**9.7800e-003**	**0.0000**	**109.3958**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1291	0.0000	0.1291	0.0196	0.0000	0.0196	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0527	0.5367	0.3309	5.8000e-004		0.0269	0.0269		0.0250	0.0250	0.0000	51.9394	51.9394	0.0145	0.0000	52.3007
Total	**0.0527**	**0.5367**	**0.3309**	**5.8000e-004**	**0.1291**	**0.0269**	**0.1560**	**0.0196**	**0.0250**	**0.0446**	**0.0000**	**51.9394**	**51.9394**	**0.0145**	**0.0000**	**52.3007**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0121	0.4224	0.0922	1.0900e-003	0.0225	1.5800e-003	0.0241	6.2200e-003	1.5100e-003	7.7300e-003	0.0000	107.4671	107.4671	9.7300e-003	0.0000	107.7104
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	6.8000e-004	6.5800e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.6841	1.6841	5.0000e-005	0.0000	1.6855
Total	**0.0130**	**0.4231**	**0.0987**	**1.1100e-003**	**0.0242**	**1.5900e-003**	**0.0258**	**6.6800e-003**	**1.5200e-003**	**8.2000e-003**	**0.0000**	**109.1512**	**109.1512**	**9.7800e-003**	**0.0000**	**109.3958**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0434	0.4557	0.2206	3.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	34.1687	34.1687	0.0108	0.0000	34.4390
Total	**0.0434**	**0.4557**	**0.2206**	**3.8000e-004**	**0.1807**	**0.0239**	**0.2046**	**0.0993**	**0.0220**	**0.1213**	**0.0000**	**34.1687**	**34.1687**	**0.0108**	**0.0000**	**34.4390**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1000e-004	5.4000e-004	5.2700e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3473	1.3473	4.0000e-005	0.0000	1.3484
Total	**7.1000e-004**	**5.4000e-004**	**5.2700e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.3473**	**1.3473**	**4.0000e-005**	**0.0000**	**1.3484**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0772	0.0000	0.0772	0.0425	0.0000	0.0425	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0434	0.4557	0.2206	3.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	34.1687	34.1687	0.0108	0.0000	34.4389
Total	**0.0434**	**0.4557**	**0.2206**	**3.8000e-004**	**0.0772**	**0.0239**	**0.1011**	**0.0425**	**0.0220**	**0.0644**	**0.0000**	**34.1687**	**34.1687**	**0.0108**	**0.0000**	**34.4389**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	7.1000e-004	5.4000e-004	5.2700e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.7000e-004	1.0000e-005	3.7000e-004	0.0000	1.3473	1.3473	4.0000e-005	0.0000	1.3484
Total	**7.1000e-004**	**5.4000e-004**	**5.2700e-003**	**1.0000e-005**	**1.3700e-003**	**1.0000e-005**	**1.3800e-003**	**3.7000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.3473**	**1.3473**	**4.0000e-005**	**0.0000**	**1.3484**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1952	0.0000	0.1952	0.0809	0.0000	0.0809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1066	1.2267	0.7510	1.4000e-003		0.0536	0.0536		0.0493	0.0493	0.0000	125.3280	125.3280	0.0397	0.0000	126.3193
Total	**0.1066**	**1.2267**	**0.7510**	**1.4000e-003**	**0.1952**	**0.0536**	**0.2488**	**0.0809**	**0.0493**	**0.1302**	**0.0000**	**125.3280**	**125.3280**	**0.0397**	**0.0000**	**126.3193**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.3600e-003	0.0132	4.0000e-005	3.6100e-003	3.0000e-005	3.6300e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	3.3682	3.3682	1.1000e-004	0.0000	3.3709
Total	**1.7700e-003**	**1.3600e-003**	**0.0132**	**4.0000e-005**	**3.6100e-003**	**3.0000e-005**	**3.6300e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**3.3682**	**3.3682**	**1.1000e-004**	**0.0000**	**3.3709**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0834	0.0000	0.0834	0.0346	0.0000	0.0346	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1066	1.2267	0.7510	1.4000e-003		0.0536	0.0536		0.0493	0.0493	0.0000	125.3278	125.3278	0.0397	0.0000	126.3191
Total	**0.1066**	**1.2267**	**0.7510**	**1.4000e-003**	**0.0834**	**0.0536**	**0.1370**	**0.0346**	**0.0493**	**0.0839**	**0.0000**	**125.3278**	**125.3278**	**0.0397**	**0.0000**	**126.3191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.3600e-003	0.0132	4.0000e-005	3.4200e-003	3.0000e-005	3.4500e-003	9.1000e-004	2.0000e-005	9.4000e-004	0.0000	3.3682	3.3682	1.1000e-004	0.0000	3.3709
Total	**1.7700e-003**	**1.3600e-003**	**0.0132**	**4.0000e-005**	**3.4200e-003**	**3.0000e-005**	**3.4500e-003**	**9.1000e-004**	**2.0000e-005**	**9.4000e-004**	**0.0000**	**3.3682**	**3.3682**	**1.1000e-004**	**0.0000**	**3.3709**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.1724	1.5388	1.2530	1.9600e-003		0.0942	0.0942		0.0885	0.0885	0.0000	171.6261	171.6261	0.0418	0.0000	172.6713
Total	**0.1724**	**1.5388**	**1.2530**	**1.9600e-003**		**0.0942**	**0.0942**		**0.0885**	**0.0885**	**0.0000**	**171.6261**	**171.6261**	**0.0418**	**0.0000**	**172.6713**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	0.7788	0.2092	1.7000e-003	0.0412	5.3900e-003	0.0466	0.0119	5.1600e-003	0.0171	0.0000	164.8532	164.8532	0.0132	0.0000	165.1839
Worker	0.1007	0.0773	0.7476	2.1200e-003	0.2049	1.5000e-003	0.2064	0.0545	1.3800e-003	0.0558	0.0000	191.2409	191.2409	6.1500e-003	0.0000	191.3946
Total	**0.1298**	**0.8561**	**0.9568**	**3.8200e-003**	**0.2461**	**6.8900e-003**	**0.2530**	**0.0663**	**6.5400e-003**	**0.0729**	**0.0000**	**356.0940**	**356.0940**	**0.0194**	**0.0000**	**356.5785**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1724	1.5388	1.2530	1.9600e-003		0.0942	0.0942		0.0885	0.0885	0.0000	171.6259	171.6259	0.0418	0.0000	172.6711
Total	**0.1724**	**1.5388**	**1.2530**	**1.9600e-003**		**0.0942**	**0.0942**		**0.0885**	**0.0885**	**0.0000**	**171.6259**	**171.6259**	**0.0418**	**0.0000**	**172.6711**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	0.7788	0.2092	1.7000e-003	0.0394	5.3900e-003	0.0448	0.0115	5.1600e-003	0.0166	0.0000	164.8532	164.8532	0.0132	0.0000	165.1839
Worker	0.1007	0.0773	0.7476	2.1200e-003	0.1942	1.5000e-003	0.1957	0.0518	1.3800e-003	0.0532	0.0000	191.2409	191.2409	6.1500e-003	0.0000	191.3946
Total	**0.1298**	**0.8561**	**0.9568**	**3.8200e-003**	**0.2337**	**6.8900e-003**	**0.2406**	**0.0633**	**6.5400e-003**	**0.0698**	**0.0000**	**356.0940**	**356.0940**	**0.0194**	**0.0000**	**356.5785**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	9.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0241**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	9.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0241**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.7436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0168	0.1156	0.1160	1.9000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	16.0855	16.0855	1.3600e-003	0.0000	16.1195
Total	**4.7603**	**0.1156**	**0.1160**	**1.9000e-004**		**8.1100e-003**	**8.1100e-003**		**8.1100e-003**	**8.1100e-003**	**0.0000**	**16.0855**	**16.0855**	**1.3600e-003**	**0.0000**	**16.1195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0174	0.0133	0.1290	3.7000e-004	0.0354	2.6000e-004	0.0356	9.4000e-003	2.4000e-004	9.6400e-003	0.0000	33.0087	33.0087	1.0600e-003	0.0000	33.0352

Total	**0.0174**	**0.0133**	**0.1290**	**3.7000e-004**	**0.0354**	**2.6000e-004**	**0.0356**	**9.4000e-003**	**2.4000e-004**	**9.6400e-003**	**0.0000**	**33.0087**	**33.0087**	**1.0600e-003**	**0.0000**	**33.0352**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.7436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0168	0.1156	0.1160	1.9000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	16.0855	16.0855	1.3600e-003	0.0000	16.1195
Total	**4.7603**	**0.1156**	**0.1160**	**1.9000e-004**		**8.1100e-003**	**8.1100e-003**		**8.1100e-003**	**8.1100e-003**	**0.0000**	**16.0855**	**16.0855**	**1.3600e-003**	**0.0000**	**16.1195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0174	0.0133	0.1290	3.7000e-004	0.0335	2.6000e-004	0.0338	8.9500e-003	2.4000e-004	9.1800e-003	0.0000	33.0087	33.0087	1.0600e-003	0.0000	33.0352
Total	**0.0174**	**0.0133**	**0.1290**	**3.7000e-004**	**0.0335**	**2.6000e-004**	**0.0338**	**8.9500e-003**	**2.4000e-004**	**9.1800e-003**	**0.0000**	**33.0087**	**33.0087**	**1.0600e-003**	**0.0000**	**33.0352**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965
Unmitigated	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,950.64	2,119.36	1796.72	5,575,706	5,575,706
Parking Lot	0.00	0.00	0.00		
Total	1,950.64	2,119.36	1,796.72	5,575,706	5,575,706

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	447.7862	447.7862	0.0180	3.7300e-003	449.3480
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	447.7862	447.7862	0.0180	3.7300e-003	449.3480
NaturalGas Mitigated	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680
NaturalGas Unmitigated	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.32275e+006	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0179**	**0.1531**	**0.0652**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**177.3143**	**177.3143**	**3.4000e-003**	**3.2500e-003**	**178.3680**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.32275e+006	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0179**	**0.1531**	**0.0652**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**177.3143**	**177.3143**	**3.4000e-003**	**3.2500e-003**	**178.3680**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.25622e+006	410.5431	0.0165	3.4200e-003	411.9750
Parking Lot	113960	37.2431	1.5000e-003	3.1000e-004	37.3730
Total		**447.7862**	**0.0180**	**3.7300e-003**	**449.3481**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.25622e+006	410.5431	0.0165	3.4200e-003	411.9750

Parking Lot	113960	37.2431	1.5000e-003	3.1000e-004	37.3730
Total		**447.7862**	**0.0180**	**3.7300e-003**	**449.3481**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7405	0.2068	2.2898	1.2700e-003		0.0268	0.0268		0.0268	0.0268	0.0000	213.4346	213.4346	7.5600e-003	3.8500e-003	214.7700
Unmitigated	20.2922	0.3883	25.1389	0.0417		3.2266	3.2266		3.2266	3.2266	305.7555	131.8341	437.5895	0.2857	0.0241	451.8990

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Hearth	18.5729	0.3627	22.9262	0.0415		3.2145	3.2145		3.2145	3.2145	305.7555	128.2294	433.9849	0.2822	0.0241	448.2058
Landscaping	0.0679	0.0256	2.2127	1.2000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	3.6047	3.6047	3.5400e-003	0.0000	3.6932
Total	**20.2922**	**0.3883**	**25.1389**	**0.0417**		**3.2266**	**3.2266**		**3.2266**	**3.2266**	**305.7555**	**131.8341**	**437.5895**	**0.2857**	**0.0241**	**451.8990**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0212	0.1812	0.0771	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	209.8299	209.8299	4.0200e-003	3.8500e-003	211.0768
Landscaping	0.0679	0.0256	2.2127	1.2000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	3.6047	3.6047	3.5400e-003	0.0000	3.6932
Total	**1.7405**	**0.2068**	**2.2898**	**1.2800e-003**		**0.0268**	**0.0268**		**0.0268**	**0.0268**	**0.0000**	**213.4346**	**213.4346**	**7.5600e-003**	**3.8500e-003**	**214.7700**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	112.0008	0.5071	0.0128	128.4803
Unmitigated	132.3308	0.6335	0.0159	152.9034

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	19.2856 / 12.1583	132.3308	0.6335	0.0159	152.9034
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**132.3308**	**0.6335**	**0.0159**	**152.9034**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Low Rise	15.4285 / 11.4167	112.0008	0.5071	0.0128	128.4803
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**112.0008**	**0.5071**	**0.0128**	**128.4803**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.8196	0.8167	0.0000	34.2375
Unmitigated	27.6393	1.6334	0.0000	68.4751

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Low Rise	136.16	27.6393	1.6334	0.0000	68.4751
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**27.6393**	**1.6334**	**0.0000**	**68.4751**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	68.08	13.8196	0.8167	0.0000	34.2375
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**13.8196**	**0.8167**	**0.0000**	**34.2375**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #9

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	296.00	Dwelling Unit	21.50	296,000.00	847
Parking Lot	814.00	Space	7.33	325,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 9 = approx 21.5 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 9 = 21.5 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	20.00
tblConstructionPhase	NumDays	440.00	146.00
tblConstructionPhase	NumDays	35.00	126.00
tblConstructionPhase	PhaseEndDate	3/8/2021	6/10/2019
tblConstructionPhase	PhaseEndDate	1/18/2021	12/31/2019
tblConstructionPhase	PhaseEndDate	4/26/2021	12/31/2019
tblConstructionPhase	PhaseStartDate	1/19/2021	5/14/2019
tblConstructionPhase	PhaseStartDate	5/14/2019	6/11/2019
tblConstructionPhase	PhaseStartDate	3/9/2021	7/9/2019
tblLandUse	LotAcreage	18.50	21.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	79.9624	63.4284	34.7212	0.1130	21.8637	2.3914	23.7636	9.9699	2.2001	12.1700	0.0000	11,901.12 36	11,901.123 6	1.9482	0.0000	11,945.37 01
Maximum	**79.9624**	**63.4284**	**34.7212**	**0.1130**	**21.8637**	**2.3914**	**23.7636**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**11,901.12 36**	**11,901.123 6**	**1.9482**	**0.0000**	**11,945.37 01**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	79.9624	63.4284	34.7212	0.1130	10.2573	2.3914	12.1572	4.2827	2.2001	6.4828	0.0000	11,901.1236	11,901.1236	1.9482	0.0000	11,945.3701
Maximum	**79.9624**	**63.4284**	**34.7212**	**0.1130**	**10.2573**	**2.3914**	**12.1572**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**11,901.1236**	**11,901.1236**	**1.9482**	**0.0000**	**11,945.3701**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.09**	**0.00**	**48.84**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396
Total	**466.9449**	**26.6443**	**631.6333**	**1.1771**	**12.8325**	**78.7558**	**91.5883**	**3.4300**	**78.7465**	**82.1765**	**8,220.4323**	**20,531.2725**	**28,751.7048**	**8.4874**	**0.6662**	**29,162.4276**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396
Total	**14.4651**	**22.2169**	**74.3383**	**0.1923**	**12.8325**	**0.7114**	**13.5439**	**3.4300**	**0.7021**	**4.1321**	**0.0000**	**22,725.1548**	**22,725.1548**	**1.0094**	**0.1231**	**22,787.0628**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.90**	**16.62**	**88.23**	**83.67**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-10.69**	**20.96**	**88.11**	**81.53**	**21.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	2/11/2019	5	30	
2	Site Preparation	Site Preparation	2/12/2019	3/11/2019	5	20	
3	Grading	Grading	3/12/2019	5/13/2019	5	45	
4	Building Construction	Building Construction	6/11/2019	12/31/2019	5	146	
5	Paving	Paving	5/14/2019	6/10/2019	5	20	
6	Architectural Coating	Architectural Coating	7/9/2019	12/31/2019	5	126	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 7.33

Residential Indoor: 599,400; Residential Outdoor: 199,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,757.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	9	350.00	85.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.1346	0.0000	20.1346	3.0491	0.0000	3.0491			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**20.1346**	**1.7949**	**21.9295**	**3.0491**	**1.6697**	**4.7188**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.7977	27.6043	5.9588	0.0729	1.6059	0.1042	1.7100	0.4401	0.0997	0.5398		7,953.6942	7,953.6942	0.7039		7,971.2909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.8566**	**27.6454**	**6.4229**	**0.0742**	**1.7291**	**0.1051**	**1.8341**	**0.4728**	**0.1005**	**0.5733**		**8,084.2242**	**8,084.2242**	**0.7080**		**8,101.9250**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6075	0.0000	8.6075	1.3035	0.0000	1.3035			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**8.6075**	**1.7949**	**10.4024**	**1.3035**	**1.6697**	**2.9732**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7977	27.6043	5.9588	0.0729	1.5330	0.1042	1.6371	0.4222	0.0997	0.5219		7,953.6942	7,953.6942	0.7039		7,971.2909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342

Total	**0.8566**	**27.6454**	**6.4229**	**0.0742**	**1.6498**	**0.1051**	**1.7548**	**0.4533**	**0.1005**	**0.5538**		**8,084.2242**	**8,084.2242**	**0.7080**		**8,101.9250**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3912	10.5390	2.7208	0.0235	0.5754	0.0733	0.6487	0.1657	0.0701	0.2358		2,516.1414	2,516.1414	0.1943		2,520.9979
Worker	1.3743	0.9591	10.8294	0.0306	2.8752	0.0205	2.8957	0.7626	0.0189	0.7815		3,045.6987	3,045.6987	0.0973		3,048.1301
Total	**1.7655**	**11.4980**	**13.5502**	**0.0541**	**3.4506**	**0.0938**	**3.5444**	**0.9283**	**0.0890**	**1.0173**		**5,561.8401**	**5,561.8401**	**0.2915**		**5,569.1280**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.3912	10.5390	2.7208	0.0235	0.5508	0.0733	0.6241	0.1596	0.0701	0.2297		2,516.1414	2,516.1414	0.1943		2,520.9979
Worker	1.3743	0.9591	10.8294	0.0306	2.7252	0.0205	2.7457	0.7258	0.0189	0.7447		3,045.6987	3,045.6987	0.0973		3,048.1301
Total	**1.7655**	**11.4980**	**13.5502**	**0.0541**	**3.2761**	**0.0938**	**3.3699**	**0.8854**	**0.0890**	**0.9745**		**5,561.8401**	**5,561.8401**	**0.2915**		**5,569.1280**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.2945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**75.5609**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2749	0.1918	2.1659	6.1200e-003	0.5750	4.1000e-003	0.5791	0.1525	3.7800e-003	0.1563		609.1397	609.1397	0.0195		609.6260
Total	**0.2749**	**0.1918**	**2.1659**	**6.1200e-003**	**0.5750**	**4.1000e-003**	**0.5791**	**0.1525**	**3.7800e-003**	**0.1563**		**609.1397**	**609.1397**	**0.0195**		**609.6260**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.2945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**75.5609**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2749	0.1918	2.1659	6.1200e-003	0.5451	4.1000e-003	0.5492	0.1452	3.7800e-003	0.1489		609.1397	609.1397	0.0195		609.6260
Total	**0.2749**	**0.1918**	**2.1659**	**6.1200e-003**	**0.5451**	**4.1000e-003**	**0.5492**	**0.1452**	**3.7800e-003**	**0.1489**		**609.1397**	**609.1397**	**0.0195**		**609.6260**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396

Unmitigated	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,950.64	2,119.36	1796.72	5,575,706	5,575,706
Parking Lot	0.00	0.00	0.00		
Total	1,950.64	2,119.36	1,796.72	5,575,706	5,575,706

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
NaturalGas Mitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
NaturalGas Unmitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9103.41	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.10341	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Unmitigated	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	452.9969	8.8465	559.1755	1.0131		78.4017	78.4017		78.4017	78.4017	8,220.4323	3,447.5294	11,667.9617	7.5861	0.6466	12,050.3006
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**462.7998**	**9.1307**	**583.7607**	**1.0144**		**78.5368**	**78.5368**		**78.5368**	**78.5368**	**8,220.4323**	**3,491.6791**	**11,712.1114**	**7.6294**	**0.6466**	**12,095.5341**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5171	4.4191	1.8805	0.0282		0.3573	0.3573		0.3573	0.3573	0.0000	5,641.4118	5,641.4118	0.1081	0.1034	5,674.9359
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**10.3200**	**4.7033**	**26.4657**	**0.0295**		**0.4923**	**0.4923**		**0.4923**	**0.4923**	**0.0000**	**5,685.5614**	**5,685.5614**	**0.1515**	**0.1034**	**5,720.1693**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #9

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	296.00	Dwelling Unit	21.50	296,000.00	847
Parking Lot	814.00	Space	7.33	325,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 9 = approx 21.5 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 9 = 21.5 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	20.00
tblConstructionPhase	NumDays	440.00	146.00
tblConstructionPhase	NumDays	35.00	126.00
tblConstructionPhase	PhaseEndDate	3/8/2021	6/10/2019
tblConstructionPhase	PhaseEndDate	1/18/2021	12/31/2019
tblConstructionPhase	PhaseEndDate	4/26/2021	12/31/2019
tblConstructionPhase	PhaseStartDate	1/19/2021	5/14/2019
tblConstructionPhase	PhaseStartDate	5/14/2019	6/11/2019
tblConstructionPhase	PhaseStartDate	3/9/2021	7/9/2019
tblLandUse	LotAcreage	18.50	21.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	80.1953	63.7163	34.3023	0.1117	21.8637	2.3914	23.7660	9.9699	2.2001	12.1700	0.0000	11,759.2887	11,759.2887	1.9479	0.0000	11,804.1669
Maximum	**80.1953**	**63.7163**	**34.3023**	**0.1117**	**21.8637**	**2.3914**	**23.7660**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**11,759.2887**	**11,759.2887**	**1.9479**	**0.0000**	**11,804.1669**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	80.1953	63.7163	34.3023	0.1117	10.2573	2.3914	12.1597	4.2827	2.2001	6.4828	0.0000	11,759.2887	11,759.2887	1.9479	0.0000	11,804.1669
Maximum	**80.1953**	**63.7163**	**34.3023**	**0.1117**	**10.2573**	**2.3914**	**12.1597**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**11,759.2887**	**11,759.2887**	**1.9479**	**0.0000**	**11,804.1669**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.09**	**0.00**	**48.84**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465
Total	**466.8363**	**27.1616**	**630.8833**	**1.1689**	**12.8325**	**78.7568**	**91.5893**	**3.4300**	**78.7475**	**82.1775**	**8,220.4323**	**19,704.8263**	**27,925.2586**	**8.4895**	**0.6662**	**28,336.0345**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465
Total	**14.3566**	**22.7342**	**73.5883**	**0.1841**	**12.8325**	**0.7124**	**13.5449**	**3.4300**	**0.7030**	**4.1330**	**0.0000**	**21,898.7086**	**21,898.7086**	**1.0116**	**0.1231**	**21,960.6697**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.92**	**16.30**	**88.34**	**84.25**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-11.13**	**21.58**	**88.08**	**81.53**	**22.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	2/11/2019	5	30	
2	Site Preparation	Site Preparation	2/12/2019	3/11/2019	5	20	
3	Grading	Grading	3/12/2019	5/13/2019	5	45	
4	Building Construction	Building Construction	6/11/2019	12/31/2019	5	146	
5	Paving	Paving	5/14/2019	6/10/2019	5	20	
6	Architectural Coating	Architectural Coating	7/9/2019	12/31/2019	5	126	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 7.33

Residential Indoor: 599,400; Residential Outdoor: 199,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,757.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	9	350.00	85.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.1346	0.0000	20.1346	3.0491	0.0000	3.0491			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**20.1346**	**1.7949**	**21.9295**	**3.0491**	**1.6697**	**4.7188**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.8202	27.8872	6.3858	0.0717	1.6059	0.1066	1.7125	0.4401	0.1020	0.5421		7,819.8523	7,819.8523	0.7294		7,838.0859
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.8868**	**27.9333**	**6.8244**	**0.0729**	**1.7291**	**0.1075**	**1.8366**	**0.4728**	**0.1028**	**0.5756**		**7,942.3893**	**7,942.3893**	**0.7333**		**7,960.7219**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6075	0.0000	8.6075	1.3035	0.0000	1.3035			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**8.6075**	**1.7949**	**10.4024**	**1.3035**	**1.6697**	**2.9732**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8202	27.8872	6.3858	0.0717	1.5330	0.1066	1.6396	0.4222	0.1020	0.5242		7,819.8523	7,819.8523	0.7294		7,838.0859
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359

Total	**0.8868**	**27.9333**	**6.8244**	**0.0729**	**1.6498**	**0.1075**	**1.7572**	**0.4533**	**0.1028**	**0.5561**		**7,942.3893**	**7,942.3893**	**0.7333**		**7,960.7219**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4081	10.5475	3.0167	0.0229	0.5754	0.0746	0.6500	0.1657	0.0714	0.2370		2,452.2522	2,452.2522	0.2067		2,457.4185
Worker	1.5543	1.0771	10.2338	0.0287	2.8752	0.0205	2.8957	0.7626	0.0189	0.7815		2,859.1981	2,859.1981	0.0923		2,861.5046
Total	**1.9623**	**11.6246**	**13.2504**	**0.0516**	**3.4506**	**0.0951**	**3.5457**	**0.9283**	**0.0903**	**1.0185**		**5,311.4503**	**5,311.4503**	**0.2989**		**5,318.9231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.4081	10.5475	3.0167	0.0229	0.5508	0.0746	0.6254	0.1596	0.0714	0.2310		2,452.2522	2,452.2522	0.2067		2,457.4185
Worker	1.5543	1.0771	10.2338	0.0287	2.7252	0.0205	2.7457	0.7258	0.0189	0.7447		2,859.1981	2,859.1981	0.0923		2,861.5046
Total	**1.9623**	**11.6246**	**13.2504**	**0.0516**	**3.2761**	**0.0951**	**3.3712**	**0.8854**	**0.0903**	**0.9757**		**5,311.4503**	**5,311.4503**	**0.2989**		**5,318.9231**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.2945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**75.5609**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3109	0.2154	2.0468	5.7400e-003	0.5750	4.1000e-003	0.5791	0.1525	3.7800e-003	0.1563		571.8396	571.8396	0.0185		572.3009
Total	**0.3109**	**0.2154**	**2.0468**	**5.7400e-003**	**0.5750**	**4.1000e-003**	**0.5791**	**0.1525**	**3.7800e-003**	**0.1563**		**571.8396**	**571.8396**	**0.0185**		**572.3009**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.2945					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**75.5609**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3109	0.2154	2.0468	5.7400e-003	0.5451	4.1000e-003	0.5492	0.1452	3.7800e-003	0.1489		571.8396	571.8396	0.0185		572.3009
Total	**0.3109**	**0.2154**	**2.0468**	**5.7400e-003**	**0.5451**	**4.1000e-003**	**0.5492**	**0.1452**	**3.7800e-003**	**0.1489**		**571.8396**	**571.8396**	**0.0185**		**572.3009**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465

Unmitigated	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,950.64	2,119.36	1796.72	5,575,706	5,575,706
Parking Lot	0.00	0.00	0.00		
Total	1,950.64	2,119.36	1,796.72	5,575,706	5,575,706

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
NaturalGas Mitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
NaturalGas Unmitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9103.41	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.10341	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Unmitigated	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	452.9969	8.8465	559.1755	1.0131		78.4017	78.4017		78.4017	78.4017	8,220.4323	3,447.5294	11,667.9617	7.5861	0.6466	12,050.3006
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**462.7998**	**9.1307**	**583.7607**	**1.0144**		**78.5368**	**78.5368**		**78.5368**	**78.5368**	**8,220.4323**	**3,491.6791**	**11,712.1114**	**7.6294**	**0.6466**	**12,095.5341**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5171	4.4191	1.8805	0.0282		0.3573	0.3573		0.3573	0.3573	0.0000	5,641.4118	5,641.4118	0.1081	0.1034	5,674.9359
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**10.3200**	**4.7033**	**26.4657**	**0.0295**		**0.4923**	**0.4923**		**0.4923**	**0.4923**	**0.0000**	**5,685.5614**	**5,685.5614**	**0.1515**	**0.1034**	**5,720.1693**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #10 - San Diego County, Annual

Encinitas HE - #10

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	296.00	Dwelling Unit	16.90	296,000.00	847
Parking Lot	814.00	Space	7.33	325,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 10 = approx 16.9 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	370.00	176.00
tblConstructionPhase	NumDays	20.00	132.00
tblConstructionPhase	PhaseEndDate	9/28/2020	4/29/2019
tblConstructionPhase	PhaseEndDate	8/31/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	10/26/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	9/1/2020	4/2/2019
tblConstructionPhase	PhaseStartDate	4/2/2019	4/30/2019
tblConstructionPhase	PhaseStartDate	9/29/2020	6/29/2019
tblLandUse	LotAcreage	18.50	16.90

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	5.3105	4.7193	4.0045	9.5000e-003	0.5838	0.2105	0.7943	0.2043	0.1970	0.4014	0.0000	863.4914	863.4914	0.1289	0.0000	866.7138
Maximum	**5.3105**	**4.7193**	**4.0045**	**9.5000e-003**	**0.5838**	**0.2105**	**0.7943**	**0.2043**	**0.1970**	**0.4014**	**0.0000**	**863.4914**	**863.4914**	**0.1289**	**0.0000**	**866.7138**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	5.3105	4.7193	4.0045	9.5000e-003	0.4269	0.2105	0.6374	0.1355	0.1970	0.3325	0.0000	863.4910	863.4910	0.1289	0.0000	866.7134
Maximum	**5.3105**	**4.7193**	**4.0045**	**9.5000e-003**	**0.4269**	**0.2105**	**0.6374**	**0.1355**	**0.1970**	**0.3325**	**0.0000**	**863.4910**	**863.4910**	**0.1289**	**0.0000**	**866.7134**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**26.87**	**0.00**	**19.75**	**33.70**	**0.00**	**17.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	1.6656	1.6656
2	4-1-2019	6-30-2019	1.0647	1.0647
3	7-1-2019	9-30-2019	3.6519	3.6519
		Highest	3.6519	3.6519

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	20.2922	0.3883	25.1389	0.0417		3.2266	3.2266		3.2266	3.2266	305.7555	131.8341	437.5895	0.2857	0.0241	451.8990
Energy	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	625.1005	625.1005	0.0214	6.9800e-003	627.7161

Mobile	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965
Waste						0.0000	0.0000		0.0000	0.0000	27.6393	0.0000	27.6393	1.6334	0.0000	68.4751
Water						0.0000	0.0000		0.0000	0.0000	6.1184	126.2124	132.3308	0.6335	0.0159	152.9034
Total	**20.9543**	**3.4318**	**32.9576**	**0.0679**	**2.1014**	**3.2644**	**5.3658**	**0.5628**	**3.2628**	**3.8256**	**339.5132**	**3,207.9823**	**3,547.4955**	**2.7005**	**0.0469**	**3,628.9900**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.7405	0.2068	2.2898	1.2700e-003		0.0268	0.0268		0.0268	0.0268	0.0000	213.4346	213.4346	7.5600e-003	3.8500e-003	214.7700
Energy	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	625.1005	625.1005	0.0214	6.9800e-003	627.7161
Mobile	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965
Waste						0.0000	0.0000		0.0000	0.0000	13.8196	0.0000	13.8196	0.8167	0.0000	34.2375
Water						0.0000	0.0000		0.0000	0.0000	4.8947	107.1061	112.0008	0.5071	0.0128	128.4803
Total	**2.4026**	**3.2503**	**10.1085**	**0.0275**	**2.1014**	**0.0646**	**2.1660**	**0.5628**	**0.0630**	**0.6258**	**18.7144**	**3,270.4765**	**3,289.1908**	**1.4792**	**0.0236**	**3,333.2004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**88.53**	**5.29**	**69.33**	**59.49**	**0.00**	**98.02**	**59.63**	**0.00**	**98.07**	**83.64**	**94.49**	**-1.95**	**7.28**	**45.22**	**49.72**	**8.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	4/1/2019	5	35	
4	Building Construction	Building Construction	4/30/2019	12/31/2019	5	176	
5	Paving	Paving	4/2/2019	4/29/2019	5	20	
6	Architectural Coating	Architectural Coating	6/29/2019	12/31/2019	5	132	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 7.33

Residential Indoor: 599,400; Residential Outdoor: 199,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	350.00	85.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9300e-003	0.0000	1.9300e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**1.9300e-003**	**0.0180**	**0.0199**	**2.9000e-004**	**0.0167**	**0.0170**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8672**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7600e-003	6.0000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7016	0.7016	6.0000e-005	0.0000	0.7032
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**6.7000e-004**	**3.2100e-003**	**4.9900e-003**	**2.0000e-005**	**1.3500e-003**	**2.0000e-005**	**1.3700e-003**	**3.6000e-004**	**2.0000e-005**	**3.8000e-004**	**0.0000**	**1.8244**	**1.8244**	**1.0000e-004**	**0.0000**	**1.8269**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.3000e-004	0.0000	8.3000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671
Total	**0.0351**	**0.3578**	**0.2206**	**3.9000e-004**	**8.3000e-004**	**0.0180**	**0.0188**	**1.3000e-004**	**0.0167**	**0.0168**	**0.0000**	**34.6263**	**34.6263**	**9.6300e-003**	**0.0000**	**34.8671**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7600e-003	6.0000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7016	0.7016	6.0000e-005	0.0000	0.7032
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**6.7000e-004**	**3.2100e-003**	**4.9900e-003**	**2.0000e-005**	**1.2900e-003**	**2.0000e-005**	**1.3100e-003**	**3.4000e-004**	**2.0000e-005**	**3.6000e-004**	**0.0000**	**1.8244**	**1.8244**	**1.0000e-004**	**0.0000**	**1.8269**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.7000e-004	2.6300e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6737	0.6737	2.0000e-005	0.0000	0.6742
Total	**3.5000e-004**	**2.7000e-004**	**2.6300e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6737**	**0.6737**	**2.0000e-005**	**0.0000**	**0.6742**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0386	0.0000	0.0386	0.0212	0.0000	0.0212	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0386**	**0.0120**	**0.0506**	**0.0212**	**0.0110**	**0.0322**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	3.5000e-004	2.7000e-004	2.6300e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.6737	0.6737	2.0000e-005	0.0000	0.6742
Total	**3.5000e-004**	**2.7000e-004**	**2.6300e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6737**	**0.6737**	**2.0000e-005**	**0.0000**	**0.6742**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0829	0.9541	0.5841	1.0900e-003		0.0417	0.0417		0.0384	0.0384	0.0000	97.4773	97.4773	0.0308	0.0000	98.2483
Total	**0.0829**	**0.9541**	**0.5841**	**1.0900e-003**	**0.1518**	**0.0417**	**0.1935**	**0.0629**	**0.0384**	**0.1013**	**0.0000**	**97.4773**	**97.4773**	**0.0308**	**0.0000**	**98.2483**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3800e-003	1.0600e-003	0.0102	3.0000e-005	2.8100e-003	2.0000e-005	2.8300e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.6197	2.6197	8.0000e-005	0.0000	2.6218
Total	**1.3800e-003**	**1.0600e-003**	**0.0102**	**3.0000e-005**	**2.8100e-003**	**2.0000e-005**	**2.8300e-003**	**7.5000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.6197**	**2.6197**	**8.0000e-005**	**0.0000**	**2.6218**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0649	0.0000	0.0649	0.0269	0.0000	0.0269	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0829	0.9541	0.5841	1.0900e-003		0.0417	0.0417		0.0384	0.0384	0.0000	97.4772	97.4772	0.0308	0.0000	98.2482
Total	**0.0829**	**0.9541**	**0.5841**	**1.0900e-003**	**0.0649**	**0.0417**	**0.1066**	**0.0269**	**0.0384**	**0.0653**	**0.0000**	**97.4772**	**97.4772**	**0.0308**	**0.0000**	**98.2482**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3800e-003	1.0600e-003	0.0102	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.3000e-004	0.0000	2.6197	2.6197	8.0000e-005	0.0000	2.6218
Total	**1.3800e-003**	**1.0600e-003**	**0.0102**	**3.0000e-005**	**2.6600e-003**	**2.0000e-005**	**2.6800e-003**	**7.1000e-004**	**2.0000e-005**	**7.3000e-004**	**0.0000**	**2.6197**	**2.6197**	**8.0000e-005**	**0.0000**	**2.6218**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.2078	1.8549	1.5104	2.3700e-003		0.1135	0.1135		0.1067	0.1067	0.0000	206.8917	206.8917	0.0504	0.0000	208.1517
Total	**0.2078**	**1.8549**	**1.5104**	**2.3700e-003**		**0.1135**	**0.1135**		**0.1067**	**0.1067**	**0.0000**	**206.8917**	**206.8917**	**0.0504**	**0.0000**	**208.1517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0350	0.9389	0.2522	2.0400e-003	0.0497	6.5000e-003	0.0562	0.0143	6.2200e-003	0.0206	0.0000	198.7271	198.7271	0.0160	0.0000	199.1258
Worker	0.1214	0.0932	0.9012	2.5500e-003	0.2470	1.8000e-003	0.2488	0.0656	1.6600e-003	0.0673	0.0000	230.5369	230.5369	7.4100e-003	0.0000	230.7223
Total	**0.1565**	**1.0320**	**1.1534**	**4.5900e-003**	**0.2966**	**8.3000e-003**	**0.3049**	**0.0800**	**7.8800e-003**	**0.0878**	**0.0000**	**429.2641**	**429.2641**	**0.0234**	**0.0000**	**429.8481**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2078	1.8549	1.5104	2.3700e-003		0.1135	0.1135		0.1067	0.1067	0.0000	206.8915	206.8915	0.0504	0.0000	208.1515
Total	**0.2078**	**1.8549**	**1.5104**	**2.3700e-003**		**0.1135**	**0.1135**		**0.1067**	**0.1067**	**0.0000**	**206.8915**	**206.8915**	**0.0504**	**0.0000**	**208.1515**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0350	0.9389	0.2522	2.0400e-003	0.0475	6.5000e-003	0.0540	0.0138	6.2200e-003	0.0200	0.0000	198.7271	198.7271	0.0160	0.0000	199.1258
Worker	0.1214	0.0932	0.9012	2.5500e-003	0.2342	1.8000e-003	0.2360	0.0625	1.6600e-003	0.0641	0.0000	230.5369	230.5369	7.4100e-003	0.0000	230.7223
Total	**0.1565**	**1.0320**	**1.1534**	**4.5900e-003**	**0.2817**	**8.3000e-003**	**0.2900**	**0.0763**	**7.8800e-003**	**0.0842**	**0.0000**	**429.2641**	**429.2641**	**0.0234**	**0.0000**	**429.8481**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	9.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0241**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	9.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0241**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.7436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0176	0.1211	0.1215	2.0000e-004		8.5000e-003	8.5000e-003		8.5000e-003	8.5000e-003	0.0000	16.8515	16.8515	1.4200e-003	0.0000	16.8871
Total	**4.7611**	**0.1211**	**0.1215**	**2.0000e-004**		**8.5000e-003**	**8.5000e-003**		**8.5000e-003**	**8.5000e-003**	**0.0000**	**16.8515**	**16.8515**	**1.4200e-003**	**0.0000**	**16.8871**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0182	0.0140	0.1352	3.8000e-004	0.0371	2.7000e-004	0.0373	9.8400e-003	2.5000e-004	0.0101	0.0000	34.5805	34.5805	1.1100e-003	0.0000	34.6083

Total	**0.0182**	**0.0140**	**0.1352**	**3.8000e-004**	**0.0371**	**2.7000e-004**	**0.0373**	**9.8400e-003**	**2.5000e-004**	**0.0101**	**0.0000**	**34.5805**	**34.5805**	**1.1100e-003**	**0.0000**	**34.6083**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.7436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0176	0.1211	0.1215	2.0000e-004		8.5000e-003	8.5000e-003		8.5000e-003	8.5000e-003	0.0000	16.8515	16.8515	1.4200e-003	0.0000	16.8870
Total	**4.7611**	**0.1211**	**0.1215**	**2.0000e-004**		**8.5000e-003**	**8.5000e-003**		**8.5000e-003**	**8.5000e-003**	**0.0000**	**16.8515**	**16.8515**	**1.4200e-003**	**0.0000**	**16.8870**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0182	0.0140	0.1352	3.8000e-004	0.0351	2.7000e-004	0.0354	9.3700e-003	2.5000e-004	9.6200e-003	0.0000	34.5805	34.5805	1.1100e-003	0.0000	34.6083
Total	**0.0182**	**0.0140**	**0.1352**	**3.8000e-004**	**0.0351**	**2.7000e-004**	**0.0354**	**9.3700e-003**	**2.5000e-004**	**9.6200e-003**	**0.0000**	**34.5805**	**34.5805**	**1.1100e-003**	**0.0000**	**34.6083**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965
Unmitigated	0.6442	2.8904	7.7536	0.0253	2.1014	0.0254	2.1268	0.5628	0.0238	0.5866	0.0000	2,324.8353	2,324.8353	0.1265	0.0000	2,327.9965

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,950.64	2,119.36	1796.72	5,575,706	5,575,706
Parking Lot	0.00	0.00	0.00		
Total	1,950.64	2,119.36	1,796.72	5,575,706	5,575,706

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	447.7862	447.7862	0.0180	3.7300e-003	449.3480
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	447.7862	447.7862	0.0180	3.7300e-003	449.3480
NaturalGas Mitigated	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680
NaturalGas Unmitigated	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.32275e+006	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0179**	**0.1531**	**0.0652**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**177.3143**	**177.3143**	**3.4000e-003**	**3.2500e-003**	**178.3680**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.32275e+006	0.0179	0.1531	0.0652	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.3143	177.3143	3.4000e-003	3.2500e-003	178.3680
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0179**	**0.1531**	**0.0652**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**177.3143**	**177.3143**	**3.4000e-003**	**3.2500e-003**	**178.3680**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.25622e+006	410.5431	0.0165	3.4200e-003	411.9750
Parking Lot	113960	37.2431	1.5000e-003	3.1000e-004	37.3730
Total		**447.7862**	**0.0180**	**3.7300e-003**	**449.3481**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.25622e+006	410.5431	0.0165	3.4200e-003	411.9750

Parking Lot	113960	37.2431	1.5000e-003	3.1000e-004	37.3730
Total		**447.7862**	**0.0180**	**3.7300e-003**	**449.3481**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7405	0.2068	2.2898	1.2700e-003		0.0268	0.0268		0.0268	0.0268	0.0000	213.4346	213.4346	7.5600e-003	3.8500e-003	214.7700
Unmitigated	20.2922	0.3883	25.1389	0.0417		3.2266	3.2266		3.2266	3.2266	305.7555	131.8341	437.5895	0.2857	0.0241	451.8990

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Hearth	18.5729	0.3627	22.9262	0.0415		3.2145	3.2145		3.2145	3.2145	305.7555	128.2294	433.9849	0.2822	0.0241	448.2058
Landscaping	0.0679	0.0256	2.2127	1.2000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	3.6047	3.6047	3.5400e-003	0.0000	3.6932
Total	**20.2922**	**0.3883**	**25.1389**	**0.0417**		**3.2266**	**3.2266**		**3.2266**	**3.2266**	**305.7555**	**131.8341**	**437.5895**	**0.2857**	**0.0241**	**451.8990**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0212	0.1812	0.0771	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	209.8299	209.8299	4.0200e-003	3.8500e-003	211.0768
Landscaping	0.0679	0.0256	2.2127	1.2000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	3.6047	3.6047	3.5400e-003	0.0000	3.6932
Total	**1.7405**	**0.2068**	**2.2898**	**1.2800e-003**		**0.0268**	**0.0268**		**0.0268**	**0.0268**	**0.0000**	**213.4346**	**213.4346**	**7.5600e-003**	**3.8500e-003**	**214.7700**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	112.0008	0.5071	0.0128	128.4803
Unmitigated	132.3308	0.6335	0.0159	152.9034

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	19.2856 / 12.1583	132.3308	0.6335	0.0159	152.9034
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**132.3308**	**0.6335**	**0.0159**	**152.9034**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Low Rise	15.4285 / 11.4167	112.0008	0.5071	0.0128	128.4803
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**112.0008**	**0.5071**	**0.0128**	**128.4803**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.8196	0.8167	0.0000	34.2375
Unmitigated	27.6393	1.6334	0.0000	68.4751

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Low Rise	136.16	27.6393	1.6334	0.0000	68.4751
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**27.6393**	**1.6334**	**0.0000**	**68.4751**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	68.08	13.8196	0.8167	0.0000	34.2375
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**13.8196**	**0.8167**	**0.0000**	**34.2375**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #10

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	296.00	Dwelling Unit	16.90	296,000.00	847
Parking Lot	814.00	Space	7.33	325,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 10 = approx 16.9 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	370.00	176.00
tblConstructionPhase	NumDays	20.00	132.00
tblConstructionPhase	PhaseEndDate	9/28/2020	4/29/2019
tblConstructionPhase	PhaseEndDate	8/31/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	10/26/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	9/1/2020	4/2/2019
tblConstructionPhase	PhaseStartDate	4/2/2019	4/30/2019
tblConstructionPhase	PhaseStartDate	9/29/2020	6/29/2019
tblLandUse	LotAcreage	18.50	16.90

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	76.5400	54.5750	34.7212	0.0901	18.2141	2.3914	20.6055	9.9699	2.2001	12.1700	0.0000	9,044.0081	9,044.0081	1.9482	0.0000	9,068.1599
Maximum	**76.5400**	**54.5750**	**34.7212**	**0.0901**	**18.2141**	**2.3914**	**20.6055**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**9,044.0081**	**9,044.0081**	**1.9482**	**0.0000**	**9,068.1599**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	76.5400	54.5750	34.7212	0.0901	7.8635	2.3914	10.2549	4.2827	2.2001	6.4828	0.0000	9,044.0081	9,044.0081	1.9482	0.0000	9,068.1599
Maximum	**76.5400**	**54.5750**	**34.7212**	**0.0901**	**7.8635**	**2.3914**	**10.2549**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**9,044.0081**	**9,044.0081**	**1.9482**	**0.0000**	**9,068.1599**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.83**	**0.00**	**50.23**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396
Total	**466.9449**	**26.6443**	**631.6333**	**1.1771**	**12.8325**	**78.7558**	**91.5883**	**3.4300**	**78.7465**	**82.1765**	**8,220.4323**	**20,531.2725**	**28,751.7048**	**8.4874**	**0.6662**	**29,162.4276**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396
Total	**14.4651**	**22.2169**	**74.3383**	**0.1923**	**12.8325**	**0.7114**	**13.5439**	**3.4300**	**0.7021**	**4.1321**	**0.0000**	**22,725.1548**	**22,725.1548**	**1.0094**	**0.1231**	**22,787.0628**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.90**	**16.62**	**88.23**	**83.67**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-10.69**	**20.96**	**88.11**	**81.53**	**21.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	4/1/2019	5	35	
4	Building Construction	Building Construction	4/30/2019	12/31/2019	5	176	
5	Paving	Paving	4/2/2019	4/29/2019	5	20	
6	Architectural Coating	Architectural Coating	6/29/2019	12/31/2019	5	132	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 7.33

Residential Indoor: 599,400; Residential Outdoor: 199,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	350.00	85.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1934	0.0000	0.1934	0.0293	0.0000	0.0293			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.1934**	**1.7949**	**1.9883**	**0.0293**	**1.6697**	**1.6990**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	7.8100e-003	0.2703	0.0584	7.1000e-004	0.0157	1.0200e-003	0.0168	4.3100e-003	9.8000e-004	5.2900e-003		77.8925	77.8925	6.8900e-003		78.0649
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0667**	**0.3114**	**0.5225**	**2.0200e-003**	**0.1390**	**1.9000e-003**	**0.1409**	**0.0370**	**1.7900e-003**	**0.0388**		**208.4225**	**208.4225**	**0.0111**		**208.6990**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0827	0.0000	0.0827	0.0125	0.0000	0.0125			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0827**	**1.7949**	**1.8776**	**0.0125**	**1.6697**	**1.6822**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8100e-003	0.2703	0.0584	7.1000e-004	0.0150	1.0200e-003	0.0160	4.1300e-003	9.8000e-004	5.1100e-003		77.8925	77.8925	6.8900e-003		78.0649
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342

Total	**0.0667**	**0.3114**	**0.5225**	**2.0200e-003**	**0.1318**	**1.9000e-003**	**0.1337**	**0.0352**	**1.7900e-003**	**0.0370**		**208.4225**	**208.4225**	**0.0111**		**208.6990**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0707**	**0.0493**	**0.5569**	**1.5700e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**156.6359**	**156.6359**	**5.0000e-003**		**156.7610**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3912	10.5390	2.7208	0.0235	0.5754	0.0733	0.6487	0.1657	0.0701	0.2358		2,516.1414	2,516.1414	0.1943		2,520.9979
Worker	1.3743	0.9591	10.8294	0.0306	2.8752	0.0205	2.8957	0.7626	0.0189	0.7815		3,045.6987	3,045.6987	0.0973		3,048.1301
Total	**1.7655**	**11.4980**	**13.5502**	**0.0541**	**3.4506**	**0.0938**	**3.5444**	**0.9283**	**0.0890**	**1.0173**		**5,561.8401**	**5,561.8401**	**0.2915**		**5,569.1280**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.3912	10.5390	2.7208	0.0235	0.5508	0.0733	0.6241	0.1596	0.0701	0.2297		2,516.1414	2,516.1414	0.1943		2,520.9979
Worker	1.3743	0.9591	10.8294	0.0306	2.7252	0.0205	2.7457	0.7258	0.0189	0.7447		3,045.6987	3,045.6987	0.0973		3,048.1301
Total	**1.7655**	**11.4980**	**13.5502**	**0.0541**	**3.2761**	**0.0938**	**3.3699**	**0.8854**	**0.0890**	**0.9745**		**5,561.8401**	**5,561.8401**	**0.2915**		**5,569.1280**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	71.8720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**72.1384**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2749	0.1918	2.1659	6.1200e-003	0.5750	4.1000e-003	0.5791	0.1525	3.7800e-003	0.1563		609.1397	609.1397	0.0195		609.6260
Total	**0.2749**	**0.1918**	**2.1659**	**6.1200e-003**	**0.5750**	**4.1000e-003**	**0.5791**	**0.1525**	**3.7800e-003**	**0.1563**		**609.1397**	**609.1397**	**0.0195**		**609.6260**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	71.8720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**72.1384**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2749	0.1918	2.1659	6.1200e-003	0.5451	4.1000e-003	0.5492	0.1452	3.7800e-003	0.1489		609.1397	609.1397	0.0195		609.6260
Total	**0.2749**	**0.1918**	**2.1659**	**6.1200e-003**	**0.5451**	**4.1000e-003**	**0.5492**	**0.1452**	**3.7800e-003**	**0.1489**		**609.1397**	**609.1397**	**0.0195**		**609.6260**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396

Unmitigated	4.0469	16.6747	47.5156	0.1574	12.8325	0.1512	12.9838	3.4300	0.1419	3.5719		15,968.6039	15,968.6039	0.8374		15,989.5396

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,950.64	2,119.36	1796.72	5,575,706	5,575,706
Parking Lot	0.00	0.00	0.00		
Total	1,950.64	2,119.36	1,796.72	5,575,706	5,575,706

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
NaturalGas Mitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
NaturalGas Unmitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9103.41	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.10341	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Unmitigated	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	452.9969	8.8465	559.1755	1.0131		78.4017	78.4017		78.4017	78.4017	8,220.4323	3,447.5294	11,667.9617	7.5861	0.6466	12,050.3006
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**462.7998**	**9.1307**	**583.7607**	**1.0144**		**78.5368**	**78.5368**		**78.5368**	**78.5368**	**8,220.4323**	**3,491.6791**	**11,712.1114**	**7.6294**	**0.6466**	**12,095.5341**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5171	4.4191	1.8805	0.0282		0.3573	0.3573		0.3573	0.3573	0.0000	5,641.4118	5,641.4118	0.1081	0.1034	5,674.9359
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**10.3200**	**4.7033**	**26.4657**	**0.0295**		**0.4923**	**0.4923**		**0.4923**	**0.4923**	**0.0000**	**5,685.5614**	**5,685.5614**	**0.1515**	**0.1034**	**5,720.1693**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - #10

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	296.00	Dwelling Unit	16.90	296,000.00	847
Parking Lot	814.00	Space	7.33	325,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site 10 = approx 16.9 ac

Construction Phase - conservative 12 month schedule

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	370.00	176.00
tblConstructionPhase	NumDays	20.00	132.00
tblConstructionPhase	PhaseEndDate	9/28/2020	4/29/2019
tblConstructionPhase	PhaseEndDate	8/31/2020	12/31/2019
tblConstructionPhase	PhaseEndDate	10/26/2020	12/31/2019
tblConstructionPhase	PhaseStartDate	9/1/2020	4/2/2019
tblConstructionPhase	PhaseStartDate	4/2/2019	4/30/2019
tblConstructionPhase	PhaseStartDate	9/29/2020	6/29/2019
tblLandUse	LotAcreage	18.50	16.90

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	76.7728	54.5817	34.3023	0.0872	18.2141	2.3914	20.6055	9.9699	2.2001	12.1700	0.0000	8,756.3181	8,756.3181	1.9479	0.0000	8,780.6298
Maximum	**76.7728**	**54.5817**	**34.3023**	**0.0872**	**18.2141**	**2.3914**	**20.6055**	**9.9699**	**2.2001**	**12.1700**	**0.0000**	**8,756.3181**	**8,756.3181**	**1.9479**	**0.0000**	**8,780.6298**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	76.7728	54.5817	34.3023	0.0872	7.8635	2.3914	10.2549	4.2827	2.2001	6.4828	0.0000	8,756.3181	8,756.3181	1.9479	0.0000	8,780.6298
Maximum	**76.7728**	**54.5817**	**34.3023**	**0.0872**	**7.8635**	**2.3914**	**10.2549**	**4.2827**	**2.2001**	**6.4828**	**0.0000**	**8,756.3181**	**8,756.3181**	**1.9479**	**0.0000**	**8,780.6298**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**56.83**	**0.00**	**50.23**	**57.04**	**0.00**	**46.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465
Total	**466.8363**	**27.1616**	**630.8833**	**1.1689**	**12.8325**	**78.7568**	**91.5893**	**3.4300**	**78.7475**	**82.1775**	**8,220.4323**	**19,704.8263**	**27,925.2586**	**8.4895**	**0.6662**	**28,336.0345**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Energy	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Mobile	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465
Total	**14.3566**	**22.7342**	**73.5883**	**0.1841**	**12.8325**	**0.7124**	**13.5449**	**3.4300**	**0.7030**	**4.1330**	**0.0000**	**21,898.7086**	**21,898.7086**	**1.0116**	**0.1231**	**21,960.6697**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.92**	**16.30**	**88.34**	**84.25**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-11.13**	**21.58**	**88.08**	**81.53**	**22.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/28/2019	5	20	
2	Site Preparation	Site Preparation	1/29/2019	2/11/2019	5	10	
3	Grading	Grading	2/12/2019	4/1/2019	5	35	
4	Building Construction	Building Construction	4/30/2019	12/31/2019	5	176	
5	Paving	Paving	4/2/2019	4/29/2019	5	20	
6	Architectural Coating	Architectural Coating	6/29/2019	12/31/2019	5	132	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 7.33

Residential Indoor: 599,400; Residential Outdoor: 199,800; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	350.00	85.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	70.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1934	0.0000	0.1934	0.0293	0.0000	0.0293			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.1934**	**1.7949**	**1.9883**	**0.0293**	**1.6697**	**1.6990**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	8.0300e-003	0.2731	0.0625	7.0000e-004	0.0157	1.0400e-003	0.0168	4.3100e-003	1.0000e-003	5.3100e-003		76.5818	76.5818	7.1400e-003		76.7604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0746**	**0.3193**	**0.5011**	**1.9300e-003**	**0.1390**	**1.9200e-003**	**0.1409**	**0.0370**	**1.8100e-003**	**0.0388**		**199.1189**	**199.1189**	**0.0111**		**199.3963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0827	0.0000	0.0827	0.0125	0.0000	0.0125			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0827**	**1.7949**	**1.8776**	**0.0125**	**1.6697**	**1.6822**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.0300e-003	0.2731	0.0625	7.0000e-004	0.0150	1.0400e-003	0.0161	4.1300e-003	1.0000e-003	5.1300e-003		76.5818	76.5818	7.1400e-003		76.7604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359

Total	**0.0746**	**0.3193**	**0.5011**	**1.9300e-003**	**0.1318**	**1.9200e-003**	**0.1337**	**0.0352**	**1.8100e-003**	**0.0371**		**199.1189**	**199.1189**	**0.0111**		**199.3963**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1479**	**1.0500e-003**	**0.1489**	**0.0392**	**9.7000e-004**	**0.0402**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1402	1.0500e-003	0.1412	0.0373	9.7000e-004	0.0383		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0799**	**0.0554**	**0.5263**	**1.4800e-003**	**0.1402**	**1.0500e-003**	**0.1412**	**0.0373**	**9.7000e-004**	**0.0383**		**147.0445**	**147.0445**	**4.7400e-003**		**147.1631**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6733**	**2.3827**	**11.0560**	**3.5965**	**2.1920**	**5.7885**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**3.7079**	**2.3827**	**6.0905**	**1.5375**	**2.1920**	**3.7295**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1557	1.1700e-003	0.1569	0.0415	1.0800e-003	0.0426		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1557**	**1.1700e-003**	**0.1569**	**0.0415**	**1.0800e-003**	**0.0426**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4081	10.5475	3.0167	0.0229	0.5754	0.0746	0.6500	0.1657	0.0714	0.2370		2,452.2522	2,452.2522	0.2067		2,457.4185
Worker	1.5543	1.0771	10.2338	0.0287	2.8752	0.0205	2.8957	0.7626	0.0189	0.7815		2,859.1981	2,859.1981	0.0923		2,861.5046
Total	**1.9623**	**11.6246**	**13.2504**	**0.0516**	**3.4506**	**0.0951**	**3.5457**	**0.9283**	**0.0903**	**1.0185**		**5,311.4503**	**5,311.4503**	**0.2989**		**5,318.9231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.4081	10.5475	3.0167	0.0229	0.5508	0.0746	0.6254	0.1596	0.0714	0.2310		2,452.2522	2,452.2522	0.2067		2,457.4185
Worker	1.5543	1.0771	10.2338	0.0287	2.7252	0.0205	2.7457	0.7258	0.0189	0.7447		2,859.1981	2,859.1981	0.0923		2,861.5046
Total	**1.9623**	**11.6246**	**13.2504**	**0.0516**	**3.2761**	**0.0951**	**3.3712**	**0.8854**	**0.0903**	**0.9757**		**5,311.4503**	**5,311.4503**	**0.2989**		**5,318.9231**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.9602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4147**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	71.8720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**72.1384**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3109	0.2154	2.0468	5.7400e-003	0.5750	4.1000e-003	0.5791	0.1525	3.7800e-003	0.1563		571.8396	571.8396	0.0185		572.3009
Total	**0.3109**	**0.2154**	**2.0468**	**5.7400e-003**	**0.5750**	**4.1000e-003**	**0.5791**	**0.1525**	**3.7800e-003**	**0.1563**		**571.8396**	**571.8396**	**0.0185**		**572.3009**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	71.8720					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**72.1384**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3109	0.2154	2.0468	5.7400e-003	0.5451	4.1000e-003	0.5492	0.1452	3.7800e-003	0.1489		571.8396	571.8396	0.0185		572.3009
Total	**0.3109**	**0.2154**	**2.0468**	**5.7400e-003**	**0.5451**	**4.1000e-003**	**0.5492**	**0.1452**	**3.7800e-003**	**0.1489**		**571.8396**	**571.8396**	**0.0185**		**572.3009**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465

Unmitigated	3.9384	17.1920	46.7656	0.1492	12.8325	0.1522	12.9848	3.4300	0.1429	3.5729		15,142.1577	15,142.1577	0.8396		15,163.1465

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,950.64	2,119.36	1796.72	5,575,706	5,575,706
Parking Lot	0.00	0.00	0.00		
Total	1,950.64	2,119.36	1,796.72	5,575,706	5,575,706

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
NaturalGas Mitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
NaturalGas Unmitigated	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9103.41	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.10341	0.0982	0.8389	0.3570	5.3500e-003		0.0678	0.0678		0.0678	0.0678		1,070.9895	1,070.9895	0.0205	0.0196	1,077.3539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0982**	**0.8389**	**0.3570**	**5.3500e-003**		**0.0678**	**0.0678**		**0.0678**	**0.0678**		**1,070.9895**	**1,070.9895**	**0.0205**	**0.0196**	**1,077.3539**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.3200	4.7033	26.4657	0.0295		0.4923	0.4923		0.4923	0.4923	0.0000	5,685.5614	5,685.5614	0.1515	0.1034	5,720.1694
Unmitigated	462.7998	9.1307	583.7607	1.0144		78.5368	78.5368		78.5368	78.5368	8,220.4323	3,491.6791	11,712.1114	7.6295	0.6466	12,095.5341

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	452.9969	8.8465	559.1755	1.0131		78.4017	78.4017		78.4017	78.4017	8,220.4323	3,447.5294	11,667.9617	7.5861	0.6466	12,050.3006
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**462.7998**	**9.1307**	**583.7607**	**1.0144**		**78.5368**	**78.5368**		**78.5368**	**78.5368**	**8,220.4323**	**3,491.6791**	**11,712.1114**	**7.6294**	**0.6466**	**12,095.5341**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4497					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.5171	4.4191	1.8805	0.0282		0.3573	0.3573		0.3573	0.3573	0.0000	5,641.4118	5,641.4118	0.1081	0.1034	5,674.9359
Landscaping	0.7540	0.2842	24.5852	1.3000e-003		0.1350	0.1350		0.1350	0.1350		44.1496	44.1496	0.0434		45.2335
Total	**10.3200**	**4.7033**	**26.4657**	**0.0295**		**0.4923**	**0.4923**		**0.4923**	**0.4923**	**0.0000**	**5,685.5614**	**5,685.5614**	**0.1515**	**0.1034**	**5,720.1693**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - All Sites - San Diego County, Annual

Encinitas HE - All Sites

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	6,853.00	Space	61.68	2,741,200.00	0
Apartments Low Rise	2,494.00	Dwelling Unit	155.88	2,494,000.00	7133

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - operations only

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.4662	4.6756	2.9361	5.2300e-003	0.0157	0.2344	0.2501	4.1700e-003	0.2180	0.2222	0.0000	466.5254	466.5254	0.1262	0.0000	469.6799
2020	0.0657	0.6482	0.4320	7.8000e-004	2.3500e-003	0.0324	0.0347	6.2000e-004	0.0301	0.0307	0.0000	68.4175	68.4175	0.0188	0.0000	68.8870
Maximum	**0.4662**	**4.6756**	**2.9361**	**5.2300e-003**	**0.0157**	**0.2344**	**0.2501**	**4.1700e-003**	**0.2180**	**0.2222**	**0.0000**	**466.5254**	**466.5254**	**0.1262**	**0.0000**	**469.6799**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.4662	4.6756	2.9361	5.2300e-003	0.0149	0.2344	0.2492	3.9700e-003	0.2180	0.2220	0.0000	466.5249	466.5249	0.1262	0.0000	469.6793

2020	0.0657	0.6482	0.4320	7.8000e-004	2.2200e-003	0.0324	0.0346	5.9000e-004	0.0301	0.0307	0.0000	68.4175	68.4175	0.0188	0.0000	68.8869
Maximum	**0.4662**	**4.6756**	**2.9361**	**5.2300e-003**	**0.0149**	**0.2344**	**0.2492**	**3.9700e-003**	**0.2180**	**0.2220**	**0.0000**	**466.5249**	**466.5249**	**0.1262**	**0.0000**	**469.6793**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.26**	**0.00**	**0.33**	**4.80**	**0.00**	**0.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2019**	**3-31-2019**	1.2667	1.2667
2	**4-1-2019**	**6-30-2019**	1.2804	1.2804
3	**7-1-2019**	**9-30-2019**	1.2945	1.2945
4	**10-1-2019**	**12-31-2019**	1.2949	1.2949
5	**1-1-2020**	**3-31-2020**	0.7193	0.7193
		Highest	1.2949	1.2949

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	170.9749	3.2715	211.8119	0.3510		27.1865	27.1865		27.1865	27.1865	2,576.1965	1,110.7909	3,686.9874	2.4072	0.2026	3,807.5540
Energy	0.1510	1.2900	0.5490	8.2300e-003		0.1043	0.1043		0.1043	0.1043	0.0000	5,266.6428	5,266.6428	0.1805	0.0588	5,288.6795
Mobile	5.4276	24.3536	65.3292	0.2128	17.7060	0.2140	17.9200	4.7419	0.2009	4.9428	0.0000	19,588.3081	19,588.3081	1.0654	0.0000	19,614.9438
Waste						0.0000	0.0000		0.0000	0.0000	232.8794	0.0000	232.8794	13.7628	0.0000	576.9487
Water						0.0000	0.0000		0.0000	0.0000	51.5519	1,063.4247	1,114.9766	5.3377	0.1339	1,288.3146
Total	**176.5535**	**28.9151**	**277.6900**	**0.5719**	**17.7060**	**27.5048**	**45.2108**	**4.7419**	**27.4916**	**32.2335**	**2,860.6278**	**27,029.1665**	**29,889.7943**	**22.7536**	**0.3953**	**30,576.4406**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	14.6646	1.7421	19.2928	0.0107		0.2258	0.2258		0.2258	0.2258	0.0000	1,798.3304	1,798.3304	0.0637	0.0324	1,809.5821
Energy	0.1510	1.2900	0.5490	8.2300e-003		0.1043	0.1043		0.1043	0.1043	0.0000	5,266.6428	5,266.6428	0.1805	0.0588	5,288.6795
Mobile	5.4276	24.3536	65.3292	0.2128	17.7060	0.2140	17.9200	4.7419	0.2009	4.9428	0.0000	19,588.3081	19,588.3081	1.0654	0.0000	19,614.9438
Waste						0.0000	0.0000		0.0000	0.0000	116.4397	0.0000	116.4397	6.8814	0.0000	288.4744
Water						0.0000	0.0000		0.0000	0.0000	41.2415	902.4410	943.6825	4.2722	0.1075	1,082.5332
Total	**20.2431**	**27.3857**	**85.1710**	**0.2317**	**17.7060**	**0.5442**	**18.2501**	**4.7419**	**0.5310**	**5.2729**	**157.6812**	**27,555.7223**	**27,713.4035**	**12.4632**	**0.1988**	**28,084.2129**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**88.53**	**5.29**	**69.33**	**59.49**	**0.00**	**98.02**	**59.63**	**0.00**	**98.07**	**83.64**	**94.49**	**-1.95**	**7.28**	**45.23**	**49.73**	**8.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	2/24/2020	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 61.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4585	4.6697	2.8788	5.0600e-003		0.2342	0.2342		0.2179	0.2179	0.0000	451.8736	451.8736	0.1257	0.0000	455.0163
Total	**0.4585**	**4.6697**	**2.8788**	**5.0600e-003**	**0.0000**	**0.2342**	**0.2342**	**0.0000**	**0.2179**	**0.2179**	**0.0000**	**451.8736**	**451.8736**	**0.1257**	**0.0000**	**455.0163**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7200e-003	5.9200e-003	0.0573	1.6000e-004	0.0157	1.1000e-004	0.0158	4.1700e-003	1.1000e-004	4.2800e-003	0.0000	14.6518	14.6518	4.7000e-004	0.0000	14.6636
Total	**7.7200e-003**	**5.9200e-003**	**0.0573**	**1.6000e-004**	**0.0157**	**1.1000e-004**	**0.0158**	**4.1700e-003**	**1.1000e-004**	**4.2800e-003**	**0.0000**	**14.6518**	**14.6518**	**4.7000e-004**	**0.0000**	**14.6636**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4585	4.6697	2.8788	5.0600e-003		0.2342	0.2342		0.2179	0.2179	0.0000	451.8731	451.8731	0.1257	0.0000	455.0157
Total	**0.4585**	**4.6697**	**2.8788**	**5.0600e-003**	**0.0000**	**0.2342**	**0.2342**	**0.0000**	**0.2179**	**0.2179**	**0.0000**	**451.8731**	**451.8731**	**0.1257**	**0.0000**	**455.0157**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7200e-003	5.9200e-003	0.0573	1.6000e-004	0.0149	1.1000e-004	0.0150	3.9700e-003	1.1000e-004	4.0800e-003	0.0000	14.6518	14.6518	4.7000e-004	0.0000	14.6636
Total	**7.7200e-003**	**5.9200e-003**	**0.0573**	**1.6000e-004**	**0.0149**	**1.1000e-004**	**0.0150**	**3.9700e-003**	**1.1000e-004**	**4.0800e-003**	**0.0000**	**14.6518**	**14.6518**	**4.7000e-004**	**0.0000**	**14.6636**

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0646	0.6474	0.4242	7.6000e-004		0.0323	0.0323		0.0301	0.0301	0.0000	66.2973	66.2973	0.0187	0.0000	66.7652
Total	**0.0646**	**0.6474**	**0.4242**	**7.6000e-004**	**0.0000**	**0.0323**	**0.0323**	**0.0000**	**0.0301**	**0.0301**	**0.0000**	**66.2973**	**66.2973**	**0.0187**	**0.0000**	**66.7652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.0000e-004	7.8300e-003	2.0000e-005	2.3500e-003	2.0000e-005	2.3600e-003	6.2000e-004	2.0000e-005	6.4000e-004	0.0000	2.1203	2.1203	6.0000e-005	0.0000	2.1219
Total	**1.0800e-003**	**8.0000e-004**	**7.8300e-003**	**2.0000e-005**	**2.3500e-003**	**2.0000e-005**	**2.3600e-003**	**6.2000e-004**	**2.0000e-005**	**6.4000e-004**	**0.0000**	**2.1203**	**2.1203**	**6.0000e-005**	**0.0000**	**2.1219**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0646	0.6474	0.4242	7.6000e-004		0.0323	0.0323		0.0301	0.0301	0.0000	66.2972	66.2972	0.0187	0.0000	66.7651
Total	**0.0646**	**0.6474**	**0.4242**	**7.6000e-004**	**0.0000**	**0.0323**	**0.0323**	**0.0000**	**0.0301**	**0.0301**	**0.0000**	**66.2972**	**66.2972**	**0.0187**	**0.0000**	**66.7651**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.0000e-004	7.8300e-003	2.0000e-005	2.2200e-003	2.0000e-005	2.2400e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	2.1203	2.1203	6.0000e-005	0.0000	2.1219
Total	**1.0800e-003**	**8.0000e-004**	**7.8300e-003**	**2.0000e-005**	**2.2200e-003**	**2.0000e-005**	**2.2400e-003**	**5.9000e-004**	**2.0000e-005**	**6.1000e-004**	**0.0000**	**2.1203**	**2.1203**	**6.0000e-005**	**0.0000**	**2.1219**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.4276	24.3536	65.3292	0.2128	17.7060	0.2140	17.9200	4.7419	0.2009	4.9428	0.0000	19,588.3081	19,588.3081	1.0654	0.0000	19,614.9438
Unmitigated	5.4276	24.3536	65.3292	0.2128	17.7060	0.2140	17.9200	4.7419	0.2009	4.9428	0.0000	19,588.3081	19,588.3081	1.0654	0.0000	19,614.9438

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	16,435.46	17,857.04	15138.58	46,979,089	46,979,089
Parking Lot	0.00	0.00	0.00		
Total	16,435.46	17,857.04	15,138.58	46,979,089	46,979,089

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH

Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,772.6497	3,772.6497	0.1519	0.0314	3,785.8084
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,772.6497	3,772.6497	0.1519	0.0314	3,785.8084
NaturalGas Mitigated	0.1510	1.2900	0.5490	8.2300e-003		0.1043	0.1043		0.1043	0.1043	0.0000	1,493.9930	1,493.9930	0.0286	0.0274	1,502.8711
NaturalGas Unmitigated	0.1510	1.2900	0.5490	8.2300e-003		0.1043	0.1043		0.1043	0.1043	0.0000	1,493.9930	1,493.9930	0.0286	0.0274	1,502.8711

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.79964e+007	0.1510	1.2900	0.5490	8.2300e-003		0.1043	0.1043		0.1043	0.1043	0.0000	1,493.9930	1,493.9930	0.0286	0.0274	1,502.8711
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.1510**	**1.2900**	**0.5490**	**8.2300e-003**		**0.1043**	**0.1043**		**0.1043**	**0.1043**	**0.0000**	**1,493.9930**	**1,493.9930**	**0.0286**	**0.0274**	**1,502.8711**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.79964e+007	0.1510	1.2900	0.5490	8.2300e-003		0.1043	0.1043		0.1043	0.1043	0.0000	1,493.9930	1,493.9930	0.0286	0.0274	1,502.8711
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1510**	**1.2900**	**0.5490**	**8.2300e-003**		**0.1043**	**0.1043**		**0.1043**	**0.1043**	**0.0000**	**1,493.9930**	**1,493.9930**	**0.0286**	**0.0274**	**1,502.8711**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.05845e+007	3,459.1029	0.1392	0.0288	3,471.1679
Parking Lot	959420	313.5469	0.0126	2.6100e-003	314.6405
Total		**3,772.6497**	**0.1519**	**0.0314**	**3,785.8084**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.05845e+007	3,459.1029	0.1392	0.0288	3,471.1679
Parking Lot	959420	313.5469	0.0126	2.6100e-003	314.6405
Total		**3,772.6497**	**0.1519**	**0.0314**	**3,785.8084**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.6646	1.7421	19.2928	0.0107		0.2258	0.2258		0.2258	0.2258	0.0000	1,798.3304	1,798.3304	0.0637	0.0324	1,809.5821
Unmitigated	170.9749	3.2715	211.8119	0.3510		27.1865	27.1865		27.1865	27.1865	2,576.1965	1,110.7909	3,686.9874	2.4072	0.2026	3,807.5540

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating	3.9967					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.9175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	156.4890	3.0561	193.1687	0.3500		27.0841	27.0841		27.0841	27.0841	2,576.1965	1,080.4192	3,656.6158	2.3774	0.2026	3,776.4367
Landscaping	0.5717	0.2155	18.6432	9.8000e-004		0.1024	0.1024		0.1024	0.1024	0.0000	30.3717	30.3717	0.0298	0.0000	31.1173
Total	**170.9749**	**3.2715**	**211.8119**	**0.3510**		**27.1865**	**27.1865**		**27.1865**	**27.1865**	**2,576.1965**	**1,110.7909**	**3,686.9874**	**2.4072**	**0.2026**	**3,807.5540**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.9967					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.9175					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1786	1.5266	0.6496	9.7400e-003		0.1234	0.1234		0.1234	0.1234	0.0000	1,767.9588	1,767.9588	0.0339	0.0324	1,778.4649
Landscaping	0.5717	0.2155	18.6432	9.8000e-004		0.1024	0.1024		0.1024	0.1024	0.0000	30.3717	30.3717	0.0298	0.0000	31.1173
Total	**14.6646**	**1.7421**	**19.2928**	**0.0107**		**0.2258**	**0.2258**		**0.2258**	**0.2258**	**0.0000**	**1,798.3304**	**1,798.3304**	**0.0637**	**0.0324**	**1,809.5821**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	943.6825	4.2722	0.1075	1,082.5332
Unmitigated	1,114.9766	5.3377	0.1339	1,288.3146

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	162.494 / 102.442	1,114.9766	5.3377	0.1339	1,288.3146
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1,114.9766**	**5.3377**	**0.1339**	**1,288.3146**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Low Rise	129.995 / 96.193	943.6825	4.2722	0.1075	1,082.5332
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**943.6825**	**4.2722**	**0.1075**	**1,082.5332**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	116.4397	6.8814	0.0000	288.4744
Unmitigated	232.8794	13.7628	0.0000	576.9487

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Low Rise	1147.24	232.8794	13.7628	0.0000	576.9487
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**232.8794**	**13.7628**	**0.0000**	**576.9487**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	573.62	116.4397	6.8814	0.0000	288.4744
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**116.4397**	**6.8814**	**0.0000**	**288.4744**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - All Sites

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	6,853.00	Space	61.68	2,741,200.00	0
Apartments Low Rise	2,494.00	Dwelling Unit	155.88	2,494,000.00	7133

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - operations only

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5723	35.8241	22.5242	0.0401	0.1232	1.7958	1.9190	0.0327	1.6705	1.7032	0.0000	3,947.4293	3,947.4293	1.0660	0.0000	3,974.0792
2020	3.3672	33.2381	22.1784	0.0401	0.1232	1.6596	1.7828	0.0327	1.5427	1.5753	0.0000	3,874.1170	3,874.1170	1.0617	0.0000	3,900.6600
Maximum	**3.5723**	**35.8241**	**22.5242**	**0.0401**	**0.1232**	**1.7958**	**1.9190**	**0.0327**	**1.6705**	**1.7032**	**0.0000**	**3,947.4293**	**3,947.4293**	**1.0660**	**0.0000**	**3,974.0792**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5723	35.8241	22.5242	0.0401	0.1168	1.7958	1.9126	0.0311	1.6705	1.7016	0.0000	3,947.4293	3,947.4293	1.0660	0.0000	3,974.0792

2020	3.3672	33.2381	22.1784	0.0401	0.1168	1.6596	1.7764	0.0311	1.5427	1.5738	0.0000	3,874.1170	3,874.1170	1.0617	0.0000	3,900.6600
Maximum	**3.5723**	**35.8241**	**22.5242**	**0.0401**	**0.1168**	**1.7958**	**1.9126**	**0.0311**	**1.6705**	**1.7016**	**0.0000**	**3,947.4293**	**3,947.4293**	**1.0660**	**0.0000**	**3,974.0792**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.21**	**0.00**	**0.35**	**4.80**	**0.00**	**0.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3,899.3998	76.9320	4,918.5776	8.5467		661.7253	661.7253		661.7253	661.7253	69,262.6964	29,419.7540	98,682.4505	64.2833	5.4480	101,913.0461
Energy	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
Mobile	34.0981	140.4958	400.3513	1.3264	108.1226	1.2743	109.3969	28.9001	1.1958	30.0959		134,546.2773	134,546.2773	7.0559		134,722.6747
Total	**3,934.3251**	**224.4964**	**5,321.9368**	**9.9183**	**108.1226**	**663.5711**	**771.6936**	**28.9001**	**663.4926**	**692.3926**	**69,262.6964**	**172,989.8418**	**242,252.5383**	**71.5121**	**5.6135**	**245,713.1553**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9519	39.6281	222.9905	0.2486		4.1481	4.1481		4.1481	4.1481	0.0000	47,904.6952	47,904.6952	1.2763	0.8714	48,196.2905
Energy	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345

Mobile	34.0981	140.4958	400.3513	1.3264	108.1226	1.2743	109.3969	28.9001	1.1958	30.0959		134,546.2773	134,546.2773	7.0559		134,722.6747
Total	**121.8772**	**187.1926**	**626.3497**	**1.6201**	**108.1226**	**5.9939**	**114.1165**	**28.9001**	**5.9154**	**34.8155**	**0.0000**	**191,474.7830**	**191,474.7830**	**8.5052**	**1.0369**	**191,996.3997**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.90**	**16.62**	**88.23**	**83.67**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-10.69**	**20.96**	**88.11**	**81.53**	**21.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	2/24/2020	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 61.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342

Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.0000**	**1.6587**	**1.6587**	**0.0000**	**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0371	0.4252	1.2700e-003	0.1232	8.6000e-004	0.1241	0.0327	8.0000e-004	0.0335		126.4121	126.4121	3.7700e-003		126.5064
Total	**0.0550**	**0.0371**	**0.4252**	**1.2700e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**8.0000e-004**	**0.0335**		**126.4121**	**126.4121**	**3.7700e-003**		**126.5064**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.0000**	**1.6587**	**1.6587**	**0.0000**	**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0371	0.4252	1.2700e-003	0.1168	8.6000e-004	0.1177	0.0311	8.0000e-004	0.0319		126.4121	126.4121	3.7700e-003		126.5064
Total	**0.0550**	**0.0371**	**0.4252**	**1.2700e-003**	**0.1168**	**8.6000e-004**	**0.1177**	**0.0311**	**8.0000e-004**	**0.0319**		**126.4121**	**126.4121**	**3.7700e-003**		**126.5064**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Mitigated	34.0981	140.4958	400.3513	1.3264	108.1226	1.2743	109.3969	28.9001	1.1958	30.0959		134,546.2773	134,546.2773	7.0559		134,722.6747
Unmitigated	34.0981	140.4958	400.3513	1.3264	108.1226	1.2743	109.3969	28.9001	1.1958	30.0959		134,546.2773	134,546.2773	7.0559		134,722.6747

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	16,435.46	17,857.04	15138.58	46,979,089	46,979,089
Parking Lot	0.00	0.00	0.00		
Total	16,435.46	17,857.04	15,138.58	46,979,089	46,979,089

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
NaturalGas Unmitigated	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	76702.4	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.8272**	**7.0687**	**3.0079**	**0.0451**		**0.5715**	**0.5715**		**0.5715**	**0.5715**		**9,023.8105**	**9,023.8105**	**0.1730**	**0.1654**	**9,077.4345**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	76.7024	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.8272**	**7.0687**	**3.0079**	**0.0451**		**0.5715**	**0.5715**		**0.5715**	**0.5715**		**9,023.8105**	**9,023.8105**	**0.1730**	**0.1654**	**9,077.4345**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	86.9519	39.6281	222.9905	0.2486		4.1481	4.1481		4.1481	4.1481	0.0000	47,904.6952	47,904.6952	1.2763	0.8714	48,196.2905
Unmitigated	3,899.3998	76.9320	4,918.5776	8.5467		661.7253	661.7253		661.7253	661.7253	69,262.6964	29,419.7540	98,682.4505	64.2833	5.4480	101,913.0461

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.8997					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.3425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,816.8050	74.5378	4,711.4312	8.5358		660.5876	660.5876		660.5876	660.5876	69,262.6964	29,047.7647	98,310.4612	63.9180	5.4480	101,531.9246

Landscaping	6.3526	2.3942	207.1463	0.0109		1.1377	1.1377		1.1377	1.1377		371.9893	371.9893	0.3653		381.1215
Total	**3,899.3998**	**76.9320**	**4,918.5775**	**8.5467**		**661.7253**	**661.7253**		**661.7253**	**661.7253**	**69,262.6964**	**29,419.7540**	**98,682.4505**	**64.2833**	**5.4480**	**101,913.0461**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.8997					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.3425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.3572	37.2340	15.8442	0.2377		3.0104	3.0104		3.0104	3.0104	0.0000	47,532.7059	47,532.7059	0.9110	0.8714	47,815.1690
Landscaping	6.3526	2.3942	207.1463	0.0109		1.1377	1.1377		1.1377	1.1377		371.9893	371.9893	0.3653		381.1215
Total	**86.9519**	**39.6281**	**222.9905**	**0.2486**		**4.1481**	**4.1481**		**4.1481**	**4.1481**	**0.0000**	**47,904.6952**	**47,904.6952**	**1.2763**	**0.8714**	**48,196.2905**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Encinitas HE - All Sites - San Diego County, Winter

Encinitas HE - All Sites

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	6,853.00	Space	61.68	2,741,200.00	0
Apartments Low Rise	2,494.00	Dwelling Unit	155.88	2,494,000.00	7133

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - operations only

Demolition -

Grading - site 10 = 16.9 acres

Construction Off-road Equipment Mitigation - standard dust control

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5800	35.8292	22.4986	0.0400	0.1232	1.7958	1.9190	0.0327	1.6705	1.7032	0.0000	3,939.4364	3,939.4364	1.0658	0.0000	3,966.0810
2020	3.3745	33.2427	22.1541	0.0400	0.1232	1.6596	1.7828	0.0327	1.5427	1.5753	0.0000	3,866.3747	3,866.3747	1.0615	0.0000	3,892.9127
Maximum	**3.5800**	**35.8292**	**22.4986**	**0.0400**	**0.1232**	**1.7958**	**1.9190**	**0.0327**	**1.6705**	**1.7032**	**0.0000**	**3,939.4364**	**3,939.4364**	**1.0658**	**0.0000**	**3,966.0810**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5800	35.8292	22.4986	0.0400	0.1168	1.7958	1.9126	0.0311	1.6705	1.7016	0.0000	3,939.4364	3,939.4364	1.0658	0.0000	3,966.0810

2020	3.3745	33.2427	22.1541	0.0400	0.1168	1.6596	1.7764	0.0311	1.5427	1.5738	0.0000	3,866.3747	3,866.3747	1.0615	0.0000	3,892.9127
Maximum	**3.5800**	**35.8292**	**22.4986**	**0.0400**	**0.1168**	**1.7958**	**1.9126**	**0.0311**	**1.6705**	**1.7016**	**0.0000**	**3,939.4364**	**3,939.4364**	**1.0658**	**0.0000**	**3,966.0810**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.21**	**0.00**	**0.35**	**4.80**	**0.00**	**0.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3,899.3998	76.9320	4,918.5776	8.5467		661.7253	661.7253		661.7253	661.7253	69,262.6964	29,419.7540	98,682.4505	64.2833	5.4480	101,913.0461
Energy	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
Mobile	33.1833	144.8544	394.0320	1.2573	108.1226	1.2828	109.4053	28.9001	1.2039	30.1039		127,582.9095	127,582.9095	7.0738		127,759.7546
Total	**3,933.4103**	**228.8551**	**5,315.6175**	**9.8492**	**108.1226**	**663.5795**	**771.7021**	**28.9001**	**663.5007**	**692.4007**	**69,262.6964**	**166,026.4740**	**235,289.1704**	**71.5300**	**5.6135**	**238,750.2352**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	86.9519	39.6281	222.9905	0.2486		4.1481	4.1481		4.1481	4.1481	0.0000	47,904.6952	47,904.6952	1.2763	0.8714	48,196.2905
Energy	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345

Mobile	33.1833	144.8544	394.0320	1.2573	108.1226	1.2828	109.4053	28.9001	1.2039	30.1039		127,582.9095	127,582.9095	7.0738		127,759.7546
Total	**120.9624**	**191.5512**	**620.0305**	**1.5510**	**108.1226**	**6.0024**	**114.1249**	**28.9001**	**5.9235**	**34.8235**	**0.0000**	**184,511.4152**	**184,511.4152**	**8.5231**	**1.0369**	**185,033.4795**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**96.92**	**16.30**	**88.34**	**84.25**	**0.00**	**99.10**	**85.21**	**0.00**	**99.11**	**94.97**	**100.00**	**-11.13**	**21.58**	**88.08**	**81.53**	**22.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	2/24/2020	5	300	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 61.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359

Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.0000**	**1.7949**	**1.7949**	**0.0000**	**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1168	8.8000e-004	0.1177	0.0311	8.1000e-004	0.0319		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0666**	**0.0462**	**0.4386**	**1.2300e-003**	**0.1168**	**8.8000e-004**	**0.1177**	**0.0311**	**8.1000e-004**	**0.0319**		**122.5371**	**122.5371**	**3.9500e-003**		**122.6359**

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.0000**	**1.6587**	**1.6587**	**0.0000**	**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0416	0.4009	1.1900e-003	0.1232	8.6000e-004	0.1241	0.0327	8.0000e-004	0.0335		118.6698	118.6698	3.5700e-003		118.7591
Total	**0.0623**	**0.0416**	**0.4009**	**1.1900e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**8.0000e-004**	**0.0335**		**118.6698**	**118.6698**	**3.5700e-003**		**118.7591**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.0000**	**1.6587**	**1.6587**	**0.0000**	**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0416	0.4009	1.1900e-003	0.1168	8.6000e-004	0.1177	0.0311	8.0000e-004	0.0319		118.6698	118.6698	3.5700e-003		118.7591
Total	**0.0623**	**0.0416**	**0.4009**	**1.1900e-003**	**0.1168**	**8.6000e-004**	**0.1177**	**0.0311**	**8.0000e-004**	**0.0319**		**118.6698**	**118.6698**	**3.5700e-003**		**118.7591**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Mitigated	33.1833	144.8544	394.0320	1.2573	108.1226	1.2828	109.4053	28.9001	1.2039	30.1039		127,582.9095	127,582.9095	7.0738		127,759.7546
Unmitigated	33.1833	144.8544	394.0320	1.2573	108.1226	1.2828	109.4053	28.9001	1.2039	30.1039		127,582.9095	127,582.9095	7.0738		127,759.7546

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	16,435.46	17,857.04	15138.58	46,979,089	46,979,089
Parking Lot	0.00	0.00	0.00		
Total	16,435.46	17,857.04	15,138.58	46,979,089	46,979,089

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
NaturalGas Unmitigated	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	76702.4	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.8272**	**7.0687**	**3.0079**	**0.0451**		**0.5715**	**0.5715**		**0.5715**	**0.5715**		**9,023.8105**	**9,023.8105**	**0.1730**	**0.1654**	**9,077.4345**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	76.7024	0.8272	7.0687	3.0079	0.0451		0.5715	0.5715		0.5715	0.5715		9,023.8105	9,023.8105	0.1730	0.1654	9,077.4345
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.8272**	**7.0687**	**3.0079**	**0.0451**		**0.5715**	**0.5715**		**0.5715**	**0.5715**		**9,023.8105**	**9,023.8105**	**0.1730**	**0.1654**	**9,077.4345**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	86.9519	39.6281	222.9905	0.2486		4.1481	4.1481		4.1481	4.1481	0.0000	47,904.6952	47,904.6952	1.2763	0.8714	48,196.2905
Unmitigated	3,899.3998	76.9320	4,918.5776	8.5467		661.7253	661.7253		661.7253	661.7253	69,262.6964	29,419.7540	98,682.4505	64.2833	5.4480	101,913.0461

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.8997					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.3425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,816.8050	74.5378	4,711.4312	8.5358		660.5876	660.5876		660.5876	660.5876	69,262.6964	29,047.7647	98,310.4612	63.9180	5.4480	101,531.9246

Landscaping	6.3526	2.3942	207.1463	0.0109		1.1377	1.1377		1.1377	1.1377		371.9893	371.9893	0.3653		381.1215
Total	**3,899.3998**	**76.9320**	**4,918.5775**	**8.5467**		**661.7253**	**661.7253**		**661.7253**	**661.7253**	**69,262.6964**	**29,419.7540**	**98,682.4505**	**64.2833**	**5.4480**	**101,913.0461**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.8997					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.3425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.3572	37.2340	15.8442	0.2377		3.0104	3.0104		3.0104	3.0104	0.0000	47,532.7059	47,532.7059	0.9110	0.8714	47,815.1690
Landscaping	6.3526	2.3942	207.1463	0.0109		1.1377	1.1377		1.1377	1.1377		371.9893	371.9893	0.3653		381.1215
Total	**86.9519**	**39.6281**	**222.9905**	**0.2486**		**4.1481**	**4.1481**		**4.1481**	**4.1481**	**0.0000**	**47,904.6952**	**47,904.6952**	**1.2763**	**0.8714**	**48,196.2905**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix E

Relevant General Plan Policies

A.E RELEVANT GENERAL PLAN POLICIES

General Plan Policy	Environmental Assessment Sections													
	4.01 Aesthetics	4.02 Air Quality	4.03 Biological Resources	4.04 Cultural Resources	4.05 Geology & Soils	4.06 Greenhouse Gas Emissions	4.07 Hazards & Hazardous Materials	4.08 Hydrology & Water Quality	4.09 Land Use & Planning	4.10 Noise	4.11 Population & Housing	4.12 Public Services, Facilities & Recreation	4.13 Transportation & Traffic	4.14 Public Utilities & Service Systems
Land Use Element (* denotes a Local Coastal Program Policy)														
*Policy 1.2: Encourage the development of unified commercial centers and neighborhood commercial centers rather than the continued development of "strip commercial." The Highway 101 corridor may be an exception because of its existing configuration and land uses. (Coastal Act/30250)									X					
Policy 1.12: The residential character of the City shall be substantially single-family detached housing.									X					
*Policy 1.14: The City will maintain and enhance the Hwy 101 commercial corridor by providing appropriate community-serving tourist-related and pedestrian oriented uses. (Coastal Act/30250)									X					
*Policy 2.3: Growth will be managed in a manner that does not exceed the ability of the City, special districts and utilities to provide a desirable level of facilities and services. (Coastal Act/30250)									X					X
Policy 2.8: Development shall not be permitted where it will result in significant degradation of ground, surface, or ocean water quality, or where it will result in significant increased risk of sewage overflows, spills, or similar accidents. (Coastal Act/30231)								X						
Policy 2.10: Development shall not be allowed prematurely, in that access, utilities, and services shall be available prior to allowing the development. (Coastal Act/30252)								X						X
*Policy 2.11: Incremental development of large properties shall not be permitted without a master plan and environmental analysis of the full potential development. (Coastal Act/30250)								X	X					
Policy 3.1: For purposes of growth management, to ensure that existing desirable community character is maintained and to ensure that facilities planning is economical and comprehensive, the ultimate buildout figure for residential dwelling units will be determined by utilizing the total mid- range density figure of the Land Use Element, which shall be derived from the total of all land use acreage devoted to residential categories, assuming a mid- range buildout density overall.									X					
Policy 3.2: The City will designate land use categories/zones for residential development which provide housing opportunities for all segments of society at densities consistent with the goals of this Element.									X					
Policy 3.6: Except where overriding considerations are found to exist, property will not be designated so as to allow or otherwise encourage commercial development along circulation roads in a continuous or “strip" manner.									X					
Policy 3.7: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, the allowable maximum density of any property designated for residential use shall not be increased except by the affirmative vote of a majority of those voting in the election approving the proposed increase.									X					
Policy 3.8: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, property designated/zoned for non-residential uses shall not be redesignated/rezoned to allow residential uses except by the affirmative vote of a majority of those voting in the election approving the proposed change.									X					

General Plan Policy	Environmental Assessment Sections													
	4.01 Aesthetics	4.02 Air Quality	4.03 Biological Resources	4.04 Cultural Resources	4.05 Geology & Soils	4.06 Greenhouse Gas Emissions	4.07 Hazards & Hazardous Materials	4.08 Hydrology & Water Quality	4.09 Land Use & Planning	4.10 Noise	4.11 Population & Housing	4.12 Public Services, Facilities & Recreation	4.13 Transportation & Traffic	4.14 Public Utilities & Service Systems
Policy 3.9: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, property designated/zoned for residential use shall not be redesignated/rezoned to any non-residential use except by the affirmative vote of a majority of those voting in the election approving the proposed change.									X					
Policy 3.12: The following may be considered as exceptions to the requirements for voter approval for specified general plan land use map amendments: 1. Minor adjustments in land use boundaries to correctly reflect property or development site boundaries, which adjustments do not substantially change intended area development potential – as approved by Council by unanimous vote. 2. Changes to land use designations to correct (a) map omissions and (b) mapping errors which are clearly demonstrated to be errors contrary to the intent of the General Plan - as approved by a unanimous Council vote. 3. A change from any land use designation to the Ecological Resource/Open Space/Parks designation, when property has been purchased or land development rights have been secured for land for open space or parks purposes - as approved by a unanimous Council vote. 4. Minor land use designation changes when approved by affirmative vote of four or more City Council members. For purposes of this paragraph, "minor" is defined as changes for which certified environmental review per the California Environmental Quality Act has determined that there will be no unmitigable significant negative environmental impacts, and one of the following apply: <u>(a) Exception for Decrease in Intensity:</u> The change is to a category of lower land use intensity or density than the existing category that results in a reduction in intensity. For purposes of this determination the following hierarchy of categories, from higher to lower, is established: Light Industrial, General Commercial, Visitor-Serving Commercial, Transportation Corridor, Local Commercial, Public/Semi-Public, Office Professional, Residential 25, Residential 15, Residential 11, Mobilehome Park, Residential 8, Residential 5, Residential 3, Rural Residential 2, Rural Residential 1, Rural Residential, Ecological Resource/Open Space/Parks. <u>(b) Exception for Residential Density:</u> The change applies to 5 acres of land area or less, and is a change from a non-residential to a residential category, or from a residential to another higher-density residential category, which would result in the allowance of ten or fewer additional dwelling units (prior to consideration of any density bonus) for the 5 acre site. The change shall also be determined to be compatible with, and generally not exceeding the density of, surrounding planned land use residential densities. <u>(c) Exception for Change Within Land Use Class:</u> The change applies to 5 acres of land area or less, and is a change from one land use category to another when both are within the same class of categories. For purposes of this determination the following classes of categories are established: 1 - Rural Residential, Rural Residential 1, Rural Residential 2 2 - Residential 3, Residential 5, Residential 8 3 - Residential 11, Residential 15, Residential 25 4 - Office Professional, Local Commercial 5 - Visitor Serving Commercial, General Commercial									X					

General Plan Policy	Environmental Assessment Sections													
	4.01 Aesthetics	4.02 Air Quality	4.03 Biological Resources	4.04 Cultural Resources	4.05 Geology & Soils	4.06 Greenhouse Gas Emissions	4.07 Hazards & Hazardous Materials	4.08 Hydrology & Water Quality	4.09 Land Use & Planning	4.10 Noise	4.11 Population & Housing	4.12 Public Services, Facilities & Recreation	4.13 Transportation & Traffic	4.14 Public Utilities & Service Systems
*Policy 6.6: The construction of very large buildings shall be discouraged where such structures are incompatible with surrounding development. The building height of both residential and nonresidential structures shall be compatible with surrounding development, given topographic and other considerations, and shall protect public views of regional or statewide significance. (Coastal Act/30251/30252/30253)									X					
Policy 7.10: Both residential and non-residential development shall be limited to a maximum height of two stories and 30 feet. Limited exceptions for non-residential development may be allowed, but only for designated specific sites as developed and adopted through area specific plans. Exceptions may also be made for Medical Complex development projects at the discretion of the City pursuant to conditional use permit applications as provided by the Zoning Code, to allow building heights up to a maximum height of three stories. An exception is also authorized for a public high school with a minimum 10-acre site.	X													
Policy 8.1: Require that any improvement constructed in an area with a slope of more than 25% and other areas where soil stability is at issue to submit soils and geotechnical studies to the City for review and approval.					X									
Policy 8.2: Development within coastal and flood plain areas identified in the Land Use and Resource Management Elements must be limited, designed to minimize hazards associated with development in these areas, and to preserve area resources. Within the floodway, channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to necessary water supply projects, flood control projects where no other method for protecting existing public or private structures is feasible and where such protection is necessary for public safety or to protect existing development, and other development where the primary function is the improvement of fish and wildlife habitats. No development shall occur in the 100-year Floodplain that is not consistent and compatible with the associated flood hazard. Only uses which are safe and compatible with periodic flooding and inundation shall be considered, such as stables, plant nurseries, a minimum intrusion of open parking, some forms of agriculture, and open space preservation, as appropriate under zoning, and subject to applicable environmental review and consistency with other policies of this Plan. No grading or fill activity other than the minimum necessary to accommodate those uses found safe and compatible shall be allowed. Such grading shall not significantly redirect or impede flood flows or require floodway modifications. Exceptions from these limitations may be made to allow the following: a. Minimum private development (defined as one dwelling unit per legal parcel under residential zoning, and an equivalent extent of development under non-residential zoning) only upon a finding that strict application thereof would preclude a minimum use of the property. b. Development of circulation element roads, other necessary public facilities, flood control projects where no feasible method for protecting existing public or private structures exists and where such protection is necessary for public safety or to protect existing development, and other development which has as its objective the improvement of fish and wildlife habitat. c. Limited reconfiguration of the flood plain in previously degraded areas provided it is determined by the City that the reconfiguration of the flood plain is incidental to the improvement of an overall storm water system and that the reconfigured storm water system is substantially based on natural channels with vegetation to accommodate storm water management. This is applicable to the El Camino Real creek corridor draining into Encinitas Creek. These exceptions shall be allowed only to the extent that no other feasible alternatives exist and minimum disruption to the natural floodplain environment is made. The City shall not approve subdivisions or boundary line adjustments which would allow increased impacts for development in 100-year floodplains. For specific policy provisions regarding wetlands which may be associated with floodplains, refer to Resource Management Element Policy 10.6. (Coastal Act/30253) *Policy 8.2 amended 1/30/91, 9/21/94 (Reso. 94-29) and 5/11/95 (Reso. 95-32)*							X						

General Plan Policy	Environmental Assessment Sections													
	4.01 Aesthetics	4.02 Air Quality	4.03 Biological Resources	4.04 Cultural Resources	4.05 Geology & Soils	4.06 Greenhouse Gas Emissions	4.07 Hazards & Hazardous Materials	4.08 Hydrology & Water Quality	4.09 Land Use & Planning	4.10 Noise	4.11 Population & Housing	4.12 Public Services, Facilities & Recreation	4.13 Transportation & Traffic	4.14 Public Utilities & Service Systems
*Policy 8.4: Within residentially designated areas, lot averaging and PRDs may be allowed to preserve areas of unique topographic features, riparian woodlands, and other significant open space areas of importance to the community based on the following criteria: Lot averaging and PRDs shall only be used to create a quality development, but shall not increase the overall density of the subdivision; the areas of open space shall be determined and preserved in perpetuity; no further subdivisions of land within lot-averaged subdivisions shall occur. (Coastal Act/30240)									X					
Policy 9.1: Encourage and preserve low-density residential zoning within I-5 Corridor while preserving the best natural features and avoiding the creation of a totally urbanized landscape and maintain I-5 Interchange areas to conform to the specifications of this overall goal. The City will develop an I-5 view corridor plan to implement this policy. (Coastal Act/30240/30251)									X					
Housing Element														
Draft 2013-2021 Housing Element Update (Appendix C)														
Circulation Element														
Policy 1.2: Endeavor to maintain Level of Service C as a basic design guideline for the local system of roadways understanding that the guideline may not be attainable in all cases.													X	
Policy 1.3: Prohibit development which results in Level of Service E or F at any intersection unless no alternatives exist and an overriding public need can be demonstrated.													X	
Policy 1.6: Minimize freeway, prime arterial, major, collector, and augmented local access to encourage their use as throughways rather than as access to adjacent properties.													X	
Policy 1.7: Encourage adjacent properties to use common access points to access prime arterials, major roads, collectors and augmented local streets.													X	
Policy 1.9: Minimize private driveway access onto both major and collector roads.													X	
Policy 1.13: Emergency response routes shall be identified as a basis for implementing an Opticon or other traffic signal control system designed to reduce emergency vehicle response time.							X							
Policy 1.15: The City will actively support an integrated transportation program that encourages and provides for mass-transit, bicycle transportation, pedestrians, equestrians, and car-pooling. (Coastal Act/30252)		X				X							X	
Policy 2.4: When considering circulation patterns and standards, primary consideration will be given to the reservation of character and safety of existing residential neighborhoods. Where conflicts arise between convenience of motorists and neighborhood safety/community character preservation, the latter will have first priority.							X							
Policy 3.1: The needs of the handicapped will be considered in new development plans including handicapped parking, loading, etc.													X	
Policy 3.2: Continue to assist in expanding public transportation and emphasize public transportation in future development with preference given to cost-effective alternatives. (Coastal Act/30252)						X	X						X	
Policy 3.3: Create a safe and convenient circulation system for pedestrians. (Coastal Act/30252)													X	
Policy 3.4: Cooperate with San Diego County, SANDAL, and other jurisdictions to help plan and implement: a regional multi-modal transportation system that is accessible to residents in the City. (Coastal Act/30252)		X				X							X	

General Plan Policy	Environmental Assessment Sections													
	4.01 Aesthetics	4.02 Air Quality	4.03 Biological Resources	4.04 Cultural Resources	4.05 Geology & Soils	4.06 Greenhouse Gas Emissions	4.07 Hazards & Hazardous Materials	4.08 Hydrology & Water Quality	4.09 Land Use & Planning	4.10 Noise	4.11 Population & Housing	4.12 Public Services, Facilities & Recreation	4.13 Transportation & Traffic	4.14 Public Utilities & Service Systems
Policy 3.5: Encourage development of mass transit and transit access points along the existing I-5 freeway corridor or along the railroad right-of-way. (Coastal Act/30252)						X								
Policy 3.6: The City should provide and encourage efficient links between possible rail transit service and other transportation modes, including rerouting of bus service to interface with transit stops.						X								
Policy 4.1: Design roads to enhance scenic areas. (Coastal Act/30251)	X													
Policy 4.2: Promote and encourage roadside and median landscaping. (Coastal Act/30251)	X													
Policy 4.5: Design and construct attractive bike paths and pedestrian ways along existing freeway overpasses and underpasses. Discourage separate pedestrian overpasses. (Coastal Act/30252)	X													
Policy 4.9: Prohibit whenever legally possible, or strictly regulate billboards on city streets, roads, freeways, railroad rights-of-way, and lagoons. (Coastal Act/30251/30253)	X													
Policy 4.10: Develop street lighting standards, where appropriate, consistent with neighborhood/community character and night sky viewing.	X													
Policy 4.14: Where feasible, minimize the dependence on private motor vehicles. (Coastal Act/30252)													X	
Goal 7: Every effort will be made to have new development, both in the City and in the region, provide for all costs of the incremental expansion of the circulation system necessary to accommodate that development. Costs include, but are not limited to, costs of right-of-way and construction, including costs of moving utilities and structures, and costs for landscaping and intersection improvement.													X	
Public Safety Element														
Policy 1.8: New residential and commercial construction shall provide for smoke detector and fire sprinkler systems to reduce the impact of development on service levels.												X		
Policy 1.9: Adequate safety service levels shall be maintained and provided for by new development.												X		
Policy 1.10: The public safety program shall provide for a response plan that strives to reduce life and property losses through technology, education, training, facilities and equipment.												X		
Policy 1.11: The public safety system shall provide standards and levels of service guidelines that assure a quality of life and protection of life and property from preventable losses.												X		
Policy 1.13: In areas identified as susceptible to brush or wildfire hazard, the City shall provide for construction standards to reduce structural susceptibility and increase protection. Brush clearance around structures for fire safety shall not exceed a 30-foot perimeter in areas of native or significant brush, and as provided by Resource Management Policy 10.1.							X							
Policy 1.14: Where development creates the need for new public safety services and/or equipment, that development shall be responsible for the cost of such services/equipment.												X		
Policy 1.16: The City and its service districts and agencies shall maintain adequate levels of staffing, materials and equipment to assure timely response to demands for public safety services.												X		
Policy 2.4: Setbacks, easements, and accesses, necessary to assure that emergency services can function with available equipment, shall be required and maintained.							X							

General Plan Policy	Environmental Assessment Sections													
	4.01 Aesthetics	4.02 Air Quality	4.03 Biological Resources	4.04 Cultural Resources	4.05 Geology & Soils	4.06 Greenhouse Gas Emissions	4.07 Hazards & Hazardous Materials	4.08 Hydrology & Water Quality	4.09 Land Use & Planning	4.10 Noise	4.11 Population & Housing	4.12 Public Services, Facilities & Recreation	4.13 Transportation & Traffic	4.14 Public Utilities & Service Systems
Policy 2.5: Emergency equipment response routes and evacuation procedures shall be defined and provided for.							X							
Policy 2.6: Except as provided in Public Safety Policy 1.1, no development or filling shall be permitted within any 100-year floodplain.								X						
Policy 3.2: Restrict the transport of hazardous materials to identified truck routes as established by an implementing policy.							X							
Resource Management Element														
Policy 1.1: Require new development to utilize measures designed to conserve water in their construction.						X		X						X
Policy 1.3: The City will implement a program for both the using and sale of treated wastewater from a new wastewater treatment facility. The City should attempt to use the treated wastewater for the landscaping of transportation corridors, parks and recreation areas, and other public uses. (Coastal Act/30231)														X
Policy 1.6: Phase out the use of water softeners which utilize salt in the water-softening process to prevent continued degradation of the water. (Coastal Act/30231)								X						
Policy 1.7: Investigate ways to reduce the reliance of local water users on imported water. The City will seek reductions in per capita water consumption and will support reclaiming sewage effluent for re-use.														X
Policy 1.10: Promote the use of water efficient sprinkling and gardening systems to include ordinances and technology to encourage drought tolerant plants.						X								X
Policy 1.11: If a development can be connected to the sewer system, the system must have the capacity to handle the additional load of the proposed project.														X
Policy 2.1: In that ocean water quality conditions are of utmost importance, the City shall aggressively pursue the elimination of all forms of potential unacceptable pollution that threatens marine or human health. (Coastal Act/30230/30231)								X						
Policy 2.2: In that the San Elijo ocean wastewater outfall lies within the jurisdiction of the City and the Encina outfall lies north of the City, the City shall encourage the highest feasible level of treatment of said wastewater prior to entering the outfalls and continually encourage the reduction of volume of wastewater to said outfalls by this City and other jurisdictions. (Coastal Act/30230/30231)								X						
Policy 2.3: To minimize harmful pollutants from entering the ocean environment from lagoons, streams, storm drains and other waterways containing potential contaminants, the City shall mandate the reduction or elimination of contaminants entering all such waterways; pursue measures to monitor the quality of such contaminated waterways, and pursue prosecution of intentional and grossly negligent polluters of such waterways. (Coastal Act/30230/30231/30233)								X						
Policy 3.1: Mature trees of community significance cannot be removed without City authorization.	X		X											
Policy 3.2: Mature trees shall not be removed or disturbed to provide public right-of-way improvements if such improvements can be deferred, redesigned, or eliminated. This policy is not meant to conflict with the establishment of riding/hiking trails and other natural resource paths for the public good, or with the preservation of views.	X		X											
Policy 3.3: The City will examine ways to aesthetically trim street trees and vegetation within the public right-of-way including the possibility of using contract services or City personnel. (Coastal Act/30240/30251)	X													
Policy 3.6: Future development shall maintain significant mature trees to the extent possible and incorporate them into the design of development projects.	X		X											

General Plan Policy	Environmental Assessment Sections													
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Policy 4.1: The following Vista Points and others will be acquired and developed, as feasible: – San Elijo & Kilkenny (overlooking lagoon & coast) – Highway 101, north of La Costa Avenue – Northeast and northwest corner of I-5 and La Costa Avenue – Encinitas Community Park site (Coastal Act/30251)	X													
Policy 4.2: The following Vista Points will be developed and maintained as feasible: – Orpheus Street Park site – Oak Crest Park site – West end of "D" Street – West end of "F" Street – West end of "J" Street (Coastal Act/30251)	X													
Policy 4.3: The following Vista Points will be maintained as needed, and upgraded as necessary: – Leucadia Beach State Park – West end of "I" Street – Moonlight State Beach – Swami's City Park – Existing Vista Point on southbound I-5 – Cardiff Beach State Park (south parking lot) (Coastal Act/30251)	X													
Policy 4.4: The system of Vista Points will provide for the differing needs of automobile, bicycle, and pedestrian users, and will recognize as a recreational resource, the function of Vista Points as facilities for the passive, and occasionally remote enjoyment of the coastal and inland view. (Coastal Act/30251/30212.5/30210)	X													
Policy 4.5: The City will designate "Scenic/Visual Corridor Overlay" areas within which the character of development would be regulated to protect the integrity of the Vista Points according to the following criteria: – Critical viewshed areas should meet the following requirements: • extend radially for 2,000 feet (610M) from the Vista Point; and • cover areas upon which development could potentially obstruct, limit, or degrade the view. – Development within the critical viewshed area should be subject to design review based on the following: • building height, bulk, roof line and color and scale should not obstruct, limit or degrade the existing views; • landscaping should be located to screen adjacent undesirable views (parking lot areas, mechanical equipment, etc.) (Coastal Act/30251/30253)	X													
Policy 4.6: The City will maintain and enhance the scenic highway/visual corridor viewsheds. (Coastal Act/30251)	X													

General Plan Policy	Environmental Assessment Sections													
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Policy 4.7: The City will designate the following view corridors as scenic highway/visual corridor viewsheds: – Saxony Road, from Leucadia Blvd., north to La Costa Ave. – Highway 101 from Encinitas Blvd. south to Santa Fe Drive – El Camino Real from Encinitas Blvd. north to La Costa Blvd. – Highway 101, La Costa Ave. to South Carlsbad Beach – La Costa Ave. from just west of I-5 to El Camino Real – Highway 101, from Encinitas Blvd. to La Costa Ave. – Leucadia Blvd. between Hwy 101 and El Camino Real – San Elijo Ave. (and Hwy 101) south of Cardiff Beach State Park to Santa Fe Drive – Manchester Ave. from San Elijo Ave. to Encinitas Blvd. – Interstate 5, crossing San Elijo Lagoon (Coastal Act/30251/30253)	X													
Policy 4.10: It is intended that development would be subject to the design review provisions of the Scenic/Visual Corridor Overlay Zone for those locations within Scenic View Corridors, along scenic highways and adjacent to significant viewsheds and vista points with the addition of the following design criteria: – Road Design • Type and physical characteristics of roadway should be compatible with natural character of corridor, and with the scenic highway function. – Development Design • Building and vegetation setbacks, scenic easements, and height and bulk restrictions should be used to maintain existing views and vistas from the roadway. • Off-site signage should be prohibited and existing billboards removed. • Development should be minimized and regulated along any bluff silhouette line or on adjacent slopes within view of the lagoon areas and Escondido Creek. • Where possible, development should be placed and set back from the bases of bluffs, and similarly, set back from bluff or ridge top silhouette lines; shall leave lagoon areas and floodplains open, and shall be sited to provide unobstructed view corridors from the nearest scenic highway. • Development that is allowed within a viewshed area must respond in scale, roof line, materials, color, massing, and location on site to the topography, existing vegetation, and colors of the native environment. (Coastal Act/30251/30253)	X													
Policy 4.11: The City will develop a program to preserve views that also preserves the appropriate vegetation and removes obstacles that impact views. Trees and vegetation which are themselves part of the view quality along the public right-of-way will be retained. (Coastal Act/30251)	X													
Policy 5.1: The City will monitor and cooperate with the ongoing efforts of the U.S. Environmental Protection Agency, the San Diego Air Pollution Control District, and the State of California Air Resources Board in improving air quality in the regional air basin. The City will implement appropriate strategies from the San Diego County SIP which are consistent with the goals and policies of this plan.		X	X			X								
Policy 5.2: The City will monitor and cooperate with the ongoing efforts of the U. S. Environmental Protection Agency, the State of California Water Resources Control Board, and the Regional Water Quality Control Board in improving water quality in the San Diego region.			X											

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Policy 6.1: The City will phase in all practical forms of mandatory recycling as soon as possible.						X								X
Policy 7.1: Require that paleontological, historical and archaeological resources in the planning area are documented, preserved or salvaged if threatened by new development. (Coastal Act/30250)				X										
Policy 7.2: Conduct a survey to identify historic structures and archaeological/cultural sites throughout the community and ensure that every action is taken to ensure their preservation. Coastal Act/30250/30253 (5))				X										
Policy 9.1: The City will initiate and pursue the landscaping of appropriate median and parking areas with trees on all new and existing arterial streets. (Coastal Act/30251)	X													
Policy 9.2: All drainage courses should be maintained in natural or semi- natural vegetation utilizing existing topography as opposed to concrete ditches or pipes. (Coastal Act/30231/30240)			X											
Policy 9.3: Where possible, bridges should be used in lieu of pipes, box culverts, or underground channels to preserve the integrity of the natural stream courses, in keeping with community character in the Planning Area. (Coastal Act/30231/30240)			X											
Policy 9.4: Encourage and adopt standards for the use of drought tolerant and/or natural landscaping and efficient irrigation systems throughout the City. (Coastal Act/30231/30240)						X								
Policy 9.5: Encourage and adopt standards for clean-up, landscaping, beautification, utility undergrounding, and additional landscaping in parking facilities where needed in existing commercial areas. (Coastal Act/30251/30252)	X													
Policy 9.6: Require landscaping in the design of new residential, commercial, and industrial areas and buildings as detailed in the City Zoning Code regulations. (Coastal Act/30251/30253)	X													
Policy 9.7: Encourage and adopt standards for landscaping of existing commercial and industrial uses to screen and buffer unsightly and congested commercial/industrial areas from surrounding land uses. (Coastal Act/30251)	X													
Policy 10.1: The City will minimize development impacts on coastal mixed chaparral and coastal sage scrub environmentally sensitive habitats by preserving within the inland bluff and hillside systems, all native vegetation on natural slopes of 25% grade and over other than manufactured slopes. A deviation from this policy may be permitted only upon a finding that strict application thereof would preclude any reasonable use of the property (one dwelling unit per lot). This policy shall not apply to construction of roads of the City' s circulation element, except to the extent that adverse impacts on habitat should be minimized to the degree feasible. Encroachments for any purpose, including fire break brush clearance around structures, shall be limited as specified in Public Safety Policy 1. 2. Brush clearance, when allowed in an area of sensitive habitat or vegetation, shall be conducted by selective hand clearance. (Coastal Act/30240/30250/30251/30253)			X											

General Plan Policy	Environmental Assessment Sections													
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Policy 10.5: The City will control development design on Coastal Mixed Chaparral and Coastal Sage Scrub environmentally sensitive habitats by including all parcels containing concentrations of these habitats within the Special Study Overlay designation. The following guidelines will be used to evaluate projects for approval. – conservation of as much existing contiguous area of Coastal Mixed Chaparral or Coastal Sage Scrub as feasible while protecting the remaining areas from highly impacting uses; – minimize fragmentation or separation of existing contiguous natural areas; – connection of existing natural areas with each other or other open space areas adjacent to maintain local wildlife movement corridors; – maintenance of the broadest possible configuration of natural habitat area to aid dispersal of organisms within the habitat; – where appropriate, based on community character and design, – clustering of residential or other uses near the edges of the natural areas rather than dispersing such uses within the natural areas; – where significant, yet isolated habitat areas exist, development shall be designed to preserve and protect them; – conservation of the widest variety of physical and vegetational conditions on site to maintain the highest habitat diversity; – design of development, with adjacent uses given consideration, to maximize conformance to these guidelines; and – preservation of rare and endangered species on site rather than by transplantation off site. (Coastal Act/ 30240/30250) In addition, all new development shall be designed to be consistent with multi- species and multi- habitat preservation goals and requirements as established in the statewide Natural Communities Conservation Planning (NCCP) Act. Compliance with these goals and requirements shall be implemented in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game. Policy 10.5 amended 5/11/95 (Reso. 95-32)			X											
Policy 10.6: The City shall preserve and protect wetlands within the City's planning area. " Wetlands" shall be defined and delineated consistent with the definitions of the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, the Coastal Act and the Coastal Commission Regulations, as applicable, and shall include, but not be limited to, all lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. There shall be no net loss of wetland acreage or resource value as a result of land use or development, and the City' s goal is to realize a net gain in acreage and value whenever possible. Within the Coastal Zone, the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following newly permitted uses and activities: a. Incidental public service projects. b. Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas. c. Restoration purposes. d. Nature study, aquaculture, or other similar resource dependent activities. Identification of wetland acreage and resource value shall precede any consideration of use or development on sites where wetlands are present or suspected. With the exception of development for the primary purpose of the improvement of wetland resource value, all public and private use and development proposals which would			X											

General Plan Policy	Environmental Assessment Sections													
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intrude into, reduce the area of, or reduce the resource value of wetlands shall be subject to alternatives and mitigation analyses consistent with Federal E.P.A 404 (b) (1) findings and procedures under the U.S. Army Corps permit process. Practicable project and site development alternatives which involve no wetland intrusion or impact shall be preferred over alternatives which involve intrusion or impact. Wetland mitigation, replacement or compensation shall not be used to offset impacts or intrusion avoidable through other practicable project or site development alternatives. When wetland intrusion or impact is unavoidable, replacement of the lost wetland shall be required through the creation of new wetland of the same type lost, at a ratio determined by regulatory agencies with authority over wetland resources, but in any case at a ratio of greater than one acre provided for each acre impacted so as to result in a net gain. Replacement of wetland on- site or adjacent, within the same wetland system, shall be given preference over replacement off- site or within a different system. The City shall also control use and development in surrounding areas of influence to wetlands with the application of buffer zones. At a minimum, 100-foot wide buffers shall be provided upland of salt water wetlands, and 50-foot wide buffers shall be provided upland of riparian wetlands. Unless otherwise specified in this plan, use and development within buffer areas shall be limited to minor passive recreational uses with fencing, desiltation or erosion control facilities, or other improvements deemed necessary to protect the habitat, to be located in the upper (upland) half of the buffer area when feasible. All wetlands and buffers identified and resulting from development and use approval shall be permanently conserved or protected through the application of an open space easement or other suitable device. The City shall not approve subdivisions or boundary line adjustments which would allow increased impacts from development in wetlands or wetland buffers. (Coastal Act/30231) Policy 10.6 amended 1/30/91 and 5/11/95 (Reso. 95-32)													
Policy 10.9: The City will encourage the preservation and the function of San Elijo Lagoon and Batiquitos Lagoon and their adjacent uplands as viable wetlands, ecosystems and habitat for resident and migratory wildlife, by prohibiting actions (subject to the detailed provisions of RM policy 10. 6) which: – involve wetland fill or increased sedimentation into wetlands; – adversely decrease stream flow into the wetlands; – reduce tidal interchange; – reduce internal water circulation; or – adversely affect existing wildlife habitats. (Coastal Act/30231)			X											
Policy 10.11: In acting to maintain and, where feasible, restore the biological productivity and quality of San Elijo Lagoon, the City will limit alterations and uses to minor public facilities; restorative measures; nature study; passive, non- degrading recreational activities; and facilities necessarily adjunct aquaculture uses. No recreational boating facilities will be permitted in San Elijo Lagoon. Coastal- dependent developments (i.e., utility facilities, boating facilities, etc.) shall not be sited in the wetland area (San Elijo Lagoon and contiguous wetlands). (Coastal Act/30231)			X											
Policy 13.1: The City shall plan for types and patterns of development which minimize water pollution, air pollution, fire hazard, soil erosion, silting, slide damage, flooding and severe hillside cutting and scarring. (Coastal Act/30250)		X				X								
Policy 13.5: The City shall promote and require the conservation and preservation of natural resources and features of the area in their natural state and avoid the creation of a totally urbanized landscape. Encourage the planting of trees and other vegetation, especially native species, to enhance the environment. (Coastal Act/30240/30251)			X											

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Policy 13.6: Establish and preserve wildlife corridors. (Coastal Act/30231/30240)			X											
Policy 15.1: The City will encourage the use of alternate energy systems, including passive solar and architectural and mechanical systems, in both commercial and residential development. (Coastal Act/30253)		X				X								
Policy 15.2: The patterns of proposed subdivisions and the orientation and design of structures on lots shall be designed with the objective of maximizing the opportunities for solar energy use and energy conservation.						X								
Policy 15.3: Energy conserving construction standards and requirements shall be enforced in the field inspection of new construction.						X								
Recreation Element														
Policy 1.2: Consider the enactment of a "Quimby Ordinance" to ensure that new residential development is provided with open space/recreational amenities. In addition, explore all other available funding resources and alternatives for acquisition and development of park and open space lands.												X		
Policy 1.3: Enforce local laws regarding the vandalism of park property and incorporate citizen involvement into the program through the "neighborhood watch" programs and other community efforts.												X		
Policy 1.5: Provide a minimum of 15 acres of local recreational area for each 1, 000 population for the entire community. This area should be devoted to neighborhood and other close- at- hand recreation facilities, community parks, and passive open space in undeveloped preserves and wilderness areas. This policy shall not be construed to reduce the minimum standards established under this Element for provision of mini, neighborhood, community, or other park land based on population or service distance.												X		
Policy 1.6: Establish mini-parks and playlots in high density areas where larger parks are inaccessible or impractical to provide, and only when the provision of neighborhood parks to serve local neighborhood park needs is not possible.												X		
Policy 1.7: Provide a neighborhood park within convenient, and where possible, walking distance for all urban area residents.												X		
Policy 1.9: Develop parks in conjunction with. Schools wherever possible and encourage joint use of facilities. (Coastal Act/30252)												X		
Policy 1.11: Develop an open space program that will link the various communities together with. parks, recreation/pedestrian access and natural visual corridors.												X		
Policy 4.3: Neighborhood parks should be accessible by pedestrians living in the immediate area.												X		
Noise Element														
Policy 1.1: Review actions or projects that may have noise generation potential to determine what impact they may have on existing land uses. If a project would cause an increase in traffic noise levels, the policy of the City of Encinitas is to accept an increase up to an Ldn of 55 dB in outdoor residential use areas without mitigation. If a project would increase the traffic noise level by more than 5 dB and the resulting Ldn would be over 55 dB, then mitigation measures must be evaluated. If the project, or action, would increase traffic noise levels by 3 dB or more and the resulting Ldn would exceed 60 dB in outdoor use areas in residential development, noise mitigation must be similarly evaluated. The impact of non-transportation projects must generally be evaluated on a case-by-case basis. The following guidelines will aid in evaluating the impacts of commercial and industrial projects.									X	X				

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a) Performance Standards Adjacent to Residential Areas. New commercial construction adjacent to residential areas should not increase noise levels in a residential area by more than 3 dB (Ldn) or create noise impacts which would increase noise levels to more than an Ldn of 60 dB at the boundary of the nearest residential area, whichever is more restrictive. b) Performance Standards Adjacent to Commercial and Industrial Areas. New commercial projects should not increase noise levels in a commercial area by more than 5 dB (Ldn) or increase noise levels to an Ldn in excess of 70 dB (office buildings, business and professional) or an Ldn of 75 dB (industrial) at the property line of an adjacent commercial/industrial use, whichever is more restrictive. These criteria may be waived if, as determined by a noise analysis, there are mitigating circumstances (such as higher existing noise levels) and/or no uses would be adversely affected. Where conditions are unusual or where backgrounds are unusually low and the characteristics of a new noise source are not adequately described by using the Ldn noise descriptor, additional acoustical analysis is encouraged and the conclusions of such analysis will be considered by the City.													
Policy 1.2: An Ldn of 60 dB is the maximum acceptable outdoor noise level in residential outdoor use areas. The City recognizes that there are residential areas in which existing noise levels exceed an acceptable level. The City will adopt a Noise Wall/Barrier Installation Policy for determining which areas should receive soundwalls along the major street system and to evaluate possible cost participation programs for constructing these soundwalls.									X	X				
Policy 1.3: To further improve the noise environment in the City of Encinitas, the police department will enforce the provisions in Sections 27-150 and 27-151 of the California State Motor Vehicle Code. These sections require that all vehicles be equipped with a properly maintained muffler and that exhaust systems not be modified.										X				
Policy 1.4: The City will limit truck traffic in residential and commercial areas to designated truck routes. Limit construction, delivery, and through truck traffic to designated routes. Distribute maps of approved truck routes to City traffic officers.									X	X				
Policy 1.7: Apply Title 24 of the California Administrative Code, associated with noise insulation standards, to single-family dwellings.										X				
Policy 1.8: Establish noise standards for all types of noise not already identified in the General Plan or governed by existing ordinances.									X	X				
Policy 2.1: Figure 2, the Noise and Land Use Compatibility Guidelines, and the accompanying discussion set forth the criteria for siting new development in the City of Encinitas. Any project which would be located in a normally unacceptable noise exposure area, based on the Land Use Compatibility Guidelines, shall require an acoustical analysis. Noise mitigation in the future shall be incorporated in the project as needed. As a condition of approval of a project, the City may require post-construction noise monitoring and sign off by an acoustician to ensure that City requirements have been met.									X	X				
Policy 3.1: The City will adopt and enforce a quantitative noise ordinance to resolve neighborhood conflicts and to control unnecessary noise in the City of Encinitas. Examples of the types of noise sources that can be controlled through the use of a quantitative noise ordinance are barking dogs, noisy mechanical equipment such as swimming pool and hot tub pumps, amplified music in commercial establishments, etc.										X				
Policy 4.1: Ensure inclusion of noise mitigation measures in the design and operation of new and existing development.									X	X				

Appendix F

General Plan Consistency Analysis

A.F GENERAL PLAN CONSISTENCY ANALYSIS

The proposed City of Encinitas 2013-2021 Housing Element Update (HEU or Project) is an update to the City's goals, policies, and programs concerning housing development, improvement, and maintenance. The Encinitas General Plan (EGP) includes the following seven topical elements:

- Land Use Element
- Circulation Element
- Housing Element*
- Safety Element
- Noise Element
- Resource Management Element (Open Space and Conservation)
- Recreational Element

In substantial conformance with State CEQA Guidelines § 151225(d), this section discusses the Project's consistency with EGP policies. This section updates the 2016 Program EIR (2016 PEIR) analysis of the EGP policies applicable to the revised Project.

LAND USE ELEMENT

GOAL 1: Encinitas will strive to be a unique seaside community providing a balance of housing, commercial light industrial/office development, recreation, agriculture and open space compatible with the predominant residential character of the community.

POLICY 1.9: Maintain a proper balance between acreage of commercial land and population served.

Policy 1.9 Response: *The HEU incorporates smart growth and sustainable principals in its development plan. The Project focuses future development into infill areas to facilitate more livable neighborhoods so that more people are more integrated into the community. In accordance with defined future housing needs, the City must balance land use activities to accommodate future housing development and meet RHNA's state housing law compliance for affordability. This is achieved through creation and implementation of a new zone program that establishes a minimum density to ensure that each project meets affordability requirements, as well as a maximum density to ensure that Encinitas remains a community of modestly-scaled development. The new zone includes new provisions to ensure that future development responds to neighborhood character, be compatible with community specific settings and promote basic best practices in urban design. In doing so, future development would provide a balanced mix of residential and commercial land use activities that is sustainable and based on market demands.*

POLICY 1.11: Encourage the rehabilitation and redevelopment of obsolete or declining commercial development, in ways consistent with community design and development objectives.

Policy 1.11 Response: *The Project focuses future development into infill areas to facilitate more livable neighborhoods so that more people are more integrated into the community. Growth should reflect a general balance of uses within the community. A new zone has been created on sites that are suitable for redevelopment in ways that are consistent with community design and development objectives.*

Rezoning existing commercial strips to allow for taller buildings on the street rather than behind parking lots is a good start for rebuilding declining commercial strips into vital town centers.

POLICY 1.12: The residential character of the City shall be substantially single-family detached housing.

Policy 1.12 Response: *In accordance with defined future housing needs, the City must balance land use activities to accommodate future housing development and meet their RHNA allocation for affordable housing. Accordingly, the Project seeks to increase the housing supply and the mix of housing types, tenure, and affordability in the City. The new zone is conveyed over less than one percent of the City's total land. It promotes infill development in key areas to preserve all other areas of land in the City, including preserving existing single-family neighborhoods and the protection of sensitive environmental resources.*

Encinitas has a disproportionately high share of households in lower density homes and/or above moderate-income categories. The creation of a land use plan that adds moderate amounts of multi-family development does not change the community's predominantly low-density residential character.

GOAL 2: The City should manage slow, orderly growth in accordance with a long- term plan which protects and enhances community values.

POLICY 2.1: Establish a growth management plan which phases development through building permit limitations, public facility availability, or other methods.

Policy 2.1 Response: *This measure provides a guiding framework on how the City will ensure that future development does not outpace the ability to provide essential services and infrastructure to support it. The policy establishes a Growth Management Plan which phases development through building permit limitations. In 1999, the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result, the City discontinued calculation of the permit cap due to the carryover of unallocated permits. HEU Program 3D proposes to rescind this policy.*

POLICY 2.2: Discourage development that sacrifices long-term goals in preference to short-term needs.

POLICY 2.3: Growth will be managed in a manner that does not exceed the ability of the City, special districts and utilities to provide a desirable level of facilities and services. (Coastal Act/30250)

Policies 2.2 and 2.3 Response: *This Environmental Assessment (EA) provides a basis for determining whether future development activities may have any significant effects. Details of each proposal are subject to City review at time of submittal and whether the City, special districts, and utilities have adequate capacity to provide services.*

POLICY 2.4: Require developments to pay the capital costs of public facilities and services to serve those developments. Seek to require developments outside the City which impact City facilities and services to pay their share of the costs for improvements of City facilities and services. For development within the City, seek to require those developments to pay their fair share of costs for such facilities and services.

POLICY 2.5: Promote annexation of only those areas which will enhance the City.

POLICY 2.6: Any subdivision created by lot averaging should not be further subdivided.

POLICY 2.7: Implement mechanisms to ensure the preservation of significant environmental areas of the City. These mechanisms might include establishing development standards encouraging developers to maximize open space, transfers of development rights (TDR' s), land banking, purchase, etc. (Coastal Act/30240)

Policy 2.7 Response: *The Project does not change the status of these policies and/or mechanisms that promote planned unit developments or projects that transfer development rights. Should an ordinance ever be created and adopted to allow a transfer of development rights, the sites identified by the new zone could be candidate receiver sites.*

POLICY 2.8: Development shall not be permitted where it will result in significant degradation of ground, surface, or ocean water quality, or where it will result in significant increased risk of sewage overflows, spills, or similar accidents. (Coastal Act/30231)

Policy 2.8 Response: *This EA provides the basis for determining whether future development activity may have any significant effects. Details of each proposal are subject to City review at time of submittal. As discussed in the water quality section of this EA, a coordinated water quality system would be maintained.*

POLICY 2.10: Development shall not be allowed prematurely, in that access, utilities, and services shall be available prior to allowing the development. (Coastal Act/30252)

Policy 2.10 Response: *This EA provides the basis for determining whether future development may have any significant effects. Details of each proposal are subject to City review at time of submittal.*

GOAL 3: To assure successful planning for future facilities and services, and a proper balance of uses within the city, the City of Encinitas will establish and maintain a maximum density and intensity of residential and commercial uses of land within the City which will:

a) provide a balance of commercial and residential uses which creates and maintains the quality of life and small- town character of the individual communities; and
b) protect and enhance the City' s natural resources and indigenous wildlife.

POLICY 3.1: For purposes of growth management, to ensure that existing desirable community character is maintained and to ensure that facilities planning is economical and comprehensive, the ultimate buildout figure for residential dwelling units will be determined by utilizing the total mid- range density figure of the Land Use Element, which shall be derived from the total of all land use acreage devoted to residential categories, assuming a mid- range buildout density overall.

Policy 3.1 Response: *In 1999 the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result, the City discontinued calculation of the permit cap due to the carryover of unallocated permits. HEU Program 3D proposes to rescind this policy.*

POLICY 3.2: The City will designate land use categories/zones for residential development which provide housing opportunities for all segments of society at densities consistent with the goals of this Element.

Policy 3.2 Response: *In accordance with defined future housing needs, the City must balance land use activities to accommodate future housing development and meet their RHNA allocation for affordable housing. This is achieved through creation and implementation of a new zone program that establishes a minimum density to ensure that each project meets affordability requirements, as well as a maximum density to ensure that Encinitas remains a community of modestly-scaled development.*

POLICY 3.7: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, the allowable maximum density of any property designated for residential use shall not be increased except by the affirmative vote of a majority of those voting in the election approving the proposed increase.

POLICY 3.8: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, property designated/zoned for non-residential uses shall not be redesignated/rezoned to allow residential uses except by the affirmative vote of a majority of those voting in the election approving the proposed change.

POLICY 3.9: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, property designated/zoned for residential use shall not be redesignated/rezoned to any non-residential use except by the affirmative vote of a majority of those voting in the election approving the proposed change.

POLICY 3.10: With the exceptions described in Policy 3.12, once acknowledged as being consistent with the General Plan and Local Coastal Program, property designated/zoned for non-residential use shall not be redesignated/rezoned to allow more non-residential uses or a greater intensity of use except by the affirmative vote of a majority of those voting in the election approving the proposed change.

Policies 3.7 to 3.10 Response: *The voters will be presented with the proposed HEU, General Plan/Zoning Code/Specific Plan Amendments, currently scheduled for November 2018. This approach will be taken because voter approval is required when major amendments are made to certain land use planning policy documents causing major increases in zoning density or intensity of land use, pursuant to EGP Land Use Policies and Encinitas Municipal Code (EMC) Chapter 30.00. Since accommodating the RHNA necessitates changes to the EGP Land Use Element and Map, Zoning Map, EMC Zoning Code and certain specific plans, a vote of the people is required. The planning process associated with the HEU is consistent with Proposition A because the voters are asked to authorize it in the comprehensive November 2018 ballot measure.*

Proposition A, also referred to Chapter 30.00, as it appears in the Encinitas Zoning Code and elsewhere, also repeals specific EGP Land Use Element sections. Section 7.3 states that this measure repeals Policy 3.10, Exceptions 4 and 5 of Policy 3.12, and Policy 7.10. Therefore, the HEU will process concurrent and conforming amendments to delete these policies.

POLICY 3.11: In determining whether to approve a proposed residential or commercial project and when to allow proposed projects to be constructed, the City shall consider the extent to which the proposed project complies with the goals and policies of this Element and the implementing zoning regulations.

Policy 3.11 Response: *This EA provides the basis for determining whether future development may have any significant effects. Details of each proposal are subject to City review at time of submittal.*

POLICY 3.12: The following may be considered as exceptions to the requirements for voter approval for specified general plan land use map amendments:

1. Minor adjustments in land use boundaries to correctly reflect property or development site boundaries, which adjustments do not substantially change intended area development potential – as approved by Council by unanimous vote.
2. Changes to land use designations to correct (a) map omissions and (b) mapping errors which are clearly demonstrated to be errors contrary to the intent of the General Plan - as approved by a unanimous Council vote.
3. A change from any land use designation to the Ecological Resource/Open Space/Parks designation, when property has been purchased or land development rights have been secured for land for open space or parks purposes - as approved by a unanimous Council vote.
4. Minor land use designation changes when approved by affirmative vote of four or more City Council members. For purposes of this paragraph, "minor" is defined as changes for which certified environmental review per the California Environmental Quality Act has determined that there will be no unmitigable significant negative environmental impacts, and one of the following apply:

   (a) Exception for Decrease in Intensity:

   The change is to a category of lower land use intensity or density than the existing category that results in a reduction in intensity. For purposes of this determination the following hierarchy of categories, from higher to lower, is established: Light Industrial, General Commercial, Visitor-Serving Commercial, Transportation Corridor, Local Commercial, Public/Semi-Public, Office Professional, Residential 25, Residential 15, Residential 11, Mobilehome Park, Residential 8, Residential 5, Residential 3, Rural Residential 2, Rural Residential 1, Rural Residential, Ecological Resource/Open Space/Parks.

   (b) Exception for Residential Density:

   The change applies to 5 acres of land area or less, and is a change from a non-residential to a residential category, or from a residential to another higher-density residential category, which would result in the allowance of ten or fewer additional dwelling units (prior to consideration of any density bonus) for the 5-acre site. The change shall also be determined to be compatible with, and generally not exceeding the density of, surrounding planned land use residential densities.

   (c) Exception for Change Within Land Use Class:

   The change applies to 5 acres of land area or less, and is a change from one land use category to another when both are within the same class of categories. For purposes of this determination the following classes of categories are established:

   1 - Rural Residential, Rural Residential 1, Rural Residential 2

   2 - Residential 3, Residential 5, Residential 8

   3 - Residential 11, Residential 15, Residential 25

   4 - Office Professional, Local Commercial

   5 - Visitor Serving Commercial, General Commercial

Policy 3.12 Response: *This policy addresses the process associated with certain changes in land use designations and exceptions to the voter requirement. The voters will be presented with the proposed General Plan/Zoning Code/Specific Plan Amendments, currently scheduled for November 2018.*

Proposition A, also referred to Chapter 30.00, as it appears in the Encinitas Zoning Code and elsewhere, also repeals specific EGP Land Use Element sections. Section 7.3 states that this measure repeals Policy 3.10, Exceptions 4 and 5 of Policy 3.12, and Policy 7.10. Therefore, the HEU will process concurrent and conforming amendments to delete these policies.

POLICY 3.13: The following establish exceptions to the fixed annual allotment of residential building permits established by this Element.

1. Vested Rights

The fixed annual allotment as established in the Land Use Element shall apply to all properties and projects covered by its terms except it shall not apply to any development project which has obtained a vested right as of the effective date of this Plan. For purposes of this provision, a vested right shall have been obtained only if each and all of the following criteria are met:

a. The proposed project has received a building permit or where no building permit is required, final discretionary approval.
b. Substantial expenditures or documented, non-cancellable liabilities have been incurred in good faith reliance on the permit or final discretionary approval.
c. Substantial construction has been performed in good faith reliance on the permit or final discretionary approval.

The substantiality of expenditures or liabilities incurred and of construction performed and the questions of whether or not such expenditures, liabilities and construction were in good faith are questions of fact to be determined on a case-by-case basis by the City following application by the developer. Actions taken by a developer to speed up or expedite a development project with knowledge of the pendency of this provision shall not be deemed to be in good faith and shall be considered for exemption on a phase by phase basis to the extent permitted by California law.

2. Vesting Tentative Maps or Other Approval Given Vested Rights

In addition to the foregoing, vesting tentative maps (and other approvals given vested rights) receiving final approval prior to the effective date of this Plan shall be exempt from the residential allocation system, so long as the number of units authorized by such an approval shall be counted against the annual limits of the fixed annual allotment upon issuance of building permits. Such vesting approval shall not by authorized by the City after the effective date, unless expressly conditioned to assure compliance with this provision.

3. Single Family Homes

The construction of one individual dwelling unit conforming to zoning on a pre-existing vacant, legal lot of record which was established as legal lot as of the effective date this Plan was filed with the City clerk, shall be exempt from the current fixed annual allotment. The units so exempted shall be counted against the City's total build-out capacity in the calculation of the annual allocation for the following year.

4. Existing Building Permits

In addition, outstanding building permits, as of the effective date of this Plan, shall be exempt from the fixed annual allotment.

5. One Unit Per Five Acres

A property owner proposing to construct more than one dwelling unit, already approved by city process, but unable to qualify for the current year's allocation (under residential allocation system) may be allowed to construct no more than one dwelling unit per five acres. The number of units so exempted shall not be counted against the annual allocation figure; however, they shall be counted against the City's total build-out capacity in the calculation of the annual allocation for the following year.

Policy 3.13 Response: *In 1999 the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result, the City discontinued calculation of the permit cap due to the carryover of unallocated permits. HEU Program 3D proposes to rescind this policy.*

POLICY 3.14: A public vote shall be required on all City Council approved General Plan updates that are comprehensive in nature, and shall become effective only when a majority of those voters who cast ballots vote for the change. A comprehensive General Plan update shall be a City-sponsored work program titled as such that substantially changes and/or re-adopts the text and maps of the existing elements.

Policies 3.14 Response: *The voters will be presented with the proposed HEU, General Plan/Zoning Code/Specific Plan Amendments, currently scheduled for November 2018. This approach will be taken because voter approval is required when major amendments are made to certain land use planning policy documents causing major increases in zoning density or intensity of land use, pursuant to EGP Land Use Policies and EMC Chapter 30.00. Since accommodating the RHNA necessitates changes to the EGP Land Use Element and Map, Zoning Map, EMC Zoning Code and certain specific plans, a vote of the people is required. The planning process associated with the HEU is consistent with Proposition A because the voters are asked to authorize it in the comprehensive November 2018 ballot measure.*

GOAL 4: The City of Encinitas will ensure that the rate of residential growth: (a) does not create a demand which exceeds the capability of available services and facilities; (b) does not destroy the quality of life and small town character of the individual communities; (c) does not exceed a rate which excludes the public from meaningful participation in all aspects of land use decision making regarding proposed projects; (d) provides the City with the ability to plan ahead for the location, timing and financing of required services and facilities; and (e) does not exceed an annual allotment of dwelling units based on the projected ultimate buildout of dwellings in the City of Encinitas assuming a 25-year buildout period.

POLICY 4.1: A figure will be established annually which will determine the maximum number of dwelling units for which building permits will be issued during the coming year. The annual numerical figure shall be based on a 25-year buildout beginning on January 1, 1989 and ending January 1, 2014. The annual allotment shall be determined by dividing the ultimate buildout figure for dwelling units, determined by midrange densities, by the number of years remaining in the assumed 25-year buildout period.

Policy 4.1 Response: *In 1999, the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result, the City discontinued calculation of the permit cap due to the carryover of unallocated permits. HEU Program 3D proposes to rescind this policy.*

POLICY 4.2: The City will plan to provide services and facilities concurrent with projected need, sufficient to allow issuance of the maximum annual number of dwelling unit building permits. To guard against an unforeseen shortfall of services or facilities, the City will determine adequacy of services and facilities for each residential development at the discretionary review stage. For dwellings not subject to discretionary review, such determination shall be made with the earliest development permit submittal. No unit shall be approved or permitted for which inadequate services or facilities are available.

Policy 4.2 Response: *This EA provides a basis for determining whether future development activities may have any significant effects. Future development activities would have to make sure that the provisions of services and facilities are available.*

Regarding the ultimate buildout and building permit limitations, in 1999 the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result, the City discontinued calculation of the permit cap due to the carryover of unallocated permits. HEU Program 3D proposes to rescind this policy.

POLICY 4.3: The City will plan to provide processing procedures for proposed development projects that will maximize citizen participation and that will operate at a pace sufficient to allow the maximum annual number of dwelling unit building permits to be issued. Citizen notice of development projects and the opportunity to participate through written and oral testimony and public hearings will be provided at the discretionary and environmental review stages of development, prior to the application of each year' s annual dwelling unit allocation limit. Neither the speed of project processing nor the volume of units or projects processed shall exceed that which will allow meaningful citizen participation.

Policy 4.3 Response: *Regarding ultimate buildout and building permit limitations, in 1999 the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result, the City discontinued calculation of the permit cap due to the carryover of unallocated permits. HEU Program 3D proposes to rescind this policy. Through its amendment, it is anticipated that processing procedures will continue to rely on maximum citizen participation opportunities.*

POLICY 4.4: Whatever the allowable rate of growth is during any particular year, the City' s intent is to see housing affordable to lower income households is not constrained. To this end, building permits for dwelling units guaranteed or assured of being affordable to very low and low-income households, in amounts equal to the SANDAG determination of the City' s regional need for housing for very low and low-income households, shall be exempt from the annual allocation limit. The number of dwellings permitted under this exemption in any year shall be included in the tabulation of total dwelling units permitted to date in the calculation of the annual allocation for the following year.

Policy 4.4 Response: *This Project reinforces the need to promote affordable housing opportunities and attempts to reduce barriers to the EA construction.*

POLICY 4.5: Development projects involving the construction of 20 or more single- family, residential dwellings may be required to phase the building of the project over several years using no more than 20 building permits per year to achieve the goals and policies of the Element.

POLICY 4.6: Any land which is annexed to the City will be pre-designated for a land use(s) as a condition of annexation, to a density and use that will be consistent with the small-town quality and character of the City.

POLICY 4.7: There will be no carry- over of unissued residential dwelling unit permits (from the maximum annual number) into the following year. However, if the allotted number are not issued during the current year, they will continue to be counted in the ultimate buildout figure and will be reflected in the fixed annual allocation for the remaining years.

Policy 4.7 Response: *Regarding ultimate buildout and building permit limitations, in 1999 the City analyzed the effectiveness of the growth management plan in regulating the pace of residential growth in Encinitas. The City found that the cumulative number of unallocated permits from year-to-year was far greater than housing production. As a result, the City discontinued calculation of the permit cap due to the carryover of unallocated permits. HEU Program 3D proposes to rescind this policy. Through its deletion, it is anticipated that processing procedures will continue to rely on maximum citizen participation opportunities.*

GOAL 6: Every effort shall be made to ensure that the existing desirable character of the communities is maintained.

POLICY 6.2: The City will make every effort to be responsive to citizen complaints concerning illegal uses, structures, and activities.

POLICY 6.3: City code enforcement personnel shall identify, investigate and abate illegal uses, structures and activities.

POLICY 6.4: City personnel shall develop and enforce a system of penalties to discourage illegal uses, structures, and activities.

POLICY 6.5: The design of future development shall consider the constraints and opportunities that are provided by adjacent existing development. (Coastal Act/30251)

Policy 6.5 Response: *This EA provides a basis for determining whether future development activities may have any significant effects. Future development activities would be subject to these policy directives.*

Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility, as well as context sensitivity to ensure that any constraints and opportunities are carefully vetted.

POLICY 6.6: The construction of very large buildings shall be discouraged where such structures are incompatible with surrounding development. The building height of both residential and nonresidential structures shall be compatible with surrounding development, given topographic and other

considerations, and shall protect public views of regional or statewide significance. (Coastal Act/30251/30252/30253) *Policy 6.6 amended 5/11/95 (Reso. 95-32)*

POLICY 6.7: Require commercial development to provide sufficient landscaping to soften the visual impact of commercial buildings and parking areas.

Policies 6.6 and 6.7 Response: *The Project includes detailed zoning standards that work together to facilitate the creation of sustainable population density; varied socio-economic mix; parks and public spaces; pedestrian-friendly design; etc. Future development would be required to take into consideration the City's unique setting to deliver a project that fits with and enhances the existing environment.*

POLICY 6.8: The City will develop standards for congregate care rooms and beds in nursing facilities in relationship with land use categories.

Policy 6.8 Response: *In early 2005, the City revised its ordinance and definitions to be consistent with State standards. The City continues to allow development of small scale care facilities, community care facilities, congregate care facilities, and residential care facilities under zoning to meet the special housing needs of seniors and persons with disabilities. This program is continued as part of the proposed HEU; see Program 3D.*

GOAL 7: Development in the for the City while community should provide an identity maintaining the unique identity of the individual communities. (Coastal Act/30253)

POLICY 7.1: Establish design themes for commercial districts located within individual communities.

POLICY 7.2: Each community may establish one or more design themes for their community.

POLICY 7.3: Although common themes for each of the communities may be established, each community may also promote variety in the design of individual projects.

Policies 7.1 to 7.3 Response: *The Project includes detailed zoning standards that work together to facilitate sustainable population density; varied socio-economic mix; parks and public spaces; pedestrian-friendly design; etc. All projects must comply with these principles and adhere to a set of community themes and unique community contexts found throughout Encinitas. This is to ensure that each future development considers the City's unique setting to deliver a project that fits with and enhances the existing environment and character.*

POLICY 7.4: Develop regulations and incentives for residential, commercial, and industrial developers to vary design, setbacks, driveways, rooflines, materials, colors, landscaping, etc. to ensure variation design in the of individual residential units within larger subdivisions and commercial/ industrial projects.

Policy 7.4 Response: *The Project includes detailed zoning standards that work together to facilitate the creation of sustainable population density; varied socio-economic mix; parks and public spaces; pedestrian-friendly design; etc. The new zone creates standards for residential development that address permitted uses, site development regulations, and performance standards.*

POLICY 7.5: A streetscape specific plan(s) for the Hwy 101 corridor and E1 Camino Real corridor shall be prepared (Coastal Act/30251)

POLICY 7.6: Private development shall coordinate with street/ public improvements, i.e. streetscape, landscape, site design and the like.

POLICY 7.7: The downtown area of Cardiff-by-the-Sea is designated a Specific Plan area. Development shall be allowed prior to the completion of the Specific Plan.

- Commercial development shall be compatible to surrounding residential uses relative to height, building bulk and mass and related complimentary uses.
- View preservation standards shall be developed that preserve existing public views and to the extent possible private views.
- Streetscape program shall be established that compliments and enhances usual quality of the community.
- Establish standards that will help to revitalize the commercial corridor.
- Provide for residential uses in commercial zones along the corridor provided the residential uses are accessory and incidental to the principal commercial use.
- Develop standards for development to vary design, setbacks, materials, colors, landscaping and the like to ensure a variation in the design of individual projects that can be tied together via common parking and internal circulation, and a common streetscape design.

POLICY 7.8: The 101 corridor from the north City boundary to Encinitas Boulevard is designated a Specific Plan area. Development shall be allowed prior to the completion of the Specific Plan.

- Establish standards and uses that compliment adjacent residential uses, enhance the appearance of Hwy 101 streetscape and railroad right-of-way, and create an attractive commercial district that would serve the needs of both local residents and visitors to the Community.
- Establish standards that will help to revitalize the commercial corridor.
- Provide for residential uses in commercial zones along the corridor provided the residential uses are accessory and incidental to the principal commercial use.
- Develop standards for development to vary design, setbacks, materials, colors, landscaping and the like to ensure a variation in the design of individual projects that can be tied together via common parking and internal circulation, and a common streetscape design.

POLICY 7.9: The downtown area of Old Encinitas including the residential area west of the downtown area is designated a Specific Plan area. Development shall be allowed prior to the completion of the Specific Plan.

- Establish standards that will help to revitalize the commercial corridor.
- Provide for residential uses in commercial zones along the corridor provided the residential uses are accessory and incidental to the principal commercial use.
- Develop standards for development to vary design, setbacks, materials, colors, landscaping and the like to ensure a variation in the design of individual projects that can be tied together via common parking and internal circulation, and a common streetscape design.
- Development standards shall be established to promote commercial development complimentary to the existing pattern of development relative to height, building bulk and mass, setbacks, open space and the like.
- Commercial development standards and uses shall promote high pedestrian activity.
- Residential, recreation and commercial uses shall be complimentary in design and use.

POLICY 7.10: Both residential and non-residential development shall be limited to a maximum height of two stories and 30 feet. Limited exceptions for non-residential development may be allowed, but only for designated specific sites as developed and adopted through area specific plans. Exceptions may also be

made for Medical Complex development projects at the discretion of the City pursuant to conditional use permit applications as provided by the Zoning Code, to allow building heights up to a maximum height of three stories. An exception is also authorized for a public high school with a minimum 10 acre site.

Policy 7.10 Response: *In accordance with defined future housing needs, the City must balance land use activities to accommodate future housing development and meet their RHNA allocation for affordable housing. This is achieved through the creation and implementation of a new zone program that establishes a minimum density to ensure that each future development meets affordability requirements, as well as a maximum density to ensure that Encinitas remains a community of modestly-scaled development.*

Proposition A was adopted by voters in 2013 and "repeals" or otherwise supersedes this policy. Not only does Proposition A affect how amendments are made to planning policy documents, but the ballot measure modifies building height standards in the City. Proposition A restricts the height of any structure to the lower of two stories or 30 feet, citywide. In cases where the existing codes specify a different maximum height standard, the more restrictive applies. Thus, voter approval is required for amendments that would increase residential densities.

Changes to development standards are proposed to accommodate a density of 30 units per acre. These changes include increasing the allowable building height to three stories, with elements of two stories to create appropriate transitions, but only for residential developments meeting at least the minimum density of 25 units per acre on sites rezoned for lower income housing. Development standards will also be revised to address other zoning issues to ensure that new standards will accommodate the minimum density required in the zone.

Proposition A, also referred to Chapter 30.00 as it appears in the Encinitas Zoning Code and elsewhere, also repeals specific sections of the Land Use Element. Section 7.3 states that this measure repeals Policy 3.10, Exceptions 4 and 5 of Policy 3.12, and Policy 7.10. Therefore, the HEU will process concurrent and conforming amendments to delete these policies.

Goal 8: Environmentally and topographically sensitive and constrained areas within the City shall be preserved to the greatest extent possible to minimize the risks associated with development in these areas. (Coastal Act/30240/30253) ***Goal 8 amended 5/11/95 (Reso. 95-32)***

POLICY 8.1: Require that any improvement constructed in an area with a slope of more than 25% and other areas where soil stability is at issue to submit soils and geotechnical studies to the City for review and approval.

These studies shall document that the proposed development will not adversely affect hillside or soil stability and that no future protective measures will be required. (Coastal Act/30253) Policy 8.1 *amended 5/11/95 (Reso. 95- 32)*

Policy 8.1 Response: *This EA provides a basis for determining whether future development activities may have any significant effects. As discussed in Section 4.5, Geology and Soils, future development activities would be subject to this policy.*

POLICY 8.2: Development within coastal and flood plain areas identified in the Land Use and Resource Management Elements must be limited, designed to minimize hazards associated with development in these areas, and to preserve area resources. Within the floodway, channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to necessary water supply projects, flood control projects where no other method for

protecting existing public or private structures is feasible and where such protection is necessary for public safety or to protect existing development, and other development where the primary function is the improvement of fish and wildlife habitats. No development shall occur in the 100-year Floodplain that is not consistent and compatible with the associated flood hazard. Only uses which are safe and compatible with periodic flooding and inundation shall be considered, such as stables, plant nurseries, a minimum intrusion of open parking, some forms of agriculture, and open space preservation, as appropriate under zoning, and subject to applicable environmental review and consistency with other policies of this Plan. No grading or fill activity other than the minimum necessary to accommodate those uses found safe and compatible shall be allowed. Such grading shall not significantly redirect or impede flood flows or require floodway modifications. Exceptions from these limitations may be made to allow the following:

a. Minimum private development (defined as one dwelling unit per legal parcel under residential zoning, and an equivalent extent of development under non-residential zoning) only upon a finding that strict application thereof would preclude a minimum use of the property.
b. Development of circulation element roads, other necessary public facilities, flood control projects where no feasible method for protecting existing public or private structures exists and where such protection is necessary for public safety or to protect existing development, and other development which has as its objective the improvement of fish and wildlife habitat.
c. Limited reconfiguration of the flood plain in previously degraded areas provided it is determined by the City that the reconfiguration of the flood plain is incidental to the improvement of an overall storm water system and that the reconfigured storm water system is substantially based on natural channels with vegetation to accommodate storm water management. This is applicable to the El Camino Real creek corridor draining into Encinitas Creek.

These exceptions shall be allowed only to the extent that no other feasible alternatives exist and minimum disruption to the natural floodplain environment is made. The City shall not approve subdivisions or boundary line adjustments which would allow increased impacts for development in 100-year floodplains. For specific policy provisions regarding wetlands which may be associated with floodplains, refer to Resource Management Element Policy 10.6. (Coastal Act/30253) *Policy 8.2 amended 1/30/91, 9/21/94 (Reso. 94-29) and 5/11/95 (Reso. 95-32)*

Policy 8.2 Response: *As discussed in Section 4.5, future development activities would be subject to this policy. No development shall occur in the 100-year floodplain that is not consistent and compatible with the associated flood hazard.*

POLICY 8.3: Residential development on land that has physical constraints shall exclude or discount areas subject to specified constraints from density allowance. Portions of development sites subject to the following constraints shall be excluded from the net lot area used to figure density: floodplains, beaches, permanent bodies of water, significant wetlands, major utility easements, railroad track beds or rights-of-way, and rights-of-way and easements for public/private streets and roads. The remaining net lot area shall then be calculated for density allowance, based on the assigned land use category density range, subject to the following discounts based on site slope:

- Portions of site 0-25% slope - 100% density;
- Portions of site 25-40% slope - approximately 50% density allowance;
- Portions of site 40%+ slope - no density allowance.

Density allowance shall be limited to the mid-point of the land use category range, as specified by the zoning code, unless findings can be made that the proposed project excels in design excellence and/or

provides extraordinary community benefits. Upon such findings, up to the maximum density level of the range may be allowed. In no case shall less than one dwelling per legal lot be allowed.

Policy 8.3 Response: *HEU Program 1B, the new zone program establishes a minimum density to ensure that each project meets affordability requirements, as well as a maximum density to ensure that Encinitas remains a community of modestly-scaled development. This policy should be revised to reflect by-right development at the maximum density for sites that are in the new zone program. Future development activities would still be subject to net lot area calculations.*

POLICY 8.4: Within residentially designated areas, lot averaging and PRDs may be allowed to preserve areas of unique topographic features, riparian woodlands, and other significant open space areas of importance to the community based on the following criteria:

- Lot averaging and PRDs shall only be used to create a quality development, but shall not increase the overall density of the subdivision;
- the areas of open space shall be determined and preserved in perpetuity;
- no further subdivisions of land within lot-averaged subdivisions shall occur. (Coastal Act/30240) *Policy 8.4 amended 6/16/93*

POLICY 8.5: The Special Study Overlay designation shall be applied to lands which, due to their sensitive nature, should only be developed with consideration of specific constraints and features related to drainage courses, bluffs, slopes, geology and soils, biotic habitat, viewsheds and vistas, and cultural resources. Development within the overlay area shall be reviewed and approved in accordance with criteria and standards which protect coastal and inland resources. (Coastal Act/30240/30253)

Policy 8.5 Response: *The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. The Project focuses future development into infill areas to capitalize on existing infrastructure. It promotes infill development in key areas to preserve all other areas of land in the City, including preserving existing single-family neighborhoods and the protection of environmental resources.*

The development standards work together to ensure that there is a variety of product arrangements within the candidate sites. The Project does not change the status of this policy. Future development activities would still be subject to special study overlay restrictions, including sensitivity to drainage courses, bluffs, slopes, geology, habitats, public viewsheds, and cultural resources.

POLICY 8.6: Significant natural features shall be preserved and incorporated into all development. Such features may include bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views. (Coastal Act/30240/30250/30251)

POLICY 8.7: Non-developable or constrained areas should be evaluated for possible use as open space or recreational use. (Coastal Act/30240)

Policies 8.6 and 8.7 Response: *The Project includes detailed zoning standards that work together to facilitate the creation of sustainable population density; socio-economic mix; parks and public spaces; pedestrian-friendly design; etc. One of the objectives of the new standards is to ensure that future development is compatible with community specific settings and promoting basic best practices in urban design. Therefore, new zoning standards address natural features, open space, and recreation.*

POLICY 8.8: The properties located in the City's Sphere of Influence west of El Camino Real shall be designated as a Specific Plan area, except for the lands west of Saxony Road designated as Open Space/Parks, and lands in the southeast corner of the upper mesa beyond the Ecke holdings designated Residential 2-3 units per acre. Development will be allowed within the specific plan area only through prior approval of the entire specific plan described below:

- The specific plan shall include:
  - An Agriculture land use category.
  - Estate and Low density residential (0-5 units per acre) land use category.
  - Medium-High density residential (5-10 units per acre) land use category.
  - High density residential (15 + units per acre) land use category.
  - Commercial land use category.
  - Open Space land use category.
  - A mixed land use category of commercial, office professional, medical office, institutional, and/or residential may be allowed.
- All development and other activities provided for by the specific plan shall conform to the following:
  - Areas shown as reserved for agriculture/open space shall be a minimum of 40 contiguous acres in size.
  - Land reserved for open space shall be permanently protected for such use by an enforceable restriction and/or other appropriate means.
  - New development shall be located and clustered to avoid inhibiting continued agricultural use of land reserved for that purpose, and where feasible, shall be located adjacent to existing development or areas planned for development. (Coastal Act/30241)
  - In selecting areas for development, land least suitable for agricultural production shall receive preference. Land best suited for agricultural production contains Class I-IV soils on slopes under 10 percent and is currently under agricultural production. (Coastal Act/30241)
- Where possible, buffer areas should be established between areas designated for agricultural use and the outer boundary of the Specific Plan area, and between the areas designated for agricultural use and other uses within the Specific Plan area. (Coastal Act/30141)
- Deeds for residential lots or dwelling units near areas designated for agricultural use should contain a clause stating that such lots or dwelling units are located in close proximity to agricultural land that is expected to remain in agricultural use, and that there could be some adverse impacts on such lots or dwelling units from agricultural operations.
- No roads other than farm access roads shall be constructed across agricultural lands unless such road proposals include mitigation measures (such as controls on access and covenants preserving agricultural use) that assure the continued long term viability of agricultural uses. (Coastal Act/30241/30242/30250)
- Land use designation boundaries shall be adopted upon submittal and approval of the specific plan to properly delineate the exact alignment of Leucadia Blvd. and the location of bluffs/steep slope areas.
- All development in the Green Valley area shall obtain direct access from roads other than El Camino Real.
- Prior to starting construction of a 4-lane roadway or accommodation of comparable capacity for Leucadia Boulevard, the Specific Plan shall be prepared and approved, and annexation of the Sphere of Influence area shall be completed to the City of Encinitas.
- All other applicable provisions, goals and policies of this Plan shall be incorporated and implemented in the specific plan.

- The specific plan shall not be approved unless the City Council makes a finding that the continued exclusive agricultural use of the area is no longer feasible, or that to allow development on portions of the area as planned will enhance the feasibility of agricultural use of the remaining portions of the area. (Coastal Act 30141/30242)

POLICY 8.9: The City will adopt land use categories for environmentally sensitive areas for the purposes of the Local Coastal Plan and will implement these categories by such ordinance and policy measures as may be appropriate. (Coastal Act/30250)

POLICY 8.10: Ecological Resource/Open Space/Parks is a category intended to be applied to both active and passive parklands; lagoons; wetland habitat areas and their adjacent buffers; and other areas of significant environmental quality or public resource value. Lands in the Ecological Resource/Open Space/Parks category, other than public parks, and similar areas for active recreation, will be limited to uses and activities related to habitat enhancement; educational and scientific nature study; passive recreation which will have no significant adverse impact on habitat values; and, aquaculture having no significant adverse effect or negative visual impact on natural processes or scenic quality. All areas possessing wetland resource values, including coastal salt marsh and freshwater marsh habitat types, shall be protected by appropriate buffers. Buffer zones sufficient to protect wetlands shall generally be minimum 100 feet in width, and buffer zones to protect riparian areas shall generally be minimum 50 feet in width, unless a use or development proposal demonstrates that a smaller buffer will protect the resources of the wetland/riparian area based on site-specific information, including but not limited to, the type and size of the development and/or proposed mitigation (such as planting of vegetation) which will also achieve the purposes of the buffer. The buffer should be measured landward from the wetland or riparian area. Maps and supplemental information submitted as part of the application should be used to specifically determine these boundaries. The California Department of Fish and Game and the U.S. Fish and Wildlife Service shall be consulted in such buffer determinations and their comments shall be accorded great weight.

Development permitted in wetland and riparian buffer areas shall be limited to access paths, passive recreational uses, fences and similar improvements necessary to protect the wetland or riparian resource, and shall be restricted to the upper or landward half of the buffer. Wetland/riparian areas and their associated buffers shall be permanently protected from development through the application of an open space easement or other suitable instrument. Developments shall be located and designed so as not to contribute to increased sediment loading of the wetland/riparian area, cause disturbances to its fish and wildlife values, or otherwise impair the functional capacity of the resource. Exceptions from this policy for intrusion of development into wetland or riparian areas and their associated buffers shall only be considered as specified in Resource Management Policy 10.6. (Coastal Act/30240)

Policy 8.10 Response: *The Project identifies locations in the City where future growth is expected to occur. Future development would be subject to this policy. All areas possessing wetland resource values, including coastal salt marsh and freshwater types, would be protected through compliance with the established regulatory framework and mitigation measures recommended in this EA.*

GOAL 9: Preserve the existence of present natural open spaces, slopes, bluffs, lagoon areas, and maintain the sense of spaciousness and semirural living within the I-5 View Corridor and within other view corridors, scenic highways and vista/view sheds as identified in the Resource Management Element. (Coastal Act/30240/30251)

POLICY 9.1: Encourage and preserve low-density residential zoning within I-5 Corridor while preserving the best natural features and avoiding the creation of a totally urbanized landscape and maintain I-5

Interchange areas to conform to the specifications of this overall goal. The City will develop an I-5 view corridor plan to implement this policy. (Coastal Act/30240/30251)

Policy 9.1 Response: *The policy recognizes that some development will occur in various areas that are presently undeveloped. The policy includes a measure designed to ensure that future development is in harmony with the surrounding environment.*

As discussed in the EA, some of the candidate sites are located within the I-5 View Corridor or along scenic highways. For the few sites that are highly visible, they already feature developed landscapes and freeway oriented commercial centers. Rezoning existing commercial strips to allow for taller buildings on the street rather than behind parking lots is a good start for rebuilding declining commercial strips into vital town centers and to conform to the specifications of this overall goal.

Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility, as well as context sensitivity to ensure that any constraints and opportunities are carefully vetted.

POLICY 9.2: Encourage retention of buffer zones such as natural vegetation or earth barriers, bluffs, and canyons to protect adjacent areas of freeway corridor from pollutants of noise, exhaust, and light. (Coastal Act/30240/30251)

POLICY 9.3: Prohibit and eliminate billboards and obtrusive advertising media along freeway corridors, Highway 101/First Street and other scenic corridors and routes as specified in the Resource Management Element, Figure 3. (Coastal Act/30251)

POLICY 9.4: Encourage all landscaping along major arterials to enhance, harmonize with, and not detract from the natural features of the surrounding area. (Coastal Act/30251)

Policy 9.4 Response: *Future development would be subject to compliance with standards that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility, as well as context sensitivity to ensure that any constraints and opportunities are carefully vetted.*

POLICY 9.5: Discourage development that would infringe upon scenic views and vistas within the I-5 corridor.

Policy 9.5 Response: *The policy recognizes that some development will occur in areas that are presently undeveloped. As discussed in the EA, some of the candidate sites are located within the I-5 View Corridor. For the few sites that are highly visible, they already feature developed landscapes and freeway oriented commercial centers. Rezoning existing commercial strips to allow for taller buildings on the street rather than behind parking lots is a good start for rebuilding declining commercial strips into vital town centers and to conform to the specifications of this overall goal.*

CIRCULATION ELEMENT

GOAL 1: Encinitas should have a transportation system that is safe, convenient and efficient, and sensitive to and compatible with surrounding community character. (Coastal Act/30252)

POLICY 1.1: Ensure that the arterial circulation system provides adequate connections across; the freeway for convenient circulation and rapid emergency access.

POLICY 1.2: Endeavor to maintain Level of Service C as a basic design guideline for the local system of roadways understanding that the guideline may not be attainable in all cases.

POLICY 1.3: Prohibit development which results in Level of Service E or F at any intersection unless no alternatives exist and an overriding public need can be demonstrated.

Policies 1.2 and 1.3 Response: *The EGP Circulation Element establishes policies for traffic improvement because growth and development requires an adequate circulation system (i.e. movement of cars). The policies that relate to roadway performance state that the City should endeavor to achieve a level of service ("LOS") of at least C. Compliance is evaluated according to the Highway Capacity Manual ("HCM") methodology be used in determining the LOS of a road. The EA revealed that the Project would cause the LOS to fall in some areas of the City. In other areas of the City, future development results in a LOS E or F – or slightly worsens an already LOS E or F intersection. Other areas have no impact on LOS. Thus, a significant unavoidable impact is concluded in this regard.*

Policy 1.3 indicates that an overriding public need must be demonstrated when development results in LOS E or F; and the HEU does just that. The Project seeks to improve the future urban environment in which residents live, work, and play through a collaboration of smart growth, sustainability, and healthy living principles. The Project promotes the principle that streets have multiple uses and users and encourages nodes of mixed use communities that maximize mobility and provide multiple opportunities for living, working and recreation, within safe and comfortable walking distances.

Furthermore, State law requires that the City adopt a plan to accommodate the housing needs of everyone in the community (existing and future housing needs). Planning for future housing helps avoid negative consequences of unplanned growth and ensures it would provide community benefits and consider environmental factors, such as climate change and coordinated planning of land use and transportation, pursuant to Senate Bill 375 (Steinberg, 2008). Compliance with the RHNA allocation cannot be accomplished without the proposed rezoning program, which is accommodating the additional development generating traffic increases.

POLICY 1.5: Promote maximum utilization or expansion of existing freeways and prime arterials as an alternative to new freeway or highway construction. Encourage new and/ or proposed freeway construction to be outside the Encinitas sphere of influence boundaries.

POLICY 1.6: Minimize freeway, prime arterial, major, collector, and augmented local access to encourage their use as throughways rather than as access to adjacent properties.

POLICY 1.7: Encourage adjacent properties to use common access points to access prime arterials, major roads, collectors and augmented local streets.

Policies 1.6 and 1.7 Response: *This EA provides the basis for determining whether future development activity may have any significant effects. Details of each proposal are subject to City review at time of submittal. Future infill development opportunities are located to both capitalize on existing infrastructure as well as to provide enhanced and/or convenient access to local serving uses by residents and visitors.*

The development standards work together to ensure that there is a variety of product arrangements within candidate sites. The provisions address such issues as building form, common access points, etc. to promote connectivity to and between adjacent projects. Adjacent properties would be asked to use common access points and otherwise reduce the amount of conflict points on the City's major roads.

POLICY 1.8: Locate major roads and prime arterials where they will bypass rather than divide residential neighborhoods.

POLICY 1.9: Minimize private driveway access onto both major and collector roads.

POLICY 1.10: Encourage the design of roads and traffic controls to optimize safe traffic flow by minimizing turning, curb parking, uncontrolled access, and frequent stops.

Policies 1.9 and 1.10 Response: *As discussed in the transportation section of the EA, the Project's development standards and design guidelines work together to address such issues as building form, common access points, etc. to minimize driveway access points and uncontrolled access. Other components include: limited block size; interconnected roadway networks; neighborhood centers; sustainable population density; mixed-use and varied socio-economic mix; parks and public spaces; pedestrian-friendly design; workplaces and schools; and complete streets.*

POLICY 1.11: Construct roads following the natural contours to minimize cuts and fills; avoid grid street patterns when feasible.

Policy 1.11 Response: *This policy discusses how to locate new major roads. The City's transportation network is relatively built out and no new major roads are proposed as part of the Project. Private road development may occur through Project implementation and would be subject to this policy directive.*

POLICY 1.12: The City will require increased off- street parking for expansions and additions to existing and future commercial and residential uses in the near coast area, will minimize curb cuts for new development in the vicinity of beach access points in order that the maximum amount of curb parking will be available to beach users, and will encourage remote parking/ shuttle service and park- and- ride facilities in the Coastal Zone. The City will require that all commercial, industrial and residential uses be designed and constructed with sufficient off- street parking and loading facilities to assure adequate parking is provided with new development such that no adverse impacts on coastal access are documented. Parking ratios shall be utilized as specified and detailed in the City' s Zoning Code and in implementing Specific Plans which provide sufficient parking spaces so as not to require patrons/ employees/residents to utilize parking which is necessary/required for other approved uses or street and other public parking that should otherwise be available for public use. (Coastal Act/30252) *Policy 1.12 amended 5/11/95 (Reso. 95-32)*

Policy 1.12 Response: *The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. The Project includes detailed zoning standards and design guidelines that addresses parking requirements. The Plan promotes the provisions of sufficient off-street parking while promoting more efficient parking management strategies, such as shared parking and non-automotive travel. Other actions incentivize the development and implementation of employment and home-based TDM programs, reducing the number of vehicular trips generated by residents and non-residents and reducing the demand of automotive storage or parking.*

POLICY 1.13: Emergency response routes shall be identified as a basis for implementing an Opticon or other traffic signal control system designed to reduce emergency vehicle response time.

POLICY 1.14: A coordinated traffic signal system shall be developed and implemented.

POLICY 1.15: The City will actively support an integrated transportation program that encourages and provides for mass-transit, bicycle transportation, pedestrians, equestrians, and car-pooling. (Coastal Act/30252)

Policy 1.15 Response: *The Project focuses future development into infill areas to both capitalize on existing infrastructure and to facilitate more livable neighborhoods so that more people are more integrated into the community. This EA has analyzed the ability of the Project to develop and maintain an adequate future capacity to accommodate future demands. It promotes the principle that streets have multiple users. More mode-choices for travel are provided.*

The Project includes detailed zoning standards and design guidelines that work together to facilitate the creation of sustainable population density; mixed-use and varied socio-economic mix; parks and public spaces; pedestrian-friendly design; etc. It outlines a process by which certain optional standards that promote compact walkable communities would be adopted to ensure that the candidate sites would reach a density level that would support transit services as part of a multi-modal transportation system.

POLICY 1.16: In areas where street patterns and extensions are not complete and significant lands remain for development which do not have direct street access, neighborhood street/ access plans shall be required prior to any further land division or development. The preferred system would be a trunk and branch system.

POLICY 1.17: Standards shall be established and implemented to provide for adequate levels of street lighting, based on criteria of safety and related to volumes of vehicular, pedestrian and bicycle activity and potential points of conflict. Such standards shall be designed to respect different community and neighborhood needs for lighting, different community standards for design and special attention given to preservation of dark sky.

Policy 1.17 Response: *The directive is intended to address community-level standards for streetlights to make sure that the nighttime environment of dark skies is protected. Through its implementation, certain areas of the city have street lighting limitations.*

The Project includes detailed zoning standards and design guidelines that work together to facilitate the creation of sustainable population density; mixed-use and varied socio-economic mix; parks and public spaces; pedestrian-friendly design; etc. One of the objectives of the new standards is to ensure that future development is compatible with community specific settings and promoting basic best practices in urban design. Through implementation, design guidelines would also determine the appropriate relationship between future development and the design context and compatibility in the surrounding neighborhood.

POLICY 1.18: Standards shall be established and implemented to provide for a comprehensive system of traffic control devices and signing, based on sound traffic engineering principals, to assure traffic safety and preservation of community character.

POLICY 1.19: The City will provide for adequate levels of maintenance of all improved components of the circulation system, such as roadways, sidewalks, bicycle facilities, roadway drainage systems, pedestrian, recreational trails, bicycle trails and facilities.

Policy 1.19 Response: *The Project focuses future development into infill areas to both capitalize on existing infrastructure and to facilitate more livable neighborhoods within the existing circulation system. Future developments would help fund and pay for the construction or needed maintenance of offsite capital improvements.*

POLICY 1.20: No street shall be closed without prior analysis including environmental review which addresses increases in traffic on other streets which would be created by the closure. Generally, it is undesirable that any closure increase traffic levels beyond the limits specified in this Plan for any street included in the General Plan computerized traffic model.

Roadway Different types of roadways have distinctly different Function functions and these differences need to be recognized and Standards in planning for new roadways and improvements to existing ones. The following policies provide the framework for roadway standards described in the Circulation Plan included in this Element.

GOAL 2: The City will make every effort to develop a varied transportation system that is capable of serving both the existing population and future residents -while preserving community values and character. (Coastal Act/30252/30253)

POLICY 2.1: Adopt and implement standards for rural, semi-rural, and urban roadways within the City consistent with community character.

Policy 2.1 Response: *Policy 2.1 addresses the need to adopt standards for different roadway segments. This EA considers broad policy alternatives and program wide mitigation measures. Private road development may occur through Project implementation and subsequent development activities would be subject, generally, to this policy directive that ensures future development is compatible to existing community character and the design context.*

POLICY 2.2: Require new residential development to have roadways constructed to City standards before the roads can be dedicated to the City.

Policy 2.2 Response: *The Project identifies locations in the City where future growth is expected to occur. Future residential development would still be required to ensure that proper off-site facilities are constructed in conjunction with the development and to provide for public dedication of such rights-of-way as streets or easements as are reasonably required by or related to the proposed use.*

POLICY 2.3: Design the circulation system serving new development in such a way to minimize through traffic in all residential neighborhoods.

POLICY 2.4: When considering circulation patterns and standards, primary consideration will be given to the reservation of character and safety of existing residential neighborhoods. Where conflicts arise between convenience of motorists and neighborhood safety/community character preservation, the latter will have first priority.

POLICY 2.5: Route major thoroughfares and plan future road construction so that development pressure on undeveloped areas is minimized.

POLICY 2.6: Periodically evaluate traffic circulation patterns of all roads in Encinitas.

POLICY 2.7: The City will emphasize road construction projects which serve the Coast by including coastal access as criterion for prioritizing those routes identified in the multi- year capital improvement program. (Coastal Act/30252)

POLICY 2.8: Where necessary, require acquisition of right-of-way as a condition of approval of all final subdivision maps. Encourage landscaping of rights-of-way if not being used for public roads, hiking/ riding trails or beach access trails.

POLICY 2.9: Develop new alternate road and intersection standards to promote retention of existing neighborhood atmosphere.

POLICY 2.10: Establish landscaping buffer and building setback requirements along all roads which are local augmented status or larger, except where inappropriate. (Coastal Act 30252)

POLICY 2.11: Encourage landscaping of freeway medians and freeway unpaved rights-of-way adjacent to the freeway using reclaimed water where available.

POLICY 2.12: Encourage unique characteristic community design standards for traffic signals and intersection signing and other street improvements, structures and furniture.

POLICY 2.13: Encourage landscaped medians and parkways on all roadways where practical.

POLICY 2.14: Develop rural, semi- rural, and urban standards and criteria for private streets including a mechanism for on- going maintenance.

Policies 2.10 to 2.14 Response: *This EA provides a basis for determining whether future development activities may have any significant effects. Future development activities would be subject to these policy directives.*

POLICY 2.17: New City road standards shall be established to reflect the character and image of each community.

POLICY 2.18: Where possible, functioning of the street system should be improved by the installation of intersection improvements.

Policy 2.18 Response: *The overall function of the street system is based on how safe, direct, and convenient access is by a variety of means of transportation. As discussed in the EA, the City's roadway system consists of four roadway classifications that accommodate varying amounts of traffic. The Traffic Impact Study is included as Appendix G (see also Section 4.13, Transportation and Traffic) and identifies areas where the LOS is deficient on intersections and roadways. Implementation of the recommended mitigation measures would minimize impacts concerning the movement and safety of related vehicle trips, as well as the impacts to capacity; however, impacts would remain significant and unavoidable.*

POLICY 2.19: Minimize road widths in rural and semi-rural areas. (Rural defined as acre and above; and semi-rural defined as having a feeling of country even if lot sizes are less than % acre)

Policy 2.19 Response: *The Traffic Impact Study is included as Appendix G (see also Section 4.13) and identifies areas where the LOS is deficient on intersections and roadways. Implementation of the recommended mitigation measures would minimize impacts concerning the movement and safety of related vehicle trips, as well as the impacts to capacity; however, impacts would remain significant and unavoidable.*

Some of these locations are in semi-rural areas. EGP Circulation Element Policy 1.3 indicates that an overriding public need must be demonstrated when development results in LOS E or F; and policy 2.19 identifies a potential overriding consideration.

POLICY 2.20: When major roads must pass through neighborhoods, large right- of- way widths should be acquired to allow for landscaping, trails, etc. to offset and minimize disruption to the community.

POLICY 2.21: Work with Caltrans to study the need for additional right- of- way along I- 5 to allow for future expansion and widening.

POLICY 2.22: To avoid impacts of the expansion and improvement of Manchester Avenue on the San Elijo Lagoon and its environmental resources, right- of- way dedication and widening shall occur to the north, away from the lagoon, rather than toward the lagoon; and the use of fill shall be prohibited. The design of the Manchester/I- 5 interchange shall also avoid the use of fill and locate structures as far north as possible to avoid impacts on the lagoon. When design and improvement of Manchester Avenue and the interchange are undertaken, the County Department of Parks and Recreation, the State Department of Fish and Game, the Coastal Commission and others will be notified and given the opportunity to participate in the design and environmental review process.

POLICY 2.23: No roadway link established by this Plan shall be re-classified to a greater capacity category and no new link shall be added without the affirmative vote of a majority of those voting in an election to approve such change.

The private automobile will continue to be the dominant form of transportation in the Planning Area in coming years. A primary focus of the following policies is to encourage people to utilize other forms of transportation and to accommodate those households that rely on public transit.

GOAL 3: The City of Encinitas will promote the use of other modes of transport to reduce the dependence on the personal automobile. (Coastal Act/30252)

POLICY 3.1: The needs of the handicapped will be considered in new development plans including handicapped parking, loading, etc.

Policy 3.1 Response: *The mobility needs of all persons and all abilities is covered in the Project's zoning standards. Future development activities would be subject to this policy directive.*

POLICY 3.2: Continue to assist in expanding public transportation and emphasize public transportation in future development with preference given to cost-effective alternatives. (Coastal Act/30252)

POLICY 3.3: Create a safe and convenient circulation system for pedestrians. (Coastal Act/30252)

POLICY 3.4: Cooperate with San Diego County, SANDAL, and other jurisdictions to help plan and implement: a regional multi- modal transportation system that is accessible to residents in the City. (Coastal Act/30252)

POLICY 3.5: Encourage development of mass transit and transit access points along the existing I- 5 freeway corridor or along the railroad right- of- way. (Coastal Act/30252)

POLICY 3.6: The City should provide and encourage efficient links between possible rail transit service and other transportation modes, including rerouting of bus service to interface with transit stops.

Policies 3.2 to 3.6 Response: *The Project identifies location in the City where future growth is expected to occur. The HEU incorporates smart growth and sustainable principals in its development plan. It outlines the City's land use strategy for facilitating a comprehensive, multimodal transportation network and places more people in areas that are more accessible by a range of transportation options, including public transit. In particular, this can emphasize commuting choices and convenient access to the rest of the City and the region.*

The Project advances more transit supportive density than what exists today. This is important because not only does land use density help support transit, but the unit-type that could be built in these areas would accommodate households with higher transit propensity use. If built, this could generally add ridership demand and increase the financial viability of the transit service, which could help maintain existing transit operations and/or potentially expand service options.

POLICY 3.7: The City will carefully review plans for transit service, while encouraging such service, so as to identify and minimize any adverse visual, noise, land use, or other development and operation impacts on the City' s communities.

POLICY 3.8: A program shall be developed to install sidewalks or paths, where appropriate, around schools, churches, active parks, commercial and other areas of pedestrian activity where public safety or welfare is at issue (Coastal Act/30252)

POLICY 3.9: A program to install handicapped access ramps at all corners with sidewalks shall be developed.

POLICY 3.10: Standards shall be established for the location and design of newsracks, signs, walls and other improvements which encroach into the public right-of-way. (Coastal Act/30251)

Policies 3.8 to 3.10 Response: *These policies address the need to develop programs to install sidewalks or paths and other amenities within the public right-of-way. These standards and programs have already been developed and are implemented on a project-by-project basis.*

POLICY 3.11: The City will strive to implement a safe, direct, and convenient circulation system for commuting and recreational bicycle traffic. The City will support the development of additional bicycle facilities in the Coastal Zone, including the following:

- all Circulation Element roads will include provisions for bicycle lanes unless precluded by design and safety considerations in which cases, alternative routes shall be provided to form a continuous network.
- the provision of secure bicycle storage facilities at all beaches designated for high and moderate levels of use; and
- the installation of bicycle and surfboard racks on all buses serving the Coastal Zone. (Coastal Act/30252)

The preservation and maintenance of scenic highways is emphasized in the following policies as well as policies included in the Resource Management Element. In addition, future road improvements should include design features that enhance the communities through which they pass.

Policies 3.11 Response: *This Project promotes the principle that streets have multiple users. Through Project implementation, more people would be more integrated into the community and more mode-choices for travel would be provided. Future development within these locations facilitate more walkable neighborhoods which would be more bike friendly. Zoning standards specifically address bike use provisions and encourage the EA use. This enhanced land use strategy helps connect to the circulation network and would help support the development of additional bike facilities within the existing circulation system.*

GOAL 4: The City should make every effort to develop a circulation system that highlights the environmental and scenic amenities of the area. (Coastal Act/30251)

POLICY 4.1: Design roads to enhance scenic areas. (Coastal Act/30251)

POLICY 4.2: Promote and encourage roadside and median landscaping. (Coastal Act/30251)

POLICY 4.3: Separate pedestrian, bicycle, and vehicular traffic by encouraging adequate space for walking and biking by striping roadways, excepting freeways. (Coastal Act/30252)

POLICY 4.4: The City has adopted a Citywide Recreation Trails Master Plan to establish a separate system of hiking trails, bicycle paths and equestrian trails from which motorized vehicles shall be banned. The general location and type of each trail is shown on the Recreational 'Trails Master Plan Map (Recreation Element, Figure 3). Any proposed modifications or additions to the Recreational Trails Master Plan or Recreational Trails Master Plan Map that may directly affect coastal zone resources shall require an LCP amendment.

Policy 4.4 Response: *This EA provides the basis for determining whether future development activity may have any significant effects. Future development would be subject to compliance with standards that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility. If the new zone is conveyed over an area that is designated for future trail alignment, then future development activities would address Trail Master Plan implementation.*

POLICY 4.5: Design and construct attractive bike paths and pedestrian ways along existing freeway overpasses and underpasses. Discourage separate pedestrian overpasses. (Coastal Act/30252)

POLICY 4.6: Enforce existing laws prohibiting off road motorized vehicles from traveling on public roads. Prohibit off road motorized vehicles from operating within limits.

POLICY 4.7: Encourage consistent signing throughout the city using international sign standards when appropriate. (Coastal Act/30251)

POLICY 4.8: Develop and enforce a system of truck routes which discourages truck traffic on residential streets and roads.

POLICY 4.9: Prohibit whenever legally possible, or strictly regulate billboards on city streets, roads, freeways, railroad rights- of- way, and lagoons. (Coastal Act/30251/30253)

POLICY 4.10: Develop street lighting standards, where appropriate, consistent with neighborhood/community character and night sky viewing.

POLICY 4.11: Keep street lighting, curbs, and gutter requirements consistent with individual neighborhood character.

Policy 4.10 and 4.11 Response: *The directive is intended to address community-level standards for streetlights to make sure that the nighttime environment of dark skies is protected and to keep street lighting, curbs, and gutter requirements consistent with individual neighborhood character. This EA generally addresses areas that have been identified in the City to accommodate future housing opportunities. Future development would be subject to these policy directives and ensure that street lighting, curbs, and gutter requirements are compatible with the surrounding area.*

POLICY 4.12: Encourage undergrounding of utilities within street rights-of-way and transportation corridors. (Coastal Act/30251)

POLICY 4.13: Encourage utilization of reflective devices and road striping where useful for safety.

Policies 4.12 and 4.13 Response: *These policies relate to the need to underground utilities and use reflective devices in road construction. Future development would be subject to these policy directives.*

POLICY 4.14: Where feasible, minimize the dependence on private motor vehicles. (Coastal Act/30252)

Policy 4.14 Response: *The Project seeks to achieve alternative development patterns, infrastructure, and transportation measures or policies to minimize the dependence on private motor vehicles.*

GOAL 5: Leucadia Boulevard between I-5 and Olivenhain Road is planned as a Major Arterial-Augmented. Prior to any improvements of any portion of this link above the capacity (at LOS "D") of a two-lane local roadway, all of the following policies shall be satisfied:

POLICY 5.1: The specific plan required by the Land Use Element for the unincorporated sphere area through which the Leucadia Boulevard alignment passes shall be adopted by the City.

POLICY 5.2: The annexation of the sphere area to the City of Encinitas shall have been accomplished.

Policy 5.3: Full design and improvement plans for the length of Leucadia Boulevard between I-5 and Olivenhain Road shall be a scenic roadway, completed and adopted by the City, subject to the following:

a) Design will include full landscape/street-scape design, bicycle and pedestrian facilities, recreational trails where appropriate, and intersection improvements including left and right turning movements. Where facilities cannot be accommodated within the right-of-way, additional easements/right-of-way may be required.
b) The design of the Leucadia Boulevard extension will include landscaped medians and\or parkways which would be integrated with pedestrian facilities.
c) Buffers such as earth berms, vegetation, broad parkways and other landscape features will be provided to protect adjacent land uses from undesirable effects of traffic, noise, pollution and light along Leucadia Boulevard.
d) The extension of Leucadia Boulevard across the bluff facing Green Valley shall be aligned and developed so as to minimize grading impacts to the bluff along Green Valley.
e) Wildlife corridors across the alignment of Leucadia Boulevard at the Green Valley bluff and elsewhere as warranted shall be provided to facilitate wildlife passage and provide continuous areas of habitat.
f) The connection of Leucadia Boulevard to Olivenhain Road shall bridge over Encinitas Creek rather than use pipes or culverts to minimize impacts to the drainage area.
g) With street design, detailed noise impact analysis shall be provided to identify where noise walls or other attenuation measures may be required. Such analysis shall assume ultimate "build-out"

traffic volumes. The installation of noise walls/other measures shall be provided prior to or in conjunction with street improvement recognizing that driveways, street openings, and other existing site conditions make noise mitigation impossible.

h) Where it is necessary or desirable to construct retaining or noise-attenuation walls along the Leucadia Boulevard corridor, they shall be constructed with natural-appearing materials and generously landscaped with vines, trees, and shrubbery, reflecting local community character.
i) The design and improvement of Leucadia Boulevard may be considered as a two-stage project: Stage I being a two-lane highway and Stage II providing additional lanes and improvements as needed to accommodate ultimate projected traffic.
j) A maximum of four through-travel lanes shall be designed and improved. The additional right-of-way for physical or visual mitigation shall not be used for through-lanes, however, additional right-of-way can be obtained for left and right turning improvements.
k) A high priority shall be given to implement these standards in areas where 126 feet of right-of-way presently exists.
l) No truck routes shall be permitted along Leucadia Boulevard from I-5 to Sidonia Street.
m) The City will consider purchasing any land within the right-of-way when it is offered for sale along Leucadia Boulevard from I-5 to Sidonia Street.

GOAL 6: The City will make every effort to provide public access and circulation to the shoreline, through private dedications, easements or other methods, and public transportation or other facilities. (Coastal Act/30211/30212/30212.5/30221)

POLICY 6.1: The City will continue to defend the public's constitutionally guaranteed right of safe physical access to the shoreline. (Coastal Act/30211/ 30212/30214)

POLICY 6.2: The City will cooperate with the State to insure that lateral beach access is protected and enhanced to the maximum degree feasible, and will continue to formalize shoreline prescriptive rights. Irrevocable offers of dedication for lateral accessways between the mean high tide line and the base of the Coastal bluffs shall be required in new development consistent with Section 30212 of the California of the California Coastal Act of 1976. (Coastal Act/30212/30214)

POLICY 6.3: The City will encourage continued public vertical access by:

- Investigating and identifying all acquired access, improved and unimproved;
- Maintaining all City-owned improved access and view points and seeking to improve the unimproved access and view points within the City boundaries;
- Cooperating with the State in planning for the Cardiff and San Elijo State Beach areas and the South Carlsbad State Beach area to increase the external accessibility and usability of these beaches, as well as enhancing their visitor-serving potential; and
- Supporting continued use of the existing public sea level beach and bluff-backed beach accessways and the establishment of additional accessways, as determined appropriate to maintain adequate public access to public beaches. (Coastal Act/30211/30212/30212.5/30214/30220/30223)

POLICY 6.4: The City will support increased public transportation service to shoreline recreational areas designated for increased visitation, including the following:

- Supporting existing and increased levels of service where needed by the North County Transit District;
- Supporting low-cost transfers between all transit operators in the Coastal Zone; and

- Encouraging the provision of safe transit stops and crosswalks at all major beaches. (Coastal Act/30252)
- When bus transportation to beaches is deemed feasible, inset bus bays at major beach transit stops shall be considered to provide safer passenger embarkation/debarkation.

POLICY 6.5: The City will seek additional funding for transit service in the Coastal Zone, including a consideration of light rail transit and other forms of public transportation. (Coastal Act/30252)

Policies 6.4 and 6.5 Response: *The Project identifies the location in the City where future growth is expected to occur. It outlines the City's land use strategy for facilitating a comprehensive, multimodal transportation network and places more people in areas that are more accessible by a range of transportation options, including public transit. Therefore, the Project advances more transit supportive density than what exists today, which helps support increased transit service operations.*

POLICY 6.6: The City will consider-improved pedestrian crossings of Pacific Coast. Highway. (Coastal Act/30252)

POLICY 6.7: Discourage and phase out private access to the beach over the bluffs. New private accessways shall be prohibited.

GOAL 7: Every effort will be made to have new development, both in the City and in the region, provide for all costs of the incremental expansion of the circulation system necessary to accommodate that development. Costs include, but are not limited to, costs of right-of-way and construction, including costs of moving utilities and structures, and costs for landscaping and intersection improvement.

Policy 7.1: The City shall seek to recover circulation system expansion costs from all available sources, without limitations, including development fees for projects both inside and outside the City limits.

Policy 7.1 Response: *The Project focuses future development into infill areas to both capitalize on existing infrastructure and facilitate more livable neighborhoods within the existing circulation system. Future development would help fund and pay for the construction or needed maintenance of offsite capital improvements. This would help recover circulation system costs and incremental expansion.*

PUBLIC SAFETY ELEMENT

GOAL 1: Public health and safety will be considered in future Land Use Planning (Coastal Act/30253)

POLICY 1.1: Development and grading or filling in drainage courses, floodways and floodplains shall be prohibited except as provided by Land Use Element Policy 8.2. An exception may be made upon the finding that strict application of this policy would preclude any reasonable use of property (one dwelling unit per legal parcel.) Exceptions may also be made for development of circulation element roads; necessary water supply projects; flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development; developments where the primary function is the improvement of fish and wildlife habitat; and other vital public facilities, but only to the extent that no other feasible alternatives exist, and minimum disruption to the natural floodplain, floodway or drainage course is made. When flood/drainage improvements are warranted, require developers to mitigate flood hazards in those areas identified as being subject to periodic flooding prior to actual development.

Policy 1.1 Response: *This policy addresses the Coastal Bluff Hillside/Inland Overlay Ordinance. The Hillside/Inland Bluff Overlay Ordinance regulations apply to all areas within the Special Study Overlay Zone where site-specific analysis indicates that 10 percent or more of the area of a parcel of land exceeds 25 percent slope.*

Future development projects and potential slope encroachment activities would be subject to this provision. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility. Physical design controls are key in providing protection against various potential hazards. Concerning public safety, areas of loose soil or fill within the candidate sites may be subject to seismically induced settlement or liquefaction and seismically induced landslides are possible in areas of steep topography. Compliance with City ordinances, recommended mitigation measures, and established engineering standards would reduce risks of seismic hazards in conjunction with future development to less than significant.

POLICY 1.2: Restrict development in those areas where slope exceeds 25% as specified in the Hillside/Inland Bluff overlay zone regulations of the zoning code. Encroachment into slopes as detailed in the Hillside/Inland Bluff overlay may range from 0 percent to a maximum of 20 percent, based on a sliding scale of encroachment allowances reflective of the amount of the property within steep slopes, upon the discretionary judgement that there is no feasible alternative siting or design which eliminates or substantially reduces the need for such encroachment, and it is found that the bulk and scale of the proposed structure has been minimized to the greatest extent feasible and such encroachment is necessary for minimum site development and that the maximum contiguous area of sensitive slopes shall be preserved. Within the Coastal Zone and for the purposes of this section, "encroachment" shall constitute any activity which involves grading, construction, placement of structures or materials, paving, removal of native vegetation including clear-cutting for brush management purposes, or other operations which would render the area incapable of supporting native vegetation or being used as wildlife habitat. Modification from this policy may be made upon the finding that strict application of this policy would preclude any reasonable use of property (one dwelling unit per legal parcel). Exceptions may also be made for development of circulation element roads, local public streets or private roads and driveways which are necessary for access to the *more developable portions of a site on slopes of less than 25%* grade, and other vital public facilities, but only to the extent that no other feasible alternatives exist, and minimum disruption to the natural slope is made. *Policy 1.2 amended 5/11/95 (Reso. 95-32)*

POLICY 1.3: The City will rely on the Coastal Bluff and Hillside/Inland Bluff Overlay Zones to prevent future development or redevelopment that will represent a hazard to its owners or occupants, and which may require structural measures to prevent destructive erosion or collapse. (Coastal Act/30240/30251/30253)

Policy 1.3 Response: *This policy addresses the Coastal Bluff and Hillside/Inland Overlay Ordinance - and it is acknowledged that physical design controls are key in providing protection against various potential hazards. Future development would be subject to this policy. Compliance with City ordinances, recommended mitigation measures, and engineering standards would reduce risks of seismic hazards in conjunction with future development to less than significant.*

POLICY 1.4: Develop a master plan for drainage and flood control. (Coastal Act/30236)

POLICY 1.5: Where significant irrigated slopes are included in industrial, commercial, and higher density residential development, their required maintenance shall be funded by a landscape maintenance assessment district. (Coastal Act/30251/30240)

POLICY 1.6: The City shall provide for the reduction of unnatural causes of bluff erosion, as detailed in the Zoning Code, by:

a) Only permitting public access stairways and no private stairways, and otherwise discouraging climbing upon and defacement of the bluff face;
b) Improving local drainage systems to divert surface water away from the bluff;
c) Studying the underground water system and looking for potential solution to bluff instability/erosion caused by such water;
d) Reducing the infusion of ground water from domestic sources through, among other actions, requiring the removal of existing irrigation systems within forty feet of the bluff edge and prohibiting the installation of such systems in new development;
e) Permitting pursuant to the Coastal Bluff Overlay Zone, bluff repair and erosion control measures on the face and at the top of the bluff that are necessary to repair human-caused damage to the bluff, and to retard erosion which may be caused or accelerated by land-based forces such as surface drainage or ground water seepage, providing that no alteration of the natural character of the bluff shall result from such measures, where such measures are designed to minimize encroachment onto beach areas through an alignment at and parallel to the toe of the coastal bluff, where such measures receive coloring and other exterior treatments and provided that such measures shall be permitted only when required to serve coastal-dependent uses or to protect existing principal structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply; and
f) Requiring new structures and improvements to existing structures to be set back 25 feet from the inland blufftop edge, and 40 feet from coastal blufftop edge with exceptions to allow a minimum coastal blufftop setback of no less than 25 feet. For all development proposed on coastal blufftops, a site-specific geotechnical report shall be required. The report shall indicate that the coastal blufftop setback will not result in risk of foundation damage resulting from bluff erosion or retreat to the principal structure within its economic life and with other engineering evidence to justify the coastal blufftop setback.

   On coastal bluffs, exceptions to allow a minimum setback of no less than 25 feet shall be limited to additions or expansions to existing principal structures which are already located seaward of the 40 foot coastal blufftop setback, provided the proposed addition or expansion is located no further seaward than the existing principal structure, is set back a minimum of 25 feet from the coastal blufftop edge, and the applicant agrees to remove the proposed addition or expansion, either in part or entirely, should it become threatened in the future.

   In all cases, all new construction shall be specifically designed and constructed such that it could be removed in the event of endangerment and the applicant shall agree to participate in any comprehensive plan adopted by the City to address coastal bluff recession and shoreline erosion problems in the City.

   This does not apply to minor structures that do not require a building permit, except that no structures, including walkways, patios, patio covers, cabanas, windscreens, sundecks, lighting standards, walls, temporary accessory buildings not exceeding 200 square feet in area, and similar structures shall be allowed within five feet from the bluff top edge; and

g) Permanently conserving the bluff face within an open space easement or other suitable instrument. (Coastal Act/30210/30235/30240/30251/30253)

Standards for the justification of preemptive erosion control devices and limits on location of shoreline devices shall be as detailed in the Zoning Code. *Policy 1.6 amended 5/11/95 (Reso. 95-32)*

POLICY 1.7: The City shall develop and adopt a comprehensive plan, based on the Beach Bluff Erosion Technical Report (prepared by Zeiser Kling Consultants Inc., dated January 24, 1994), to address the coastal bluff recession and shoreline erosion problems in the City. Said plan shall include, at minimum, components that deal with all the factors affecting the bluffs in Encinitas. These include, but are not limited to, minimum blufftop setback requirements for new development/redevelopment; alternatives to shore/bluff protection such as beach sand replenishment; removal of threatened portions of a residence or the entire residence or underpinning existing structures; addressing bluff stability and the need for protective measures over the entire bluff (lower, mid and upper); impacts of shoreline structures on beach and sand areas as well as mitigation for such impacts; impacts of groundwater and irrigation on bluff stability; and, visual impacts of necessary/required protective structures.

If a comprehensive plan is not submitted to, reviewed and approved by the Coastal Commission as an amendment to this land use plan by November 17, 1995, then no additions or expansions to existing structures shall be permitted on coastal blufftop lots except for minor additions or expansions that comprise no greater than a 10 percent increase above the existing gross floor area or 250 square feet whichever is greater, provided such additions/expansions are located at least 40 feet from the coastal blufftop edge, the addition/expansion is constructed in a manner so that it could be removed in its entirety, and the applicant agrees, in writing, to participate in any comprehensive plan adopted by the City to address coastal bluff recession and shoreline erosion problems in the City. In addition, until such a comprehensive plan is approved by the City of Encinitas and the Coastal Commission as an amendment to the LCP, the City shall not permit the construction of seawalls, revetments, breakwaters, cribbing, or similar structures for coastal erosion except under circumstances where an existing principal structure is imminently threatened and, based on a thorough alternatives analysis, an emergency coastal development permit is issued and all emergency measures authorized by the emergency coastal development permit are designed to eliminate or mitigate adverse impacts on local shoreline sand supply. *Policy 1.7 amended 5/11/95 (Reso. 95-32)*

POLICY 1.8: New residential and commercial construction shall provide for smoke detector and fire sprinkler systems to reduce the impact of development on service levels.

Policy 1.8 Response: *This policy requires new smoke detection and prevention systems. This Project identifies the locations in the City where future growth is expected to occur.*

There is a possibility for wildland fires. However, future development must comply with Building Standards and Fire Code. In addition, urbanization reduces the threat of wildland fires except on the perimeter. There is a linear path in this area that acts as a buffer. Details of each proposal are subject to City review at time of submittal.

POLICY 1.9: Adequate safety service levels shall be maintained and provided for by new development.

Policy 1.9 Response: *The EGP Circulation Element establishes policies for traffic improvement because growth and development requires an adequate circulation system (i.e. movement of cars). The policies that relate to roadway performance state that the City should endeavor to achieve a level of service ("LOS") of at least C. The City has provided adequate safety service levels under Policy 1.9, even though some areas of the City have had LOS E and F intersection movement conditions.*

The EA revealed the Project would cause LOS impacts in some areas of the City. In other areas of the City, future development results in a LOS E or F – or slightly worsens an already LOS E or F intersection. Other areas have no impact on LOS. As discussed in Section 4.13, with implementation of mitigation measures, a coordinated traffic signal system and adequate emergency access would be maintained, although LOS impacts would remain significant and unavoidable.

This EA provides the basis for determining whether future development activity may have any significant effects. Future infill development opportunities are located to both capitalize on existing infrastructure as well as to provide enhanced and/or convenient access to local serving uses by residents and visitors. No new candidate sites are proposed in areas that would not be served by adequate emergency response.

POLICY 1.10: The public safety program shall provide for a response plan that strives to reduce life and property losses through technology, education, training, facilities and equipment.

POLICY 1.11: The public safety system shall provide standards and levels of service guidelines that assure a quality of life and protection of life and property from preventable losses.

POLICY 1.12: The City will observe and apply measures to reduce earthquake structural risk through building and construction codes.

POLICY 1.13: In areas identified as susceptible to brush or wildfire hazard, the City shall provide for construction standards to reduce structural susceptibility and increase protection. Brush clearance around structures for fire safety shall not exceed a 30-foot perimeter in areas of native or significant brush, and as provided by Resource Management Policy 10.1.

Policy 1.13 Response: *The Project identifies locations in the City where future growth is expected to occur. Some of the proposed locations of the candidate sites are in areas of the City that are zoned for potential wildfire hazards. However, future development within the candidate sites must comply with Building Standards and Fire Code. In addition, urbanization reduces the threat of wildland fires except on the perimeter.*

This EA provides the basis for determining whether future development may have any significant effects. Details of each proposal are subject to City review at time of submittal. Future development would be subject to this policy and must adhere to the various codes that help implement this policy.

POLICY 1.14: Where development creates the need for new public safety services and/or equipment, that development shall be responsible for the cost of such services/equipment.

Policy 1.14 Response: *Future development would occur in infill areas to both capitalize on existing infrastructure within the existing circulation system and taking advantage of existing public safety services. Future development would help fund and pay for the construction or needed maintenance of offsite capital improvements. This would help recover public safety system costs and incremental service expansion.*

POLICY 1.15: The City shall establish and implement standards, based on the 50- or 100-year storm, for flood control and drainage improvements, and the maintenance of such improvements, designed to assure adequate public safety. Such standards and improvements shall be consistent with the policies of this Plan to respect community character and maintain natural or natural-appearing drainage courses whenever feasible.

Policy 1.15 Response: *This policy directs the City to create and implement standards for development to ensure adequate safety and flood control. This EA generally addresses areas that have been identified in the City to accommodate future housing opportunities. Although portions of the City are within a FEMA 100-year flood zone, none of the candidate sites are located within a FEMA 100-year flood zone. Environmentally sensitive areas and drainage courses are maintained and incorporated within the plan. Even still, future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility, as well as maintain natural resources.*

POLICY 1.16: The City and its service districts and agencies shall maintain adequate levels of staffing, materials and equipment to assure timely response to demands for public safety services.

POLICY 1.17: In order to protect the health and safety of the residents of Encinitas and surrounding communities, the City shall control the development of hazardous waste facilities as required in Chapter 30.57 of the Municipal Code. The City shall also participate in programs to reduce the amounts of hazardous wastes being generated in the San Diego region, as provided in the adopted San Diego County Hazardous Waste Management Plan.

GOAL 2: The City of Encinitas will make an effort to minimize potential hazards to public health, safety, and welfare and to prevent the loss of life and damage to health and property resulting from both natural and man-made phenomena.

POLICY 2.1: The City will cooperate with and support in every way possible current Federal, State, and County agencies responsible for the enforcement of health, safety, and environmental laws.

POLICY 2.2: Implement an emergency preparedness program (referenced by the State as a Multihazard Function Plan) to ensure that emergency shelters and emergency evacuation and response routes are provided and clearly identified.

POLICY 2.3: Conduct a survey to identify all structures in the City constructed of unreinforced masonry and partially unreinforced masonry. Once inventoried, based on need, the City shall undertake necessary programs to assure reasonable structural safety.

POLICY 2.4: Setbacks, easements, and accesses, necessary to assure that emergency services can function with available equipment, shall be required and maintained.

Policy 2.4 Response: *Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and public safety issues. The zoning standards work together to ensure that buildings can accommodate emergency services and general maintenance. Future residential development would still be required to ensure that proper off-site facilities are constructed in conjunction with the development and to provide for public dedication of such rights-of-way as streets or easements as are reasonably required by or related to the effect of the proposed use.*

POLICY 2.5: Emergency equipment response routes and evacuation procedures shall be defined and provided for.

POLICY 2.6: Except as provided in Public Safety Policy 1.1, no development or filling shall be permitted within any 100-year floodplain.

Policy 2.6 Response: *Although portions of the City are within a FEMA 100-year flood zone, none of the candidate sites are within a FEMA 100-year floodplain. Environmentally sensitive areas and drainage courses are maintained and incorporated within the plan.*

POLICY 2.7: The City shall consider and/or institute an early warning system of a potential failure at a nuclear operation plant.

GOAL 3: The City will make every effort to ensure that all City residents and workers are protected from exposure to hazardous materials and wastes and the transport of such materials.

POLICY 3.1: Cooperate with the enforcement of disclosure laws requiring all users, producers, and transporters of hazardous materials and wastes to clearly identify such materials at the site and to notify the appropriate local County, State and/or Federal agencies in the event of a violation.

POLICY 3.2: Restrict the transport of hazardous materials to identified truck routes as established by an implementing policy.

POLICY 3.3: Cooperate with the railroads to ensure that hazardous materials transported by rail through the City do not present a threat to life or property in Encinitas.

POLICY 3.4: Land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials will be located a safe distance from land uses that may be adversely impacted by such activities. (Coastal Act/30250)

POLICY 3.5: Commercial and industrial facilities shall be required to participate in a hazardous materials and wastes mitigation and response program.

POLICY 3.6: The City shall cooperate with the efforts of the County Department of Health, Hazardous Waste Management Division to inventory and properly regulate land uses involving hazardous wastes and materials.

Policies 3.1 to 3.6 Response: *This goal and related policies are associated with hazardous waste operations, land use, transport/movement, and coordination. This is important because hazardous materials may have the potential to affect the environment or human health. Policy 3.1 relates to disclosure laws and Policies 3.2 to 3.3 relate to hazard materials transport. This Project identifies the location in the City where future growth is expected to occur and is unrelated to disclosure laws and material transport.*

Policies 3.4 and 3.5 discuss land use operations. Policy 3.6 requires coordination with Human Health Services and Hazardous Waste Management. Land uses in the Project area that may handle or have handled or generated hazardous wastes include commercial, residential, and agricultural uses. Generally, the developed candidate sites have supported commercial office, retail, restaurants, civic, and residential uses with little potential to handle or generate substantial amounts of hazardous materials. This trend is expected to occur within the identified candidate sites. However, future development of the candidate sites would be subject to these policies.

RESOURCE MANAGEMENT ELEMENT

GOAL 1: The City will conserve, protect, and enhance the water resources in the Planning Area. (Coastal Act/30231)

POLICY 1.1: Require new development to utilize measures designed to conserve water in their construction.

Policy 1.1 Response: *This EA provides a basis for determining whether future development activities may have any significant effects. As discussed in Section 4.14, Public Utilities and Service Systems, water quality conditions would be maintained. Consistent with what is required by Policy 1.1, future projects would be evaluated. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and development activities.*

POLICY 1.2: Cooperate with the Federal, State, and County governments and surrounding jurisdictions concerning the maintenance and improvement of water quality from local groundwater sources. (Coastal Act/ 30231)

POLICY 1.3: The City will implement a program for both the using and sale of treated wastewater from a new wastewater treatment facility. The City should attempt to use the treated wastewater for the landscaping of transportation corridors, parks and recreation areas, and other public uses. (Coastal Act/30231)

POLICY 1.4: The City will explore the possibilities of establishing or promoting a tree farm or plant growing operation to take advantage of the possibilities for sewage sludge and wastewater recycling.

POLICY 1.5: A study of the feasibility of participating with other governmental agencies in the processing of sludge into usable products should be conducted, including the possibility of worm farming.

POLICY 1.6: Phase out the use of water softeners which utilize salt in the water-softening process to prevent continued degradation of the water. (Coastal Act/30231)

POLICY 1.7: Investigate ways to reduce the reliance of local water users on imported water. The City will seek reductions in per capita water consumption and will support reclaiming sewage effluent for re-use.

Policy 1.7 Response: *As it was intended, water, wastewater, drainage, and utility systems have been designed to seamlessly connect to the regional/local systems. The infrastructure plans were developed separately and prior to City incorporation. Water-related issues such as imported water usage would be addressed upon completion of the Urban Water Management Plan updates; and this Project does not limit the ability of the City to support water district conservation efforts such as reclaimed sewage.*

This Project identifies the location in the City where future growth is expected to occur. Greater energy and water conservation leading to sustainability can be achieved by a more efficient use of land such as that obtained with higher residential densities in appropriate locations. Increased residential density utilizes less land, utilities, streets, and sidewalks. Compact developments cost less, are a more efficient land use, and offers convenient access to transit. Sprawling development increases costs for sewers, water, roads, electricity, and other infrastructure services. Therefore, this Project encourages a reduction of water consumption on a per person or capita basis. Notwithstanding, as concluded in Section 4.14, the Project would result in a significant and unavoidable impact concerning water supplies.

POLICY 1.8: The City will achieve and maintain secondary sewage treatment through available means such as development fees, user fees, bond issues, etc. to prevent sewage pollution into the lagoons, ocean waters, or ground waters. (Coastal Act/30231)

POLICY 1.9: Encourage the use of recycled liquid wastes where appropriate. (Coastal Act/30231)

POLICY 1.10: Promote the use of water efficient sprinkling and gardening systems to include ordinances and technology to encourage drought tolerant plants.

Policy 1.10 Response: *The development standards work together to ensure that there is a variety of product arrangements within Candidate sites. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on water use and landscaping requirements.*

POLICY 1.11: If a development can be connected to the sewer system, the system must have the capacity to handle the additional load of the proposed project.

POLICY 1.12: Development within unsewered areas shall only be allowed after testing proves that septic systems would not create potential pollution. All development within unsewered areas shall be limited to parcels of at least one (1) acre.

Policies 1.11 and 1.12 Response: *The HEU incorporates smart growth and sustainable principals in its development plan. It outlines the City's land use strategy that focuses future development into infill areas to capitalize on existing infrastructure. Policies 1.11 and 1.12 were conceived when the City was originally growing to what it is today. None of the candidate sites are proposed in locations that do not already have sewer service available.*

GOAL 2: The City shall make every effort to improve ocean water quality. (Coastal Act/30231)

POLICY 2.1: In that ocean water quality conditions are of utmost importance, the City shall aggressively pursue the elimination of all forms of potential unacceptable pollution that threatens marine or human health. (Coastal Act/30230/30231)

POLICY 2.2: In that the San Elijo ocean wastewater outfall lies within the jurisdiction of the City and the Encina outfall lies north of the City, the City shall encourage the highest feasible level of treatment of said wastewater prior to entering the outfalls and continually encourage the reduction of volume of wastewater to said outfalls by this City and other jurisdictions. (Coastal Act/30230/30231)

POLICY 2.3: To minimize harmful pollutants from entering the ocean environment from lagoons, streams, storm drains and other waterways containing potential contaminants, the City shall mandate the reduction or elimination of contaminants entering all such waterways; pursue measures to monitor the quality of such contaminated waterways, and pursue prosecution of intentional and grossly negligent polluters of such waterways. (Coastal Act/30230/30231/30233)

Policies 2.1 to 2.3 Response: *In general, natural and human-made pollutants come from two types of sources: point sources (i.e. from known specific locations, such as a spill) and nonpoint sources (i.e. sources that cannot be traced to a single site, such as rainfall). Future development would be required to capture and filter stormwater to achieve regionally beneficial environmental improvements, including: catch basin screening systems; biofiltration swales; and basin impoundments to capture stormwater for infiltration.*

POLICY 2.4: The City shall prohibit support facilities in the City for offshore exploration of oil or drilling of oil in coastal waters within its jurisdiction and strongly discourage such activity in any coastal waters in San Diego County. (Coastal Act/30232)

GOAL 3: The City will make every effort possible to preserve significant mature trees, vegetation and wildlife habitat within the Planning Area. (Coastal 30240)

POLICY 3.1: Mature trees of community significance cannot be removed without City authorization.

Policy 3.1 Response: *Retention of the image and heritage of mature trees and plant life is important to create a healthy urban forest. To promote and provide for the regulation of the planting, maintenance, and removal of public trees, within the public right-of-way or on public property, the City adopted an Urban Forestry Management Program and Heritage Tree Program. The Urban Forest Management Program and Heritage Tree Program also apply to the protection of trees during construction, which applies during development, redevelopment, razing, or renovating of structures.*

This Project identifies the location in the City where future growth is expected to occur and does not change the status of this goal and program. This EA provides the basis for determining whether future development activity may have any significant effects. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility. The zoning standards work together to also address community character and context sensitivity. This arrangement would help establish a framework to address the preservation of remaining vestiges of significant native plant life found within the City.

POLICY 3.2: Mature trees shall not be removed or disturbed to provide public right-of-way improvements if such improvements can be deferred, redesigned, or eliminated. This policy is not meant to conflict with the establishment of riding/hiking trails and other natural resource paths for the public good, or with the preservation of views.

POLICY 3.3: The City will examine ways to aesthetically trim street trees and vegetation within the public right-of-way including the possibility of using contract services or City personnel. (Coastal Act/30240/30251)

POLICY 3.4: A program shall be developed to trim roots and replace sidewalks and other public facilities which may be damaged by roots. (Coastal Act/30251/30254)

POLICY 3.5: A street tree planting program shall be developed and implemented.

POLICY 3.6: Future development shall maintain significant mature trees to the extent possible and incorporate them into the design of development projects.

POLICY 3.7: Where trees are now encroaching into the right-of-way, the City will establish a program that plants replacement trees in anticipation of removal of existing trees.

Policies 3.6 and 3.7 Responses: *The City's primary regulatory tools for providing for the orderly protection of trees consists of the Urban Forestry Management Program and Heritage Tree Program. The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. The Project does not change the status of these policies and does not change implementation of the City's Urban Forestry Management Program and Heritage Tree Program. All future development shall adhere to the Urban Forest Management Program and Maintenance Guidelines. None of the candidate sites identified and studied as part of this EA contain trees of significance.*

GOAL 4: The City, with the assistance of the State, Federal and Regional Agencies, shall provide the maximum visual access to coastal and inland views through the acquisition and development of a system of coastal and inland vista points. (Coastal Act/30251)

POLICY 4.1: The following Vista Points and others will be acquired and developed, as feasible:

- San Elijo & Kilkenny (overlooking lagoon & coast)
- Highway 101, north of La Costa Avenue
- Northeast and northwest corner of I-5 and La Costa Avenue
- Encinitas Community Park site (Coastal Act/30251)

POLICY 4.2: The following Vista Points will be developed and maintained as feasible:

- Orpheus Street Park site
- Oak Crest Park site
- West end of "D" Street
- West end of "F" Street
- West end of "J" Street (Coastal Act/30251)

POLICY 4.3: The following Vista Points will be maintained as needed, and upgraded as necessary:

- Leucadia Beach State Park
- West end of "I" Street
- Moonlight State Beach
- Swami's City Park
- Existing Vista Point on southbound I-5
- Cardiff Beach State Park (south parking lot) (Coastal Act/30251)

POLICY 4.4: The system of Vista Points will provide for the differing needs of automobile, bicycle, and pedestrian users, and will recognize as a recreational resource, the function of Vista Points as facilities for the passive, and occasionally remote enjoyment of the coastal and inland view. (Coastal Act/30251/30212.5/30210)

POLICY 4.5: The City will designate "Scenic/Visual Corridor Overlay" areas within which the character of development would be regulated to protect the integrity of the Vista Points according to the following criteria:

- Critical viewshed areas should meet the following requirements:
  - extend radially for 2,000 feet (610M) from the Vista Point; and
  - cover areas upon which development could potentially obstruct, limit, or degrade the view.
- Development within the critical viewshed area should be subject to design review based on the following:

- building height, bulk, roof line and color and scale should not obstruct, limit or degrade the existing views;
- landscaping should be located to screen adjacent undesirable views (parking lot areas, mechanical equipment, etc.) (Coastal Act/30251/30253)

POLICY 4.6: The City will maintain and enhance the scenic highway/visual corridor viewsheds. (Coastal Act/30251)

POLICY 4.7: The City will designate the following view corridors as scenic highway/visual corridor viewsheds:

- Saxony Road, from Leucadia Blvd., north to La Costa Ave.
- Highway 101 from Encinitas Blvd. south to Santa Fe Drive
- El Camino Real from Encinitas Blvd. north to La Costa Blvd.
- Highway 101, La Costa Ave. to South Carlsbad Beach
- La Costa Ave. from just west of I-5 to El Camino Real
- Highway 101, from Encinitas Blvd. to La Costa Ave.
- Leucadia Blvd. between Hwy 101 and El Camino Real
- San Elijo Ave. (and Hwy 101) south of Cardiff Beach State Park to Santa Fe Drive
- Manchester Ave. from San Elijo Ave. to Encinitas Blvd.
- Interstate 5, crossing San Elijo Lagoon (Coastal Act/30251/30253)

POLICY 4.8: The City will designate Scenic/Visual Corridor Overlay and scenic highway viewshed areas as illustrated on the Visual Resource Sensitivity Map (Figure 3). (Coastal Act/30251)

POLICY 4.9: The City will designate historic viewsheds in order to preserve historical views which represent a significant cultural or historic resource to the community. The following historic viewsheds will be developed and maintained as feasible:

Station White

POLICY 4.10: It is intended that development would be subject to the design review provisions of the Scenic/ Visual Corridor Overlay Zone for those locations within Scenic View Corridors, along scenic highways and adjacent to significant viewsheds and vista points with the addition of the following design criteria:

- Road Design
  - Type and physical characteristics of roadway should be compatible with natural character of corridor, and with the scenic highway function.
- Development Design
  - Building and vegetation setbacks, scenic easements, and height and bulk restrictions should be used to maintain existing views and vistas from the roadway.
  - Off-site signage should be prohibited and existing billboards removed.
  - Development should be minimized and regulated along any bluff silhouette line or on adjacent slopes within view of the lagoon areas and Escondido Creek.
  - Where possible, development should be placed and set back from the bases of bluffs, and similarly, set back from bluff or ridge top silhouette lines; shall leave lagoon areas and floodplains open, and shall be sited to provide unobstructed view corridors from the nearest scenic highway.

- Development that is allowed within a viewshed area must respond in scale, roof line, materials, color, massing, and location on site to the topography, existing vegetation, and colors of the native environment. (Coastal Act/30251/30253)

POLICY 4.11: The City will develop a program to preserve views that also preserves the appropriate vegetation and removes obstacles that impact views. Trees and vegetation which are themselves part of the view quality along the public right-of-way will be retained. (Coastal Act/30251)

Policies 4.1 to 4.11 Response: *Goal 4 and associated policies state that the City would undertake a program that involves the acquisition and development of sites for vista points and the establishment of a "Scenic/Visual Corridor Overlay" land use designation. Finally, various scenic highways have been designated. All of which would ensure that existing views are not compromised by future development.*

The HEU incorporates smart growth and sustainable principals in its development plan. It outlines the City's land use strategy for focusing future development into infill areas to capitalize on existing infrastructure. Locating high quality development within existing community areas can facilitate the creation of distinctive and attractive community settings.

This EA provides the basis for determining whether future development activity may have any significant effects. Future development activities would be subject, generally, to this policy directive that ensures future development is compatible to existing community character and the design context. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility. This would allow greater opportunity to address building location against resource corridor sensitivity.

The HEU incorporates smart growth and sustainable principals in its development plan. Various candidate sites are located along major transportation corridors that have a Scenic Visual Corridor Overlay designation. Also, as noted in the viewshed analysis (see Section 4.1) some candidate sites that are identified within critical viewshed areas. Impacts were concluded to be significant and unavoidable for two sites.

The Project's focus is making improvements to the physical form of some areas that are already developed (infill development or revitalization within the built context). Building more compactly minimizes the amount of land needed to accommodate new residential uses; which would allow more land to can be allocated to passive open space or space transitions. New zoning standards provide a framework to better respond to the visual resource sensitivity needs.

GOAL 5: The City will make every effort to participate in programs to improve air and water quality in the San Diego region. (Coastal Act/30231)

POLICY 5.1: The City will monitor and cooperate with the ongoing efforts of the U. S. Environmental Protection Agency, the San Diego Air Pollution Control District, and the State of California Air Resources Board in improving air quality in the regional air basin. The City will implement appropriate strategies from the San Diego County SIP which are consistent with the goals and policies of this plan.

POLICY 5.2: The City will monitor and cooperate with the ongoing efforts of the U. S. Environmental Protection Agency, the State of California Water Resources Control Board, and the Regional Water Quality Control Board in improving water quality in the San Diego region.

GOAL 6: The City will make every effort to reduce the amount of solid and liquid waste generated in the Planning Area and will identify ways to responsibly deal with these wastes.

POLICY 6. 1: The City will phase in all practical forms of mandatory recycling as soon as possible.

POLICY 6.2: The City will contract only with waste haulers who will willingly cooperate with the City' s recycling effort.

POLICY 6.3: The City will continue to oppose the permanent location of hazardous waste disposal facilities, trash- burning plants and inappropriate sitings of landfills in or adjacent to the City.

POLICY 6.4: The City will cooperate with other cities in the region to site and operate both landfill and recycling facilities.

Policies 6.1 to 6.4 Response: *This goal and related policies are associated with solid and liquid waste, recycling, hazardous waste disposal, etc. Residential activities generate waste that requires disposal. Programs are needed to address the problems of disposal of these wastes and ensuring that these substances do not pollute after they have been disposed of. This Project identifies the locations in the City where future growth is expected to occur and does not change the status of this goal and associated policies.*

GOAL 7: The City will make every effort to ensure significant scientific and cultural resources in the Planning Area are preserved for future generations. (Coastal Act/30250)

POLICY 7.1: Require that paleontological, historical and archaeological resources in the planning area are documented, preserved or salvaged if threatened by new development. (Coastal Act/30250)

POLICY 7.2: Conduct a survey to identify historic structures and archaeological/ cultural sites throughout the community and ensure that every action is taken to ensure their preservation. Coastal Act/30250/30253 (5))

POLICY 7.3: The City will pursue the development of a historic resources program to assist in the identification, preservation, and restoration of those buildings, structures, and places within the City that have historic significance.

POLICY 7.4: The City will encourage the development of cultural facilities to be made available to the public, such as performing arts theaters, museums, and libraries. (Coastal Act/30250)

Policies 7.1 to 7.4 Response: *This goal and related policies are associated with cultural resources. This EA provides the basis for determining whether future development activity may have any significant effects. Details of each proposal are subject to City review at time of submittal. Future development would be subject to these policies and recommended mitigation measures, and must adhere to the various codes that help implement this policy.*

Section 4.4, Cultural Resources, addresses the Project in relation to potential impacts associated with historic structures, archaeological resources, and paleontological resources. The EGP, along with relevant specific plans, contains policies related to protection and preservation of sensitive cultural resources. The EMC provides special provisions related to the protection of cultural resources for sites identified as containing archaeological and historic resources.

The Project identifies where potential impacts to cultural resources may occur. Future study of impacts at the project-level would ensure policy compliance. Additionally, mitigation measures are recommended to reduce potential impacts to less than significant.

GOAL 9: The City will encourage the abundant use of natural and drought tolerant landscaping in new development and preserve natural vegetation, as much as possible, in undeveloped areas. (Coastal Act/30240/30251)

POLICY 9.1: The City will initiate and pursue the landscaping of appropriate median and parking areas with trees on all new and existing arterial streets. (Coastal Act/30251)

POLICY 9.2: All drainage courses should be maintained in natural or semi- natural vegetation utilizing existing topography as opposed to concrete ditches or pipes. (Coastal Act/30231/30240)

POLICY 9.3: Where possible, bridges should be used in lieu of pipes, box culverts, or underground channels to preserve the integrity of the natural stream courses, in keeping with community character in the Planning Area. (Coastal Act/30231/30240)

Policy 9.2 and 9.3 Response: *These policies establish guidelines for landscaping in all future development. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and landscaping issues. Future development activities would be subject, generally, to these policy directives.*

POLICY 9.4: Encourage and adopt standards for the use of drought tolerant and/ or natural landscaping and efficient irrigation systems throughout the City. (Coastal Act/30231/30240)

POLICY 9.5: Encourage and adopt standards for clean-up, landscaping, beautification, utility undergrounding, and additional landscaping in parking facilities where needed in existing commercial areas. (Coastal Act/30251/30252)

POLICY 9.6: Require landscaping in the design of new residential, commercial, and industrial areas and buildings as detailed in the City Zoning Code regulations. (Coastal Act/30251/30253)

Policy 9.6 Response: *This EA provides the basis for determining whether future development activity may have any significant effects. Details of each proposal are subject to City review at time of submittal. Future development would be subject to this policy. Future development would be subject to standards that address landscaping to ensure future development is compatible to existing community character and the design context.*

POLICY 9.7: Encourage and adopt standards for landscaping of existing commercial and industrial uses to screen and buffer unsightly and congested commercial/ industrial areas from surrounding land uses. (Coastal Act/30251)

POLICY 9.8: Brush clearing and grading for agricultural, construction and non- construction purposes shall be subject to City review. (Coastal Act/30240)

Policy 9.8 Response: *This EA provides the basis for determining whether future development activity may have any significant effects. Details of each proposal are subject to City review at time of submittal. Future development would be subject to this policy.*

POLICY 9.9: The City shall develop and implement a program to preserve natural drainage courses and their associated vegetation. (Coastal Act/30240)

GOAL 10: The City will preserve the integrity, function, productivity, and long-term viability of environmentally sensitive habitats throughout the City, including kelp- beds, ocean recreational areas, coastal water, beaches, lagoons and their up- lands, riparian areas, coastal strand areas, coastal sage scrub and coastal mixed chaparral habitats. (Coastal Act/30230/30231/30240)

POLICY 10.1: The City will minimize development impacts on coastal mixed chaparral and coastal sage scrub environmentally sensitive habitats by preserving within the inland bluff and hillside systems, all

native vegetation on natural slopes of 25% grade and over other than manufactured slopes. A deviation from this policy may be permitted only upon a finding that strict application thereof would preclude any reasonable use of the property (one dwelling unit per lot). This policy shall not apply to construction of roads of the City' s circulation element, except to the extent that adverse impacts on habitat should be minimized to the degree feasible. Encroachments for any purpose, including fire break brush clearance around structures, shall be limited as specified in Public Safety Policy 1. 2. Brush clearance, when allowed in an area of sensitive habitat or vegetation, shall be conducted by selective hand clearance. (Coastal Act/30240/30250/30251/30253)

Policy 10.1 Response: *The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. This EA provides the basis for determining whether future development activity may have any significant effects. Details of each proposal are subject to City review at time of submittal. Future development would be subject to this policy. Future development in the City would not conflict with the multi-species and multi-habitat preservation goals. Compliance with these requirements would occur.*

POLICY 10.2: To preserve and protect sensitive offshore kelp bed areas, the City will prohibit the overcultivation overpruning, and overcutting of kelp. (Coastal Act/30230)

POLICY 10.3: The City shall explore the prevention of beach sand erosion. Beaches shall be artificially nourished with excavated sand whenever suitable material becomes available through excavation or dredging, in conjunction with the development of a consistent and approved project. The City shall obtain necessary permits to be able to utilize available beach replenishment sands (as necessary, permits from the Army Corps of Engineers, California Coastal Commission, Department of Fish and Game, EPA, etc.). (Coastal Act/30232)

POLICY 10.4: The City will develop a program to acquire or preserve the entire undeveloped riparian corridor within the City that drains into the San Elijo Lagoon and Batiquitos Lagoon. Methods of financing acquisition may include, but are not limited to, use of available State and Federal grants for such purpose; the application of developer or mitigation fees specifically for open space presentation; and creations of a non- profit or joint-powers agency for lagoon and drainage sheds acquisition and management. (Coastal Act/30231/30240)

POLICY 10.5: The City will control development design on Coastal Mixed Chaparral and Coastal Sage Scrub environmentally sensitive habitats by including all parcels containing concentrations of these habitats within the Special Study Overlay designation. The following guidelines will be used to evaluate projects for approval.

- conservation of as much existing contiguous area of Coastal Mixed Chaparral or Coastal Sage Scrub as feasible while protecting the remaining areas from highly impacting uses;
- minimize fragmentation or separation of existing contiguous natural areas;
- connection of existing natural areas with each other or other open space areas adjacent to maintain local wildlife movement corridors;
- maintenance of the broadest possible configuration of natural habitat area to aid dispersal of organisms within the habitat;
- where appropriate, based on community character and design,
- clustering of residential or other uses near the edges of the natural areas rather than dispersing such uses within the natural areas;
- where significant, yet isolated habitat areas exist, development shall be designed to preserve and protect them;

- conservation of the widest variety of physical and vegetational conditions on site to maintain the highest habitat diversity;
- design of development, with adjacent uses given consideration, to maximize conformance to these guidelines; and
- preservation of rare and endangered species on site rather than by transplantation off site. (Coastal Act/ 30240/30250)

In addition, all new development shall be designed to be consistent with multi- species and multi- habitat preservation goals and requirements as established in the statewide Natural Communities Conservation Planning (NCCP) Act. Compliance with these goals and requirements shall be implemented in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game. Policy 10.5 amended 5/11/95 (Reso. 95-32)

Policy 10.5 Response: *The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. The spatial arrangement of future land uses covered by this Project is intended to focus growth inward, reduce sprawling, and accommodate permanent natural open space, wildlife preserves, natural drainage and stream courses, cultural and historic resources, and protect natural plant and animal habitats.*

This EA provides the basis for determining whether future development activity may have any significant effects. Section 4.3, Biological Resources, identifies areas in the City that have Coastal Mixed Chaparral and Coastal Sage Scrub environmentally sensitive habitats. Details of each proposal are subject to City review at time of submittal. All future development in the City shall be designed to be consistent with the multi-species and multi-habitat preservation goals. Compliance with these requirements would occur.

POLICY 10.6: The City shall preserve and protect wetlands within the City's planning area. " Wetlands" shall be defined and delineated consistent with the definitions of the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, the Coastal Act and the Coastal Commission Regulations, as applicable, and shall include, but not be limited to, all lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.

There shall be no net loss of wetland acreage or resource value as a result of land use or development, and the City' s goal is to realize a net gain in acreage and value whenever possible.

Within the Coastal Zone, the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following newly permitted uses and activities:

a. Incidental public service projects.
b. Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
c. Restoration purposes.
d. Nature study, aquaculture, or other similar resource dependent activities.

Identification of wetland acreage and resource value shall precede any consideration of use or development on sites where wetlands are present or suspected. With the exception of development for the primary purpose of the improvement of wetland resource value, all public and private use and development proposals which would intrude into, reduce the area of, or reduce the resource value of wetlands shall be subject to alternatives and mitigation analyses consistent with Federal E.P.A 404 (b) (1)

findings and procedures under the U.S. Army Corps permit process. Practicable project and site development alternatives which involve no wetland intrusion or impact shall be preferred over alternatives which involve intrusion or impact. Wetland mitigation, replacement or compensation shall not be used to offset impacts or intrusion avoidable through other practicable project or site development alternatives. When wetland intrusion or impact is unavoidable, replacement of the lost wetland shall be required through the creation of new wetland of the same type lost, at a ratio determined by regulatory agencies with authority over wetland resources, but in any case at a ratio of greater than one acre provided for each acre impacted so as to result in a net gain. Replacement of wetland on- site or adjacent, within the same wetland system, shall be given preference over replacement off- site or within a different system.

The City shall also control use and development in surrounding areas of influence to wetlands with the application of buffer zones. At a minimum, 100-foot wide buffers shall be provided upland of salt water wetlands, and 50-foot wide buffers shall be provided upland of riparian wetlands. Unless otherwise specified in this plan, use and development within buffer areas shall be limited to minor passive recreational uses with fencing, desiltation or erosion control facilities, or other improvements deemed necessary to protect the habitat, to be located in the upper (upland) half of the buffer area when feasible.

All wetlands and buffers identified and resulting from development and use approval shall be permanently conserved or protected through the application of an open space easement or other suitable device.

The City shall not approve subdivisions or boundary line adjustments which would allow increased impacts from development in wetlands or wetland buffers. (Coastal Act/30231) Policy 10.6 amended 1/30/91 and 5/11/95 (Reso. 95-32)

Policy 10.6 Response: *The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. Policy 10.6 provides policy direction on use and development restrictions around wetlands and wetland buffers. Future development activities would be subject to this policy. Compliance with these requirements would occur. The spatial arrangement of future land uses covered by this Project is intended to accommodate permanent natural open space, wildlife preserves, natural drainage and stream courses, cultural and historic resources, and protect natural plant and animal habitats. Future study of impacts at the project-level would ensure policy compliance.*

POLICY 10.7: The City will urge the State to take appropriate preservation measures relative to Coastal Strand Dune habitat in its development of State beach areas. (Coastal Act/30240)

POLICY 10.8: The City will investigate the establishment of one or more preserves for the preservation of endangered plant species, such as the Encinitas Baccharis, of sufficient size to ensure perpetuation of the species. (Coastal Act/30240)

POLICY 10.9: The City will encourage the preservation and the function of San Elijo Lagoon and Batiquitos Lagoon and their adjacent uplands as viable wetlands, ecosystems and habitat for resident and migratory wildlife, by prohibiting actions (subject to the detailed provisions of RM policy 10. 6) which:

- involve wetland fill or increased sedimentation into wetlands;
- adversely decrease stream flow into the wetlands;
- reduce tidal interchange;
- reduce internal water circulation; or
- adversely affect existing wildlife habitats. (Coastal Act/30231)

POLICY 10.10: The City will encourage and cooperate with other responsible agencies to plan and implement an integrated management plan for the long-term conservation and restoration of wetlands

resources at San Elijo Lagoon (and where it applies, Batiquitos Lagoon), Escondido and Encinitas Creeks and their significant upstream feeder creeks, according to the following guidelines:

- Plans for the west, central and eastern basins should be treated as internal parts of the whole;
- The plan should be implemented in phases so that discreet physical alterations can be performed as funds become available, and so that the effects of changes can be evaluated at each stage, and recognizing the experimental basis of wetland manipulations;
- Wildlife corridors between the wetland shoreline and important upland areas and upstream riparian areas should be maintained and enhanced;
- Adequate buffer zones should be utilized when development occurs adjacent to the floodplain and sensitive habitats; 100-foot-wide buffers should be provided adjacent to all identified wetlands, and 50-foot-wide buffers should be provided adjacent to riparian areas. In some cases, smaller buffers may be appropriate, when conditions of the site as demonstrated in a site specific biological survey, the nature of the proposed development, etc., show that a smaller buffer would provide adequate protection; and when the Department of Fish and Game has been consulted and their comments have been accorded great weight.
- Management plans should implement adopted State and Federal wildlife management plans (i.e., California Least Tern Recovery Plan, etc.);
- Human uses of the wetland and adjacent areas should be compatible with the primary use of the wetland as a natural value;
- Passive recreational activity at the lagoons should be encouraged to the extent there are no substantial adverse impacts to wildlife;
- There should be limited human access to the wetland shoreline since the immediate wetland shoreline and adjacent shallows are the most important sensitive wildlife habitat;
- Boating and other water surface activities should not be allowed in significant wildlife habitat areas, particularly in the central and east basins of the San Elijo Lagoon and parts of the west basin supporting significant waterbird populations;
- The plan should include a provision for sediment catch basins or other control devices outside the wetland area and should allow for periodic removal of recently accumulated sediment from the lagoon until a long- range sediment control plan is operational;
- Plans should attempt to optimize the habitat for species already known to use the wetlands, as well as certain "featured" species recognized as depleted, rare, or endangered (California Least Tern, Belding' s Savannah Sparrow, Snowy Plover, and other species recommended by wildlife management agencies) to the extent feasible;
- The integrity of the existing natural system (in particular, topography, hydrology, and vegetative cover) should not be disturbed, except as required to restore internal lagoon water circulation, tidal flushing, and plant habitat improvements;
- Adequate monitoring of chemical, physical and biological changes should be carried out for periodic re-evaluation of the management plan and maintenance of optimal conditions;
- Rare and significant habitats such as coastal strand (dunes), salt flats and fresh water ponds existing in and around the lagoon should not be reduced or degraded;
- High priority shall be given to actions which serve to remove impediments to internal lagoon water circulation (except where such areas are significant wildlife habitats in their own right) and improving tidal flow with the ocean;
- It shall be a long- range goal to remove the flow blockage such as that caused by existing fills for transportation facilities and by existing dikes to the extent necessary to create an adequate internal water circulation system. (Coastal Act/30231/30233)

Policies 10.8 to 10.10 Response: *The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. The Project does not change the status of this policy. Compliance with these requirements would occur.*

POLICY 10.11: In acting to maintain and, where feasible, restore the biological productivity and quality of San Elijo Lagoon, the City will limit alterations and uses to minor public facilities; restorative measures; nature study; passive, non- degrading recreational activities; and facilities necessarily adjunct aquaculture uses. No recreational boating facilities will be permitted in San Elijo Lagoon. Coastal- dependent developments (i.e., utility facilities, boating facilities, etc.) shall not be sited in the wetland area (San Elijo Lagoon and contiguous wetlands). (Coastal Act/30231)

GOAL 11: The City recognizes the important contribution of agricultural and horticultural land uses in the local economy and the emphasis of the need to maintain these activities.

POLICY 11.1: Investigate the feasibility of establishing and instituting an incentive program for preservation of land within the City suitable for agricultural production. Institute such a program if fiscally sound within the City.

POLICY 11.2: Support agricultural water rates for agricultural/ horticultural operations and explore the use of treated wastewater for agricultural operations.

POLICY 11.3: Support efforts of the floriculture industry and/ or the University of California Extension

Service in establishing a farm cooperative and/or flower auction in the City of Encinitas.

POLICY 11.4: Encourage and support the establishment of a horticultural park in the Encinitas area.

POLICY 11.5: Encourage the establishment and preservation of new agricultural preserves for areas within the coastal zone designated for agricultural land use.

POLICY 11.6: Continue to support the policy of the Metropolitan Water District and its member agencies to provide water to agricultural users at a lower rate than to domestic users, when conservation measures by such users are assured.

POLICY 11.7: Encourage the San Diego County Water Authority and the local retail water agencies to consider additional reductions in the agricultural water rate. The City will look at lowering current minimum acreage requirements for agricultural water rates.

POLICY 11.8: Preserve and promote the right to produce unique horticultural crops and community gardens in Encinitas.

POLICY 11.9: Recognize agriculture/ horticulture, with proper mitigation to preserve wetland habitats when present, as one of the highest and best uses for those areas within the planning area located in floodplains.

POLICY 11.10: Provide an economic advantage, where possible, to agriculture in competing with the forces of urbanization to minimize pressures to redevelop to urban land uses.

POLICY 11.11: Enforce regulations and ordinances with regard to maintenance and upkeep of greenhouses and other agricultural accessory buildings.

POLICY 11.12: Support air quality control measures to protect against agricultural crop damage.

POLICY 11.13: Encourage agricultural/horticultural practices which minimize adverse impacts on surrounding areas.

POLICY 11.14: Encourage the producers of agricultural/horticultural products to provide suitable housing for farm laborers.

POLICY 11.15: Encourage projects for community food and flower producing gardens.

POLICY 11. 16: Encourage projects for community garden and surplus food and flower resources marketing.

GOAL 12: The City will encourage the preservation of "prime" agriculture lands within its sphere of influence. (Coastal Act/30241)

POLICY 12.1: For the purpose of this plan and the LCP, "prime" agriculture is defined as land in the sphere of influence of the City of Encinitas Coastal Zone presently producing or with the future potential for commercial production of agricultural products and with a soil classification of Class I- IV. (Coastal Act/30241)

POLICY 12.2: No "prime" agriculture lands are located within the City of Encinitas Coastal Zone. However, the Ecke Holdings, et. al., are within the City of Encinitas' Coastal Zone sphere of influence, and may, therefore, be influenced by the City' s LCP and General Plan policies. The City recognizes this land as "prime" agriculture suitability and as such, designates it for long term preservation as Agriculture/Open Space Preserve." (Coastal Act/30241)

Policies 11.1 to 11.16 and 12.1 to 12.2 Response: *Open spaces, ecological resources, and agricultural lands are necessary parts of a community. Permanent agricultural, agricultural operations on residentially zoned lands, and natural open space areas are accommodated by existing land use policies. This helps to maintain the City's cultural heritage.*

Agricultural uses are also an important historic land use. Much of the existing operations in the City are located on sites that are zoned for residential use. In recent years, much of this land has been lost due to development and there is pressure to develop the remaining agricultural lands. Some of the lands are within the Project area. These sites consist of greenhouse operations. There is not designated "Prime" farmland within the scope of the Project. Candidate sites are within areas of land classified as "other land", according to the California Division of Land Resource Protection Farmland Mapping and Monitoring Program. This category consists of land not included in any other mapping category.

The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. It outlines the City's land use strategy for focusing future development into infill areas to capitalize on existing infrastructure. Communities with a variety of housing choices and options meet the needs of current and future residents. Building compactly minimizes the amount of land that is needed to accommodate residential uses. As a result, more land can be preserved as open space or maintain agricultural operations.

The Project does not change the status of these goals and policies. Goals 11 and 12 and the EA associated policies underscore the City's commitment towards preserving the remaining agricultural lands in the City. The City can still implement Goal 11 and encourage agricultural production; and the City can implement Goal 12 and work to preserve "prime" farmland.

GOAL 13: Create a desirable, healthful, and comfortable environment for living while preserving Encinitas, unique natural resources by encouraging land use policies that will preserve the environment. (Coastal Act/30250/30251)

POLICY 13.1: The City shall plan for types and patterns of development which minimize water pollution, air pollution, fire hazard, soil erosion, silting, slide damage, flooding and severe hillside cutting and scarring. (Coastal Act/30250)

POLICY 13.2: The City shall plan for compatible land uses within and adjacent to recreation areas, natural preserves, and agricultural areas. (Coastal Act/30240/30250)

Policies 13.1 to 13.2 Response: *These policies emphasize the need to consider the environmental consequences of future development in the City as well as ensuring that environmentally sensitive areas are protected from this development. The HEU incorporates smart growth and sustainable principals in its development plan. It outlines the City's land use strategy for focusing future development into infill areas to capitalize on existing infrastructure. It also facilitates more walkable neighborhoods with access to public transit and proximity to places where people shop and visit. The Project promotes diversity, while preserving community character. Communities with a variety of housing choices and options meet the needs of current and future residents. Building compactly minimizes the amount of land that is needed to accommodate future residential development. As a result, more land can be preserved as open space. The spatial arrangement of future land uses covered by this Project is intended to create desirable, healthful, and comfortable environments for current and future residents. Details of each proposal are subject to City review at time of submittal.*

POLICY 13. 3: Encourage the use of buffer zones to separate major thoroughfares from adjacent areas and protect them from pollutants of noise, exhaust, and light. (Coastal Act/ 30250/ 30251)

POLICY 13.4: Minimize visual pollution by establishing design review standards. Coastal Act/30251/30253 (5))

POLICY 13.5: The City shall promote and require the conservation and preservation of natural resources and features of the area in their natural state and avoid the creation of a totally urbanized landscape. Encourage the planting of trees and other vegetation, especially native species, to enhance the environment. (Coastal Act/30240/30251)

Policies 13.3 to 13.5 Response: *The HEU incorporates smart growth and sustainable principals in its development plan. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use, natural resource protection, and community character compatibility. Details of each proposal are subject to City review at time of submittal.*

These policies address buffer zones around major thoroughfares (13.3), visual design standards (13.4), and preservation/planting of trees and vegetation (13.5). Future development activities would be subject, generally, to these policy directives to ensure future development is compatible to existing community character and the design context.

POLICY 13.6: Establish and preserve wildlife corridors. (Coastal Act/30231/30240)

GOAL 14: The City shall stringently control erosion and sedimentation from land use and development to avoid environmental degradation of lagoons and other sensitive biological habitat, preserve public resources and avoid the costs of dealing with repair and sedimentation removal. (Coastal Act/30231/30240/30250/30253)

POLICY 14.1: The best strategy to reduce erosion and sedimentation is to reduce to the maximum extent feasible, grading and removal of vegetation. It is the policy of the City that, in any land use and

development, grading and vegetation removal shall be limited to the minimum necessary. (Coastal Act/30240/30250)

POLICY 14.2: The City shall develop a comprehensive program to control sedimentation and erosion. (Coastal Act/30233/30240)

POLICY 14.3: The City will reduce the rate of sedimentation of the lagoons by requiring procedures for controlling runoff and erosion associated with upland grading and development based on a minimum 10-year, six- hour storm event. The City shall provide regulations for the use of sedimentation basins and the potential transfer of sediment as beach replenishment (if of an acceptable material). (Coastal Act/30250/30251)

POLICY 14.4: Revegetation and appropriate landscaping of all areas graded and scraped of vegetative cover shall be required with land use and development. Plantings, hydroseeding, and irrigation systems used shall be selected on the bases of minimizing erosion and conserving water. (Coastal Act/30251)

POLICY 14.5: To minimize erosion and allow sedimentation control systems to work, no grading or vegetation removal shall be allowed to occur during the wet season, October 1 - April 15, without all systems and devices per an approved erosion control plan and program being in place. During other times of the year such systems shall be provided and operative as required by a comprehensive City erosion control ordinance. No grading shall occur during the rainy season within the Special Study Overlay area, or in areas upland of sensitive areas including lagoons, floodplains, riparian or wetland habitat areas, unless by site-specific determination, the grading would not be occurring on sensitive slopes, in floodplain areas or upland of floodplains, where sedimentation might occur in other sensitive habitat areas. Then, if grading is determined to be allowable, all necessary erosion control devices, including sedimentation basins, must be in place, and shall be monitored and maintained throughout the grading period. (Coastal Act/30251)

POLICY 14.6: To achieve the ends of erosion control, a comprehensive erosion control plan shall be required with final building permit and improvement plans, subject to review and approval prior to commencement of grading and construction. (Coastal Act/30251)

POLICY 14.7: Minimize extensive or premature grading or filling, and penalize illegal grading or filling.

Policies 14.1 to 14.7 Response: *There is an important relationship between land use planning and the reduction of potential hazards. Certain considerations need to be given when development is proposed in areas subject to environmental constraints that could result in sedimentation erosion, loss of life, personal injury, or property damage. Many of these impacts arise from activities related to construction, especially when there is a significant amount of grading and site preparation involved.*

This Project identifies locations in the City where future growth is expected to occur. Some of these sites are within areas already developed, which would minimize site preparation activities. This EA provides the basis for determining whether future development activity may have any significant effects. Details of each proposal are subject to City review at time of submittal. Future development would be subject to these policies and must adhere to the regulatory framework that helps implement these policies for erosion and sedimentation control.

GOAL 15: The City will make every effort to conserve energy in the City thus reducing our dependence on fossil fuels.

POLICY 15.1: The City will encourage the use of alternate energy systems, including passive solar and architectural and mechanical systems, in both commercial and residential development. (Coastal Act/30253)

POLICY 15.2: The patterns of proposed subdivisions and the orientation and design of structures on lots shall be designed with the objective of maximizing the opportunities for solar energy use and energy conservation.

POLICY 15.3: Energy conserving construction standards and requirements shall be enforced in the field inspection of new construction.

Policies 15.1 to 15.3 Response: *The Project's proposed land use pattern respects the general aim of conserving energy because the mapping strategies are designed in a compact manner. The future developments' high density, along with transit and active transportation options will help to reduce the need to utilize the automobile.*

The Project takes positive steps towards ensuring that future development is as energy efficient as possible. Future developers within Candidate sites are required to comply with the City's building code, as well as the recommended mitigation measures, and are encouraged to incorporate energy efficient techniques. This would encourage the incorporation of energy saving features, energy saving materials, and energy efficient systems and design for future residential development. Planning to maximize energy efficiency and the incorporation of energy conservation and green building features can contribute to reduced housing costs for homeowners and renters, in addition to promoting sustainable community design and reduced dependence on vehicles.

RECREATION ELEMENT

GOAL 1: The maintenance of the open space resources in the Planning Area will continue to be emphasized. (Coastal Act/30240)

POLICY 1.1: Continue to cooperate with property owners, the County of San Diego, and others to

preserve and maintain the riparian habitats within the planning area. (Coastal Act/30240)

POLICY 1.2: Consider the enactment of a "Quimby Ordinance" to insure that new residential development is provided with open space/recreational amenities. In addition, explore all other available funding resources and alternatives for acquisition and development of park and open space lands.

POLICY 1.3: Enforce local laws regarding the vandalism of park property and incorporate citizen involvement into the program through the "neighborhood watch" programs and other community efforts.

POLICY 1.4: Establish a balance of natural open space and "improved" recreational open space and implement measures to preserve, and maintain the natural environment. (Coastal Act/ 30252)

POLICY 1.5: Provide a minimum of 15 acres of local recreational area for each 1, 000 population for the entire community. This area should be devoted to neighborhood and other close- at- hand recreation facilities, community parks, and passive open space in undeveloped preserves and wilderness areas. This policy shall not be construed to reduce the minimum standards established under this Element for provision of mini, neighborhood, community, or other park land based on population or service distance.

Policies 1.4 and 1.5 Response: *The Project focuses future development into infill areas to both capitalize on existing infrastructure and to facilitate more livable neighborhoods. Locating development within existing community areas reduces sprawl and conserves open space and agricultural land. In addition, infill development takes advantage of locational amenities and existing services and infrastructure, while strengthening or revitalizing existing neighborhoods.*

POLICY 1.6: Establish mini-parks and playlots in high density areas where larger parks are inaccessible or impractical to provide, and only when the provision of neighborhood parks to serve local neighborhood park needs is not possible.

POLICY 1.7: Provide a neighborhood park within convenient, and where possible, walking distance for all urban area residents.

POLICY 1.8: Establish a system of community parks so that each community (Leucadia, Old and New Encinitas, Cardiff-by-the-Sea and Olivenhain) is within a community park service area.

POLICY 1.9: Develop parks in conjunction with. Schools wherever possible and encourage joint use of facilities. (Coastal Act/30252)

POLICY 1.10: Encourage the development of private and public recreational and meeting facilities throughout Encinitas.

POLICY 1.11: Develop an open space program that will link the various communities together with. parks, recreation/pedestrian access and natural visual corridors.

POLICY 1.12: Active parks, passive parks, and natural open space shall be provided in each of the communities to the extent possible.

POLICY 1.13: Encourage appropriate multiple use of open space wherever possible.

POLICY 1.14: The City shall attempt to acquire the Santa Fe railroad right- of- way, should it become available, for the development of recreational facilities and landscaping as well as transportation and other public needs.

POLICY 1.15: Provide the playing fields necessary to serve the community.

POLICY 1.16: The City has adopted a City-wide Recreational Trails Master Plan to establish a recreational trails system. The proposed trail system is shown on the Recreational Trails Master Plan Map (Figure 3). Future trails, in addition to those planned for in the Recreational Trails Master Plan, may be added to the existing systems to enhance the recreational opportunities of the City. Within the coastal zone, all proposed trails and trail alignments shall be consistent with the requirements of Policy 10. 5 of the Resource Management Element, and the Multiple Habitat Conservation Program (MHCP) subarea plan for the City of Encinitas, if adopted. Any proposed modifications or additions to the Recreational Trails Master Plan or Recreational Trails Master Plan map that would directly affect coastal zone resources shall require an LCP amendment.

POLICY 1.17: The City shall strive to acquire a regional park within its ultimate boundaries.

POLICY 1.18: The City shall develop a program that will establish future park sites as identified in the Implementation Plan.

POLICY 1.19: The City shall develop standards for protection of views along and down public corridors, particularly from inland areas such as the crest of Santa Fe Drive.

Policy 1.19 Response: *This EA provides the basis for determining whether future development activity may have any significant effects. Future development activities would be subject, generally, to this policy directive that ensures future development is compatible to existing community character and the design context. Future development would be subject to compliance with standards and criteria that provide future developers, City staff, and decision makers with clear guidance on land use and community character compatibility. This would allow greater opportunity to address building locations against resource corridor sensitivity.*

The HEU incorporates smart growth and sustainable principals in its development plan. Various candidate sites are located along major transportation corridors that have a Scenic Visual Corridor Overlay designation. Also, as noted in the viewshed analysis (see Section 4.1), some candidate sites are identified within critical viewshed areas. The Project's focus is making improvements and improving the physical form of some areas that are already developed (infill development or revitalization within the built context). Building more compactly minimizes the amount of land needed to accommodate future residential land uses; which would allow more land to can be allocated to passive open space or space transitions.

GOAL 2: The City will make every effort to preserve open space areas that represent a significant environmental resource in the community. (Coastal Act/30240)

POLICY 2.1: The City should identify and seek to acquire floodplain areas for appropriate public uses. (Coastal Act/30212.5/30231/30240)

POLICY 2.2: Provide and maintain an inter- linking network of trails for horseback riding, hiking, and bicycling; and minimize the cost of the trail system by encouraging the use of drainage channels, flood plains, existing trails, public lands, excess street rights- of- way, and major utility rights-of-way. (Coastal Act/30212.5/30252)

POLICY 2.3: Encourage the preservation and protection of areas for the recreational activities characteristic of Encinitas such as horseback: riding, surfing, skydiving, bicycling, walking, and jogging. (Coastal Act/30212.5/30252)

POLICY 2.4: Leave appropriate areas of neighborhood and community parks in a natural state, retaining natural topography and vegetation where preservation is feasible. (Coastal Act/30240)

POLICY 2.5: Provide for early acquisition of park sites to insure proper location, adequate size, and lower costs through development of a program that identifies future park needs and possible future sites. (Coastal Act/30212.5)

POLICY 2.6: Encourage the provision of a full range of recreational facilities distributed throughout the area. (Coastal Act/30212.5)

POLICY 2.7: Encourage the use of appropriate public lands and facilities for park and recreation purposes to the maximum extent feasible consistent with the maintenance of natural resources. (Coastal Act/30212.5)

POLICY 2.8: Encourage the maintenance of the bluffs, beach, shoreline, reefs and ocean and discourage any use that would adversely affect the beach and bluffs except a reasonable number of access public stairways, lifeguard towers, and similar public beach facilities. (Coastal Act/30211/30213)

POLICY 2.9: The City will encourage the maintenance of existing overnight camping facilities (both tent and RV) at public beaches or upland from beaches. (Coastal Act/30213)

POLICY 2.10: Expand the function of Neighborhood Watch or other programs to include surveillance of local parks.

POLICY 2.11: The City may consider accessory revenue generating activities at various parks on a case-by-case basis.

Policies 2.1 to 2.11 Response: *Open spaces, ecological resources, and agricultural lands are necessary parts of a community. Preservation of natural resources and open space helps maintain water quality and protects animal and plant habitats. Ready access to the natural environment and undeveloped land also enhances people's quality of life, which can improve health and wellbeing and lead to higher and increased economic prosperity. The Project would not adversely impact or alter recreational facilities, as concluded in Section 4.12.*

The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. It outlines the City's land use strategy for focusing future development into infill areas to capitalize on existing infrastructure. Building compactly minimizes the amount of land that is needed to accommodate future residential land uses. As a result, more land can be preserved as open space. The spatial arrangement of future land uses covered by this Project is intended to accommodate permanent natural open space, wildlife preserves, natural drainage and stream courses, cultural and historic resources, and protect natural plant and animal habitats.

All future development in the City would be subject to compliance with the multi-species and multi-habitat preservation goals. Compliance with these requirements would occur.

GOAL 3: The Coastal Areas will continue to play a dominant role in providing residents with open spaces for recreation. (Coastal Act/30220)

POLICY 3.1: The City shall continue to support the acquisition and improvement through outright purchase, private donations, establishment of tax benefits, living trusts, etc., of additional local park sites. (Coastal Act/30212.5/30221)

POLICY 3.2: The City will designate as Visitor-Serving Commercial" use areas land in the vicinity of primary coastal access routes, particularly in proximity to higher intensity beach use areas. (Coastal Act/30221/30222/30223)

Policy 3.2 Response: *The Project identifies land use changes in key areas of the City to accommodate future housing opportunities. The Project does not change the nature of a property owner's existing rights.*

NOISE ELEMENT

GOAL 1: Provide an acceptable noise environment for existing and future residents of the City of Encinitas.

POLICY 1.1: Review actions or projects that may have noise generation potential to determine what impact they may have on existing land uses. If a project would cause an increase in traffic noise levels, the policy of the City of Encinitas is to accept an increase up to an Ldn of 55 dB in outdoor residential use areas without mitigation. If a project would increase the traffic noise level by more than 5 dB and the resulting Ldn would be over 55 dB, then mitigation measures must be evaluated. If the project, or action, would increase traffic noise levels by 3 dB or more and the resulting Ldn would exceed 60 dB in outdoor use areas in residential development, noise mitigation must be similarly evaluated. The impact of non-

transportation projects must generally be evaluated on a case-by-case basis. The following guidelines will aid in evaluating the impacts of commercial and industrial projects.

a) Performance Standards Adjacent to Residential Areas. New commercial construction adjacent to residential areas should not increase noise levels in a residential area by more than 3 dB (Ldn) or create noise impacts which would increase noise levels to more than an Ldn of 60 dB at the boundary of the nearest residential area, whichever is more restrictive.

b) Performance Standards Adjacent to Commercial and Industrial Areas. New commercial projects should not increase noise levels in a commercial area by more than 5 dB (Ldn) or increase noise levels to an Ldn in excess of 70 dB (office buildings, business and professional) or an Ldn of 75 dB (industrial) at the property line of an adjacent commercial/industrial use, whichever is more restrictive.

These criteria may be waived if, as determined by a noise analysis, there are mitigating circumstances (such as higher existing noise levels) and/or no uses would be adversely affected. Where conditions are unusual or where backgrounds are unusually low and the characteristics of a new noise source are not adequately described by using the Ldn noise descriptor, additional acoustical analysis is encouraged and the conclusions of such analysis will be considered by the City.

Policy 1.1 Response: *This policy addresses how noise exposure criteria are incorporated into land use planning to reduce future conflicts between noise and land use. The policy references a change in Ldn at a 55 dB and 60 dB thresholds in outdoor use residential areas. Many residential areas have existing noise levels that exceed this 55-dB acceptable level. As concluded in Section 4.10, Noise, with mitigation, the Project would result in less than significant impacts concerning operational noise levels.*

POLICY 1.2: An Ldn of 60 dB is the maximum acceptable outdoor noise level in residential outdoor use areas. The City recognizes that there are residential areas in which existing noise levels exceed an acceptable level. The City will adopt a Noise Wall/Barrier Installation Policy for determining which areas should receive soundwalls along the major street system and to evaluate possible cost participation programs for constructing these soundwalls.

POLICY 1.3: To further improve the noise environment in the City of Encinitas, the police department will enforce the provisions in Sections 27-150 and 27-151 of the California State Motor Vehicle Code. These sections require that all vehicles be equipped with a properly maintained muffler and that exhaust systems not be modified.

POLICY 1.4: The City will limit truck traffic in residential and commercial areas to designated truck routes. Limit construction, delivery, and through truck traffic to designated routes. Distribute maps of approved truck routes to City traffic officers.

POLICY 1.5: The City will establish and maintain coordination among City, County, and State agencies involved in noise abatement and other agencies to reduce noise generated from sources outside the City's jurisdiction.

POLICY 1.6: Include noise mitigation measures in the design of new roadway projects recognizing that driveways, street openings, and other existing site conditions make noise mitigation impossible.

POLICY 1.7: Apply Title 24 of the California Administrative Code, associated with noise insulation standards, to single-family dwellings.

POLICY 1.8: Establish noise standards for all types of noise not already identified in the General Plan or governed by existing ordinances.

Policies 1.2 to 1.8 Response: *These policies address noise exposure criteria to ensure that noise does not exceed specified values to generally protect public health and welfare. The policy refers to a Ldn of a 60-dB maximum acceptable noise level in outdoor use residential areas, which conflicts in part to Policy 1.1. This policy does acknowledge that there are some residential areas where existing noise levels exceed 60 dB.*

The Project is introducing new residential growth opportunities in different areas of the City. Many of the sites identified are located along major roads served by transit and/or in commercial corridors where more intensive land use activities are expected to occur. For that reason, future noise levels in these more urban environments are expected to be higher. Although the City would still require the analysis of proposed discretionary projects which may generate excessive noise or which may be impacted by existing excessive noise levels. As concluded in Section 4.10, with mitigation, the Project would result in less than significant impacts concerning noise levels.

GOAL 2: Require that new development be designed to provide acceptable indoor and outdoor noise environments.

POLICY 2.1: Figure 2, the Noise and Land Use Compatibility Guidelines, and the accompanying discussion set forth the criteria for siting new development in the City of Encinitas. Any project which would be located in a normally unacceptable noise exposure area, based on the Land Use Compatibility Guidelines, shall require an acoustical analysis. Noise mitigation in the future shall be incorporated in the project as needed. As a condition of approval of a project, the City may require post-construction noise monitoring and sign off by an acoustician to ensure that City requirements have been met.

GOAL 3: Ensure that residents are protected from harmful and irritating noise sources to the greatest extent possible.

POLICY 3.1: The City will adopt and enforce a quantitative noise ordinance to resolve neighborhood conflicts and to control unnecessary noise in the City of Encinitas. Examples of the types of noise sources that can be controlled through the use of a quantitative noise ordinance are barking dogs, noisy mechanical equipment such as swimming pool and hot tub pumps, amplified music in commercial establishments, etc.

Policies 2.1 and 3.1 Response: *As discussed in Section 4.10, the City would require the analysis of proposed discretionary projects which may generate excessive noise or which may be impacted by existing excessive noise levels. Implementation of the recommended mitigation measures would promote compatibility between land uses and minimize exposure from obtrusive noise impacts.*

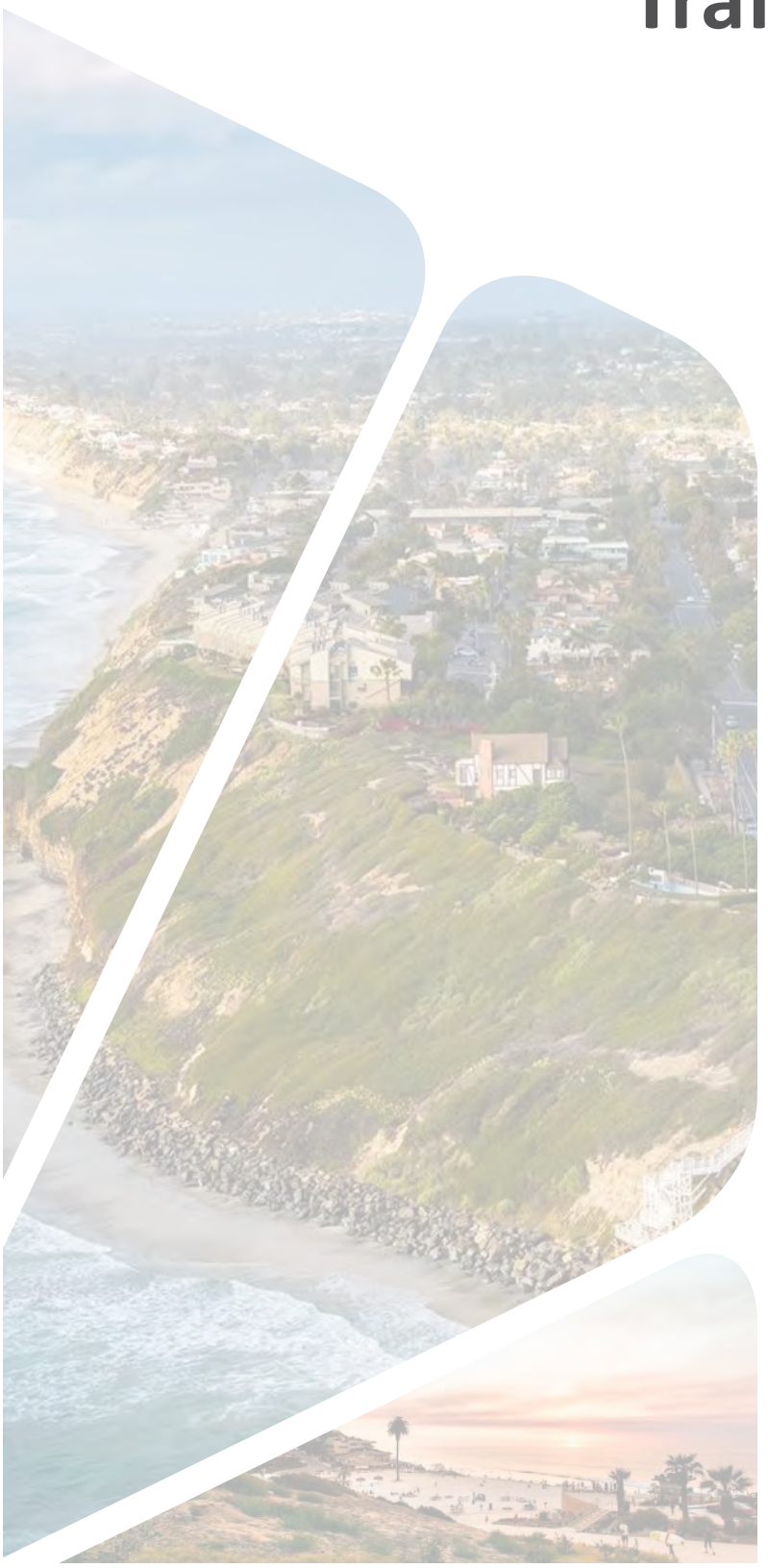
GOAL 4: Provide for measures to reduce noise impacts from stationary noise sources.

POLICY 4.1: Ensure inclusion of noise mitigation measures in the design and operation of new and existing development.

Policy 4.1 Response: *As discussed in Section 4.10, acceptable noise standards would be considered in the planning and construction of future development. The City would require the analysis of proposed discretionary projects which may generate excessive noise or which may be impacted by existing excessive noise levels. Implementation of the recommended mitigation measures would promote compatibility between land uses and minimize exposure from obtrusive noise impacts.*

Appendix G

Traffic Impact Study



Traffic Impact Study

for:

2014 – 2021 Housing Element Update

Prepared for:

The City of Encinitas

May, 2018

Kimley»Horn

TRAFFIC IMPACT STUDY
FOR THE
2014 - 2021 HOUSING ELEMENT UPDATE

Prepared for:

The City of Encinitas

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May 2018

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TRAFFIC IMPACT STUDY
FOR THE CITY OF ENCINITAS
2014 - 2021 HOUSING ELEMENT UPDATE

INTRODUCTION

The purpose of this report is to address the traffic-related impacts associated with the 2014 - 2021 Housing Element Update in the City of Encinitas. This report supplements the *City of Encinitas Housing Element Traffic Impact Study* (Chen Ryan, April 2016) prepared for the City of Encinitas Housing Element Program Environmental Impact Report (2016 PEIR).

The 2014 - 2021 Housing Element Update project consists of 17 candidate housing sites (candidate sites) throughout the City of Encinitas, and would result in the addition of 2,494 Low-Income housing units. The location of each of the candidate sites is depicted on Figure 1.

This traffic study includes evaluation of Future Year 2035 conditions without and with the Project, and identification of project-related impacts and mitigation. The traffic impact analysis will include analysis of the project-related traffic impacts at 53 study intersections and 130 roadway segments.

STUDY METHODOLOGY AND SIGNIFICANCE CRITERIA

A description of the analysis methodologies, Level of Service standards, and impact significance criteria applied in this traffic impact analysis is provided below.

Traffic Impact Analysis Scenarios

The traffic impact analysis has been conducted to evaluate morning and evening peak hour conditions at the study intersections and daily operating conditions on the study roadway segments for the following scenarios:

- Existing Conditions
- Future Year 2035 without Project Conditions
- Future Year 2035 with Project Conditions

Study Area

The study area consists of 53 arterial intersections and 130 roadway segments in the City of Encinitas and neighboring jurisdictions. Of the 53 study intersections, 9 are located in the City of Carlsbad. Study area roadway segments include all roadway segments within the adopted City of Encinitas Circulation Element. The study area was extended just beyond the City boundaries into the Cities of Carlsbad, Solana Beach, and unincorporated San Diego County, to account for the potential impacts outside the City boundaries.

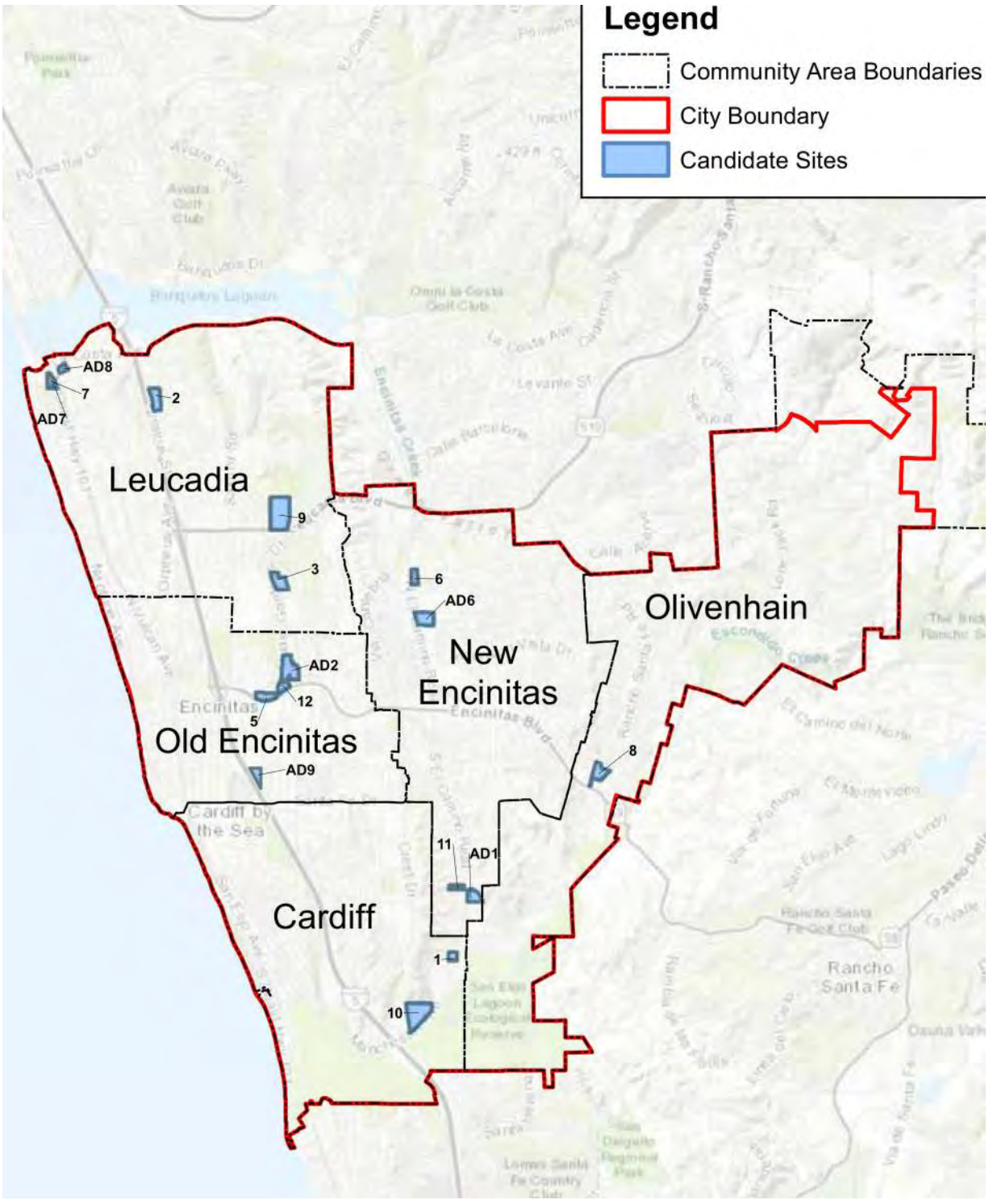


FIGURE 1
LOCATION OF
CANDIDATE HOUSING SITES

Intersection Analysis Methodology

Peak hour operating conditions at the study intersections were evaluated using the Highway Capacity Manual (HCM) delay methodology. The HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, depending on a number of factors, including the number of through and turn lanes, volume of traffic, and signal cycle length and timing at signalized intersections. The delay forecast translates to a Level of Service designation, ranging from LOS "A" to LOS "F". A summary description of each Level of Service for the HCM intersection methodology for signalized and unsignalized intersections, and the corresponding delay, expressed in seconds per vehicle, is provided on the following chart.

Intersection Level of Service Definitions			
Level of Service	Average Delay (sec/veh)		Description
	Signalized	Unsignalized	
A	≤ 10.0	≤ 10.0	Primarily free-flow operation. Vehicles are unimpeded in their ability to maneuver within the traffic stream. Controlled delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	10.1 – 20.0	10.1 – 15.0	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
C	20.1 – 35.0	15.1 – 25.0	Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	35.1 – 55.0	25.1 – 35.0	Less stable condition in which small increase in flow may cause substantial increases in delay and decreases in travel speed. The operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.
E	55.1 - 80.0	35.1 - 50.0	Unstable operation and significant delay. Such operations may be due to some combination of adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.
F	> 80.0	> 50.0	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subjection direction of travel if the through movement at one or more boundary intersections have a volume-to-capacity ratio greater than 1.0

Source: Highway Capacity Manual 2010

The HCM 2010 methodology sets 1,900 passenger cars per hour per lane (pcphpl) as the ideal saturation flow rate at signalized intersections based upon the minimum headway that can be sustained between departing vehicles at a signalized intersection. The ideal saturation flow rate is then adjusted to reflect actual conditions at each study location, to account for lane widths, on-street parking, bus stops, pedestrian volume, traffic composition (including percentage of heavy vehicles), and shared lane movements.

Unsignalized intersections, including side-street stop-controlled (SSSC) and all-way stop-controlled (AWSC) intersections, were analyzed using the HCM 2010 delay methodologies, Chapters 19 and 20, respectively. The Level of Service for a side-street stop-controlled intersection is determined by the computed or measured control delay at each minor-street movement.

Roadway Segment Analysis

Roadway segment Level of Service is determined by the average daily traffic traveling along that roadway segment; and the daily roadway capacity, which is based on the functional classification of the roadway, number of travel lanes, and roadway geometrics. Roadway segments are evaluated by comparing the daily traffic volume to the daily capacity of that segment, to determine the volume-to-capacity (v/c) ratio. Daily capacity is based on the roadway classification, as shown in the following chart.

CITY OF ENCINITAS
DAILY ROADWAY CAPACITY AND LEVEL OF SERVICE THRESHOLDS

Facility Type	Lane Configuration	ADT Capacity		
		LOS **C**	LOS **D**	LOS **E**
Prime Arterial	6 Lanes – Divided	46,000	51,200	57,000
Prime Arterial – Augmented [1]	6+ Lanes - Divided	53,000	60,000	66,000
Major Roadway	4 Lanes - Divided	28,200	31,600	35,200
Major Roadway – Augmented [1]	4+ Lanes - Divided	36,300	41,000	45,400
Collector Roadway	4 lanes - Undivided	26,000	29,200	32,400
Local Roadway	2 Lanes	11,200	12,600	14,000
Local Roadway – Augmented [1]	2+ Lanes	16,000	18,000	20,000

[1] The intent of the Augmented designation is to provide a means of increasing the capacity of a given type of arterial by maximizing the utilization of the base lane configuration. Such augmentation can range from simply adding lanes at intersections to adding or expanding a median and/or other midblock measures to improve traffic flow and reduce side friction.

Source: City of Encinitas *General Plan Circulation Element*

Level of Service Standard and Performance Criteria

The City of Encinitas Circulation Element of the General Plan has established that the Level of Service standard for intersection and roadway operation in the City is LOS D.

The project impact was determined by comparing Future Year 2035 Adopted General Plan Conditions (No Project) to the Future Year 2035 with the 2014 - 2021 Housing Element Update Project Conditions (Future Year 2035 With Project). The applicable thresholds of significance for each of the jurisdictions in the study area are summarized below.

Cities of Encinitas, Carlsbad, and Solana Beach

The Cities of Encinitas, Carlsbad, and Solana Beach follow the traffic study requirements identified in the SANTEC/ITE Guidelines, which are summarized in the following chart:

Measure of Significant Project Traffic Impacts						
Level of Service with Project	Allowable Change Due to Project Impact					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E or F (or ramp meter delays above 15 min.)	0.01	1	0.02	1	2	2

Source: SANTEC/ITE Guidelines for Traffic Impact Studies (TIS) in the San Diego Region

In addition, a project impact would be considered significant per SANTEC/ITE Guidelines if it caused a roadway segment, freeway segment, intersection, or freeway ramp Level of Service to worsen from an acceptable to unacceptable Level of Service.

County of San Diego Mobility Element Roads

The County of San Diego applies the following significance criteria for Mobility Element Roadways:

Measure of Significant Project Impacts to Congestion on Road Segments: Allowable Increases on Congested Road Segments			
Level of Service	Two-Lane Road	Four-Lane Road	Six-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

EXISTING CONDITIONS

The existing area circulation network and transit service within the study area was described in Section 3.1 of the 2016 Traffic Impact Study (2016 PEIR TIS), which is Appendix N of the 2016 PEIR. Existing traffic operating conditions for study area roadways, intersections, freeway mainline, and freeway ramp intersections were discussed in Sections 3.2 – 3.5, respectively. The location of the study intersections and roadway segments are shown on Figure 2-1, and existing intersection lane configurations and traffic control are shown on Figure 3-3 of the 2016 PEIR TIS.

PROJECT TRAFFIC

The 2014 - 2021 Housing Element Update project consists of the development of 2,494 Low-Income housing units, distributed throughout the City in 17 candidate sites.

Some of the sites are currently developed with existing, occupied and operating uses. For a conservative approach, existing traffic associated with the existing uses was not deducted from the project trip generation potential. Trip generation for the 2014 - 2021 Housing Element Update development, therefore, represents the net new trip-making potential, over and above traffic currently being generated by existing uses.

Table 1 presents the daily trip generation for the Future Year 2035 Adopted General Plan (No Project) and With Project Conditions, and the net ADT change compared to the No Project scenario.

Table **1** – 2014 – 2021 Housing Element Update Trip Generation Summary

Table **1**
2014 – 2021 Housing Element Update
Trip Generation Summary

Scenario	Daily Trip Generation	ADT Change from No Project
Adopted General Plan (No Project)	696,144	-
2014 - 2021 Housing Element Update	711,109	14,965

FUTURE YEAR 2035 TRAFFIC CONDITIONS

Analysis of projected traffic conditions at build-out of the study area was conducted to determine if the transportation system can accommodate the future traffic demands in the study area, including the traffic associated with the Housing Element Update development potential. If intersection or roadway segment deficiencies are projected to occur as a result of build-out of the housing land uses, then improvements needed to accommodate future traffic volumes will be identified.

Future Year 2035 Without Project Conditions

Future Year 2035 Without Project (Adopted General Plan) conditions represent build-out of the adopted General Plan without the Housing Element Update development. Forecast traffic data for this scenario was obtained from the 2016 PEIR TIS, which indicates that the City of Encinitas General Plan Update SANDAG Series 12 Year 2035 Sub-Area model was used as a base to develop the Year 2035 No Project forecasts.

Roadway Segment Analysis

The results of the Future Year 2035 Without Project roadway segment analysis are summarized on Table 2. Review of this table shows that the following 28 roadway segments are forecasted to operate at an unacceptable Level of Service E or F, with 22 segments located in the City of Encinitas, five in the City of Carlsbad, and one in the County of San Diego:

<u>City of Encinitas (22 segments)</u>

- South Coast Highway 101: Swami's Parking to San Elijo State Beach – LOS F
- Via Cantebria: Town Center Drive to Garden View Road – LOS F
- Rancho Santa Fe Road: 9th Street to 8th Street – LOS E
- Rancho Santa Fe Road: 8th Street to 7th Street – LOS E
- Manchester Avenue: I-5 NB Ramps to I-5 SB Ramps – LOS F
- La Costa Avenue: N. Coast Highway 101 to Vulcan Avenue – LOS F
- La Costa Avenue: Vulcan Avenue to Sheridan Road – LOS F
- La Costa Avenue: Sheridan Road to I-5 SB Ramps – LOS F
- Leucadia Boulevard: Hymettus Avenue to Orpheus Avenue – LOS E
- Leucadia Boulevard: Piraeus Street to Urania Avenue – LOS E
- Leucadia Boulevard: Urania Avenue to Saxony Road – LOS E
- Leucadia Boulevard: Saxony Road to Sidonia Street – LOS E
- Leucadia Boulevard: Sidonia Street to Quail Gardens Drive – LOS E
- Leucadia Boulevard: Quail Gardens Drive to Garden View Road – LOS F
- Encinitas Boulevard: I-5 SB Ramps to I-5 NB Ramps – LOS F
- Encinitas Boulevard: I-5 NB Ramps to Saxony Road – LOS F
- Encinitas Boulevard: Quail Gardens Drive to Delphinium Street – LOS F
- Encinitas Boulevard: Delphinium Street to Balour Drive – LOS F

- Encinitas Boulevard: Balour Drive to Via Cantebria – LOS F
- S. Rancho Santa Fe Road: Manchester Avenue to City Limits – LOS E
- Santa Fe Drive: Balour Drive to Lake Drive – LOS E; and
- Birmingham Drive: I-5 SB Ramps to I-5 NB Ramps – LOS F

City of Carlsbad (5 segments)

- El Camino Real: Aviara Parkway to La Costa Avenue – LOS F
- La Costa Avenue: I-5 NB Ramps to Piraeus Street – LOS E
- La Costa Avenue: Piraeus Street to Saxony Road – LOS E
- La Costa Avenue: Saxony Road to El Camino Real – LOS F; and
- La Costa Avenue: Fairway Lane to Calle Madero – LOS E

County of San Diego (1 segment)

- S. Rancho Santa Fe Road: City of Encinitas Limits to El Mirlo – LOS F

Intersection Analysis

Future Year 2035 Without Project peak hour intersection volumes were obtained from the 2016 PEIR TIS. The results of the Future Year 2035 Without Project intersection analysis are summarized on Table 3. Review of this table shows that the following 14 intersections are forecasted to operate at an unacceptable Level of Service E or F, with 13 of the intersections located in the City of Encinitas, and one in the City of Carlsbad:

City of Encinitas (13 intersections)

- Int. # 6 – Vulcan Avenue at La Costa Avenue – AM LOS E, PM LOS E
- Int. # 17 – Saxony Road at Leucadia Boulevard – AM LOS E, PM LOS E
- Int. # 21 – El Camino Real at Leucadia Boulevard – PM LOS E
- Int. # 25 – Rancho Santa Fe Road at Lone Jack Road – AM LOS E, PM LOS E
- Int. # 27 – Rancho Santa Fe Road at El Camino del Norte – PM LOS E
- Int. # 36 – El Camino Real at Encinitas Boulevard – PM LOS E
- Int. # 39 – Rancho Santa Fe Road at Encinitas Boulevard – AM LOS E
- Int. # 40 – San Elijo Avenue at Santa Fe Drive – AM LOS E
- Int. # 45 – Balour Drive at Santa Fe Drive – AM LOS F, PM LOS F
- Int. # 49 – I-5 SB Ramps at Birmingham Drive – AM LOS E, PM LOS E
- Int. # 50 – I-5 NB Ramps at Birmingham Drive – AM LOS E, PM LOS E
- Int. # 51 – I-5 SB Ramps at Manchester Avenue – AM LOS F, PM LOS E
- Int. # 52 – I-5 NB Ramps at Manchester Avenue – AM LOS E

City of Carlsbad (1 intersection)

- Int. # 11 – El Camino Real at La Costa Avenue – PM LOS E

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Carlsbad Blvd	Poinsettia Lane to Avenida Encinas	4-Lane Major Arterial	25,300	40,000	0.633	C	Carlsbad
	Avenida Encinas to La Costa Avenue	4-Lane Major Arterial	24,700	40,000	0.618	C	Carlsbad
North Coast Highway 101	La Costa Avenue to 600 feet south of La Costa Avenue	4-Lane Major Roadway	19,900	35,200	0.565	C or better	Encinitas
	600 feet south of La Costa Avenue to Leucadia Blvd	4-Lane Major Roadway	18,100	26,400	0.686	C or better	Encinitas
	Leucadia Blvd to Cadmus Street	4-Lane Major Roadway	19,900	35,200	0.565	C or better	Encinitas
	Cadmus Street to Marcheta Street	4-Lane Major Roadway	19,900	35,200	0.565	C or better	Encinitas
	Marcheta Street to 660 feet south of Marcheta Street	4-Lane Major Roadway	19,900	35,200	0.565	C or better	Encinitas
	660 feet south of Marcheta Street to Encinitas Blvd	4-Lane Major Roadway	19,900	35,200	0.565	C or better	Encinitas
	Encinitas Blvd to D Street	4-Lane Major Roadway	19,400	35,200	0.551	C or better	Encinitas
	D Street to E Street	4-Lane Major Roadway	19,400	35,200	0.551	C or better	Encinitas
	E Street to F Street	4-Lane Major Roadway	19,400	35,200	0.551	C or better	Encinitas
	F Street to H Street	4-Lane Major Roadway	19,400	35,200	0.551	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
South Coast Highway 101	H Street to J Street	4-Lane Major Roadway	21,100	35,200	0.599	C or better	Encinitas
	J Street to Swami's Parking	3-Lane Major Roadway	21,100	26,400	0.799	C or better	Encinitas
	Swami's Parking to San Elijo State Beach	2-Lane Local Roadway	21,300	14,000	1.521	F	Encinitas
	San Elijo State Beach to Chesterfield	4-Lane Major Roadway	21,300	35,200	0.605	C or better	Encinitas
	Chesterfield to Cardiff State Beach traffic signal	4-Lane Major Roadway	23,200	35,200	0.659	C or better	Encinitas
	Cardiff Beach State to Chart House traffic signal	4-Lane Major Roadway	23,200	35,200	0.659	C or better	Encinitas
	Chart House traffic signal to Las Olas Mexican Restaurant traffic signal	4-Lane Major Roadway	23,200	35,200	0.659	C or better	Encinitas
	Las Olas Mexican Restaurant to City of Solana Beach boundary	4-Lane Major Roadway	23,200	35,200	0.659	C or better	Encinitas
North Highway 101	City of Solana Beach boundary to West Cliff Street	4-Lane Major Arterial	22,500	40,000	0.563	C	Solana Beach
	West Cliff to Lomas Santa Fe	4-Lane Major Arterial	25,000	40,000	0.625	C	Solana Beach
	Lomas Santa Fe Drive to Via De La Valle	4-Lane Major Arterial	23,600	40,000	0.590	C	Solana Beach
	La Costa Avenue to Leucadia Boulevard	2-Lane Local Roadway	7,000	14,000	0.500	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Vulcan Avenue	Leucadia Blvd to Encinitas Boulevard	2-Lane Local Roadway	7,500	14,000	0.536	C or better	Encinitas
	Encinitas Boulevard to D Street	4-Lane Collector	12,900	32,400	0.398	C or better	Encinitas
	D Street to E Street	4-Lane Collector	12,900	32,400	0.398	C or better	Encinitas
	E Street to Santa Fe Drive	2-Lane Local Roadway - Augmented	13,100	20,000	0.655	C or better	Encinitas
San Elijo Avenue	Santa Fe Drive to Birmingham Drive	2-Lane Local Roadway	10,100	14,000	0.721	C or better	Encinitas
	Birmingham Drive to Chesterfield Drive	2-Lane Local Roadway - Augmented	12,500	20,000	0.625	C or better	Encinitas
	Chesterfield Drive to Manchester Avenue	2-Lane Local Roadway - Augmented	9,500	20,000	0.475	C or better	Encinitas
Saxony Road	La Costa Avenue to Quail Gardens Drive	2-Lane Local Roadway	4,600	14,000	0.329	C or better	Encinitas
	Quail Hollow Drive to Normandy Road	2-Lane Local Roadway	3,400	14,000	0.243	C or better	Encinitas
	Normandy Road to Brittany Avenue	2-Lane Local Roadway	3,900	14,000	0.279	C or better	Encinitas
	Brittany Avenue to Leucadia Blvd	2-Lane Local Roadway	3,500	14,000	0.250	C or better	Encinitas
	Leucadia Blvd to Silver Berry Place	2-Lane Local Roadway	11,800	14,000	0.843	D	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
	Silver Berry Place to Encinitas Blvd	2-Lane Local Roadway - Augmented	13,800	20,000	0.690	C or better	Encinitas
Quail Hollow Drive	Swallow Tail Road to Saxony Road	2-Lane Local Roadway	5,000	14,000	0.357	C or better	Encinitas
Quail Gardens Drive	Swallow Tail Road to Lauren Court	2-Lane Local Roadway - Augmented	4,900	20,000	0.245	C or better	Encinitas
	Lauren Court to Leucadia Boulevard	2-Lane Local Roadway - Augmented	5,300	20,000	0.265	C or better	Encinitas
	Leucadia Boulevard to Paseo De Las Flores	2-Lane Local Roadway - Augmented	9,100	20,000	0.455	C or better	Encinitas
	Paseo De Las Flores to Paseo De Las Verdes	2-Lane Local Roadway - Augmented	8,900	20,000	0.445	C or better	Encinitas
	Paseo De Las Verdes to Encinitas Boulevard	2-Lane Local Roadway - Augmented	8,200	20,000	0.410	C or better	Encinitas
Westlake Street	Encinitas Boulevard to Requeza Street	2-Lane Local Roadway - Augmented	11,800	20,000	0.590	C or better	Encinitas
Nardo Drive	Requeza Street to Melba Road	2-Lane Local Roadway	5,100	14,000	0.364	C or better	Encinitas
	Melba Road Santa Fe Drive	2-Lane Local Roadway	5,100	14,000	0.364	C or better	Encinitas
MacKinnon Avenue	Santa Fe Drive to Villa Cardiff Drive	2-Lane Local Roadway	6,200	14,000	0.443	C or better	Encinitas
Villa Cardiff	MacKinnon Avenue to Windsor Road	2-Lane Local Roadway	6,500	14,000	0.464	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Drive	Windsor Road to Birmingham Drive	2-Lane Local Roadway	5,700	14,000	0.407	C or better	Encinitas
Garden View Road	Leucadia Boulevard to Via Cantebria	4-Lane Major Roadway	11,500	35,200	0.327	C or better	Encinitas
	Via Cantebria to El Camino Real	4-Lane Major Roadway	12,900	35,200	0.366	C or better	Encinitas
Town Center Place	Leucadia Boulevard to Town Center Place	4-Lane Collector (Not a CE)	20,000	32,400	0.617	C or better	Encinitas
	Town Center Place to Town Center Drive	4-Lane Collector (Not a CE)	17,800	32,400	0.549	C or better	Encinitas
Via Cantebria	Town Center Drive to Garden View Road	2-Lane Local Roadway (Not a CE)	15,800	14,000	1.129	F	Encinitas
	Garden View Road to Forrest Bluff	3-Lane Collector	14,900	24,300	0.613	C or better	Encinitas
	Forrest Bluff to Via Montoro	4-Lane Collector	15,200	32,400	0.469	C or better	Encinitas
	Via Montoro to Via Molena	4-Lane Collector	17,900	32,400	0.552	C or better	Encinitas
	Via Molena to Encinitas Boulevard	4-Lane Collector	17,500	32,400	0.540	C or better	Encinitas
Balour Drive	Encinitas Blvd to Melba Road	2-Lane Local Roadway	11,200	14,000	0.800	C or better	Encinitas
	Melba Road to Santa Fe Drive	2-Lane Local Roadway	10,700	14,000	0.764	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Lake Drive	Santa Fe Drive to Woodlake Drive	2-Lane Local Roadway	6,600	14,000	0.471	C or better	Encinitas
	Woodlake Drive to Birmingham Drive	2-Lane Local Roadway	6,600	14,000	0.471	C or better	Encinitas
El Camino Real	Aviara Parkway to La Costa Avenue	5-Lane Prime Arterial	54,300	50,000	1.086	F	Carlsbad
	La Costa Avenue to Calle Barcelona	6-Lane Prime Arterial	38,400	60,000	0.640	C	Carlsbad
	Calle Barcelona to City of Carlsbad boundary	6-Lane Prime Arterial	36,500	60,000	0.608	C	Carlsbad
	City of Carlsbad boundary to Leucadia Boulevard	6-Lane Prime Arterial - Augmented	46,700	66,000	0.708	C or better	Encinitas
	Leucadia Boulevard to Town Center Drive	6-Lane Prime Arterial - Augmented	58,600	66,000	0.888	D	Encinitas
	Town Center Drive to Garden View Road	6-Lane Prime Arterial - Augmented	54,200	66,000	0.821	D	Encinitas
	Garden View Road to 331-339 El Camino Real	6-Lane Prime Arterial - Augmented	42,900	66,000	0.650	C or better	Encinitas
	331-339 El Camino Real to Via Montoro	6-Lane Prime Arterial - Augmented	48,900	66,000	0.741	C or better	Encinitas
	Via Montoro to Mountain Vista	6-Lane Prime Arterial - Augmented	44,300	66,000	0.671	C or better	Encinitas
	Mountain Vista to Via Molena	6-Lane Prime Arterial - Augmented	47,000	66,000	0.712	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
	Via Molena to Encinitas Boulevard	6-Lane Prime Arterial - Augmented	56,900	66,000	0.862	D	Encinitas
	Encinitas Boulevard to 213 S El Camino Real	6-Lane Prime Arterial	39,400	57,000	0.691	C or better	Encinitas
	213 S El Camino to Crest Drive	6-Lane Prime Arterial	33,800	57,000	0.593	C or better	Encinitas
	Crest Drive to Willowspring Drive	6-Lane Prime Arterial	36,200	57,000	0.635	C or better	Encinitas
	Willowspring Drive to Santa Fe Drive	4-Lane Major Roadway - Augmented	37,500	45,400	0.826	D	Encinitas
	Santa Fe Drive to Sage Canyon Drive	4-Lane Major Roadway - Augmented	28,400	45,400	0.626	C or better	Encinitas
	Sage Canyon Drive to Manchester Avenue	4-Lane Major Roadway	27,700	35,200	0.787	C or better	Encinitas
Village Park Way	Mountain Vista Drive to Parkdale Drive	4-Lane Major Roadway	10,900	35,200	0.310	C or better	Encinitas
	Parkdale Drive to Encinitas Boulevard	4-Lane Major Roadway	14,200	35,200	0.403	C or better	Encinitas
	Olivenhain Road to Calle Acervo	4-Lane Major Arterial	17,400	40,000	0.435	C or better	Encinitas
	Calle Acervo/Avenida La Posta to Olive Crest Drive	2-Lane Local Roadway - Augmented	15,900	20,000	0.795	C or better	Encinitas
	Olive Crest Drive to 13th Street	2-Lane Local Roadway - Augmented	15,800	20,000	0.790	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Rancho Santa Fe Road	13th Street to 11th Street	2-Lane Local Roadway - Augmented	15,700	20,000	0.785	C or better	Encinitas
	11th Street to El Camino Del Norte	2-Lane Local Roadway - Augmented	15,800	20,000	0.790	C or better	Encinitas
	El Camino Del Norte to 9th Street	2-Lane Local Roadway - Augmented	13,300	20,000	0.665	C or better	Encinitas
	9th Street to 8th Street	2-Lane Local Roadway	13,500	14,000	0.964	E	Encinitas
	8th Street to 7th Street	2-Lane Local Roadway	13,900	14,000	0.993	E	Encinitas
	7th Street to Encinitas Boulevard	2-Lane Local Roadway - Augmented	15,200	20,000	0.760	C or better	Encinitas
Manchester Avenue	Encinitas Boulevard to El Camino Real	2-Lane Local Roadway - Augmented	12,300	20,000	0.615	C or better	Encinitas
	Manchester Avenue to Mira Costa College	4-Lane Major Roadway - Augmented	35,400	45,400	0.780	C or better	Encinitas
	Mira Costa College to I-5 NB On-Ramp	4-Lane Major Roadway - Augmented	35,700	45,400	0.786	C or better	Encinitas
	I-5 NB Ramps to I-5 SB Ramps	2-Lane Major Roadway - Augmented	40,200	20,000	2.010	F	Encinitas
	I-5 SB Ramps to Ocean Cove Drive	2-Lane Major Roadway - Augmented	11,900	20,000	0.595	C or better	Encinitas
	Ocean Cove Drive to Seaside Cardiff-by-the-sea residential area driveway	2-Lane Local Roadway	11,900	14,000	0.850	D	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
	Seaside Cardiff-by-the-sea residential area driveway to San Elijo Water Reclamation Facility Driveway	2-Lane Local Roadway - Augmented	11,900	20,000	0.595	C or better	Encinitas
	San Elijo Water Reclamation Facility Driveway to Manchester Avenue	2-Lane Local Roadway	11,800	14,000	0.843	D	Encinitas
La Costa Avenue	North Coast Highway 101 to Vulcan Avenue	2-Lane Local Roadway	16,400	14,000	1.171	F	Encinitas
	Vulcan Avenue to Sheridan Road	2-Lane Local Roadway	16,300	14,000	1.164	F	Encinitas
	Sheridan Road to I-5 SB Ramps	2-Lane Local Roadway - Augmented	22,000	20,000	1.100	F	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	4-Lane Major Arterial	29,300	40,000	0.733	C	Carlsbad
	I-5 NB Ramps to Piraeus Street	5-Lane Major Arterial	39,500	41,667	0.948	E	Carlsbad
	Piraeus Street to Saxony Road	4-Lane Major Arterial	39,600	40,000	0.990	E	Carlsbad
	Saxony Road to El Camino Real	4-Lane Major Arterial	42,000	40,000	1.050	F	Carlsbad
	El Camino Real to La Costa Towne Center traffic signal	4-Lane Major Arterial	20,700	40,000	0.518	B	Carlsbad
	La Costa Towne Center traffic signal to Fairway Lane	4-Lane Major Arterial	20,900	40,000	0.523	B	Carlsbad
	Fairway Lane to Calle Madero	3-Lane Collector	20,700	22,500	0.920	E	Carlsbad

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Leucadia Blvd	North Coast Highway 101 to Vulcan Avenue	4-Lane Collector	14,300	32,400	0.441	C or better	Encinitas
	Vulcan Avenue to Hermes Avenue	2-Lane Local Roadway - Augmented	16,300	20,000	0.815	D	Encinitas
	Hermes Avenue to Hygeia Avenue	2-Lane Local Roadway - Augmented	15,700	20,000	0.785	C or better	Encinitas
	Hygeia Avenue to Hymettus Avenue	2-Lane Local Roadway - Augmented	17,400	20,000	0.870	D	Encinitas
	Hymettus Avenue to Orpheus Avenue	2-Lane Local Roadway - Augmented	19,200	20,000	0.960	E	Encinitas
	Orpheus Avenue to I-5 SB Ramps	4-Lane Major Roadway	17,700	35,200	0.503	C or better	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	4-Lane Major Roadway	28,600	35,200	0.813	D	Encinitas
	Piraeus Street to Urania Avenue	4-Lane Major Roadway - Augmented	44,100	45,400	0.971	E	Encinitas
	Urania Avenue to Saxony Road	4-Lane Major Roadway - Augmented	44,100	45,400	0.971	E	Encinitas
	Saxony Road to Sidonia Street	4-Lane Major Roadway - Augmented	42,400	45,400	0.934	E	Encinitas
	Sidonia Street to Quail Gardens Drive	4-Lane Major Roadway - Augmented	42,400	45,400	0.934	E	Encinitas
	Quail Gardens Drive to Garden View Road	4-Lane Major Roadway - Augmented	47,100	45,400	1.037	F	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
	Garden View Road to Town Center Place	4-Lane Major Roadway - Augmented	34,700	45,400	0.764	C or better	Encinitas
	Town Center Place to El Camino Real	6-Lane Prime Arterial	39,000	57,000	0.684	C or better	Encinitas
Mountain Vista Drive	El Camino Real to Wandering Road	2-Lane Local Roadway - Augmented	15,000	20,000	0.750	C or better	Encinitas
	Wandering Road to Village Park Way	2-Lane Local Roadway - Augmented	9,300	20,000	0.465	C or better	Encinitas
Lone Jack Drive	Rancho Santa Fe Road to northern terminus	2-Lane Local Roadway	8,400	14,000	0.600	C or better	Encinitas
El Camino Del Norte	Rancho Santa Fe Road to San Dieguito CPA boundary	2-Lane Local Roadway	7,900	14,000	0.564	C or better	Encinitas
	San Dieguito CPA boundary to Via De Fortuna	Lane Light Collector with Reduced Should	7,800	9,700	0.804	D	San Diego
	North Coast Highway 101 to Vulcan Avenue	4-Lane Collector	22,300	32,400	0.688	C or better	Encinitas
	Vulcan Avenue to I-5 SB Ramps	4-Lane Major Roadway - Augmented	34,100	45,400	0.751	C or better	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	4-Lane Major Roadway	38,500	35,200	1.094	F	Encinitas
	I-5 NB Ramps to Saxony Road	4-Lane Major Roadway	41,400	35,200	1.176	F	Encinitas
	Saxony Road to Calle Magdalena	6-Lane Prime Arterial - Augmented	35,400	66,000	0.536	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Encinitas Blvd	Calle Magdalena to Encinitas Town Country traffic signal	6-Lane Prime Arterial	40,000	57,000	0.702	C or better	Encinitas
	Encinitas Town Country traffic signal to Quail Gardens Drive	4-Lane Major Roadway - Augmented	36,000	45,400	0.793	C or better	Encinitas
	Quail Gardens Drive to Delphinium Street	4-Lane Major Roadway	37,700	35,200	1.071	F	Encinitas
	Delphinium Street to Balour Drive	4-Lane Major Roadway	38,300	35,200	1.088	F	Encinitas
	Balour Drive to Via Cantebria	4-Lane Major Roadway	47,500	35,200	1.349	F	Encinitas
	Via Cantebria to El Camino Real	4-Lane Major Roadway	29,400	35,200	0.835	D	Encinitas
	El Camino Real to Village Square Drive	4-Lane Major Roadway	31,000	35,200	0.881	D	Encinitas
	Village Square Drive to Turner Avenue	4-Lane Major Roadway	29,300	35,200	0.832	D	Encinitas
	Turner Avenue to Cerro Street	4-Lane Major Roadway	29,300	35,200	0.832	D	Encinitas
	Cerro Street to Village Park Way	4-Lane Major Roadway	29,700	35,200	0.844	D	Encinitas
	Village Park Way to Willowspring Drive	4-Lane Major Roadway	27,900	35,200	0.793	C or better	Encinitas
	Willowspring Drive to Rancho Santa Fe Road	4-Lane Major Roadway	22,700	35,200	0.645	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
South Rancho Santa Fe Road	Manchester Avenue to City of Encinitas Limits	2-Lane Local Roadway - Augmented	18,580	20,000	0.929	E	Encinitas
	City of Encinitas Limits to El Mirlo	2-Lane Light Collector with Reduced Shoulder	18,580	9,700	1.915	F	San Diego
F Street	Vulcan Avenue to Cornish Drive	2-Lane Local Roadway	6,200	14,000	0.443	C or better	Encinitas
Requeza Street	Cornish Drive to San Dieguito Drive	2-Lane Local Roadway	6,300	14,000	0.450	C or better	Encinitas
	San Dieguito Drive to Stratford Drive	2-Lane Local Roadway	6,300	14,000	0.450	C or better	Encinitas
	Stratford Drive to Regal Road	2-Lane Local Roadway	6,800	14,000	0.486	C or better	Encinitas
	Regal Road to West Lake Drive	2-Lane Local Roadway	6,400	14,000	0.457	C or better	Encinitas
	West Lake Drive to Nardo Drive	2-Lane Local Roadway	4,800	14,000	0.343	C or better	Encinitas
	Vulcan Avenue to Cornish Drive	2-Lane Local Roadway	9,000	14,000	0.643	C or better	Encinitas
	Cornish Drive to Summit Avenue	2-Lane Local Roadway	9,000	14,000	0.643	C or better	Encinitas
	Summit Avenue to Devonshire	2-Lane Local Roadway	10,100	14,000	0.721	C or better	Encinitas
	Devonshire Drive to Scripps Memorial Encinitas traffic signal	2-Lane Local Roadway - Augmented	15,200	20,000	0.760	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Santa Fe Drive	Scripps Memorial Hospital Encinitas traffic signal to I-5 SB Ramps	4-Lane Collector	15,200	32,400	0.469	C or better	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	3-Lane Major Roadway	22,400	26,400	0.848	D	Encinitas
	I-5 NB Ramps to Regal Road	2-Lane Local Roadway - Augmented	16,100	20,000	0.805	D	Encinitas
	Regal Road to Gardena Road	2-Lane Local Roadway - Augmented	16,100	20,000	0.805	D	Encinitas
	Gardena Road to Nardo Road	2-Lane Local Roadway - Augmented	16,100	20,000	0.805	D	Encinitas
	Nardo Road to Windsor Road/Bonita Drive	2-Lane Local Roadway - Augmented	17,700	20,000	0.885	D	Encinitas
	Windsor Road/Bonita Drive to Balour Drive	2-Lane Local Roadway - Augmented	17,700	20,000	0.885	D	Encinitas
	Balour Drive to Lake Drive	2-Lane Local Roadway - Augmented	18,600	20,000	0.930	E	Encinitas
	Lake Drive to Crest Drive	2-Lane Local Roadway - Augmented	17,700	20,000	0.885	D	Encinitas
	Crest Drive to El Camino Real	2-Lane Local Roadway - Augmented	17,700	20,000	0.885	D	Encinitas
	San Elijo Avenue to MacKinnon Avenue	2-Lane Local Roadway - Augmented	15,500	20,000	0.775	C or better	Encinitas
	MacKinnon Avenue to Carol View Drive	2-Lane Local Roadway - Augmented	15,500	20,000	0.775	C or better	Encinitas

TABLE 2
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Roadway	Segment	Functional Classification	Future ADT	Capacity (LOS E)	V/C	LOS	Jurisdiction
Birmingham Drive	Carol View Drive to I-5 SB Ramps	2-Lane Local Roadway - Augmented	15,500	20,000	0.775	C or better	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	2-Lane Local Roadway	17,400	14,000	1.243	F	Encinitas
	I-5 NB Ramps to Villa Cardiff Drive	2-Lane Local Roadway	8,800	14,000	0.629	C or better	Encinitas
	Villa Cardiff to Playa Riviera	2-Lane Local Roadway	8,800	14,000	0.629	C or better	Encinitas
	Playa Riviera to Freda Lane	2-Lane Local Roadway	8,800	14,000	0.629	C or better	Encinitas
	Freda Lane to Lake Drive	2-Lane Local Roadway	8,800	14,000	0.629	C or better	Encinitas

TABLE 3
SUMMARY OF INTERSECTION OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Carlsbad Blvd & Poinsettia Ln	S	11.7	B	10.6	B
2	I-5 SB Ramp/I-5 SB Ramp & Poinsettia Ln	S	15.2	B	21.6	C
3	I-5 NB Ramp/I-5 NB Ramp & Poinsettia Ln	S	32.4	C	29.7	C
4	Aviara Parkway & Poinsettia Ln	S	29.1	C	30.8	C
5	Highway 101/Carlsbad Blvd & La Costa Ave	S	18.8	B	16.8	B
6	Vulcan Ave & La Costa Ave	U	45.2	E	99.1	F
7	I-5 SB Ramp/I-5 SB Ramp & La Costa Ave	S	44.3	D	34.1	C
8	I-5 NB Ramp/I-5 NB Ramp & La Costa Ave	S	28.2	C	31.2	C
9	Piraeus Street & La Costa Ave	S	22.4	C	34.9	C
10	Saxony Rd & La Costa Ave	S	19.2	B	28.3	C
11	El Camino Real & La Costa Ave	S	51.7	D	58.3	E
12	Highway 101 & Leucadia Blvd	S	30.1	C	35.3	D
13	Vulcan Ave & Leucadia Blvd	S	12.5	B	11.9	B
14	Orpheus Ave & Leucadia Blvd	S	17.1	B	16.5	B
15	I-5 SB Ramp/I-5 SB Ramp & Leucadia Blvd	S	14.5	B	16.3	B
16	I-5 NB Ramp/I-5 NB Ramp & Leucadia Blvd	S	13.3	B	36.4	D
17	Saxony Rd & Leucadia Blvd	S	60.8	E	79.4	E
18	Quail Gardens Dr & Leucadia Blvd	S	31.8	C	42.8	D
19	Garden View Rd/Barcelona & Leucadia Blvd	S	47.1	D	53.7	D
20	Town Center Place & Leucadia Blvd	S	24.6	C	43.9	D
21	El Camino Real & Leucadia Blvd/Olivenhain Rd	S	48.7	D	67.3	E
22	El Camino Real & Town Center Dr	S	11.6	B	23.5	C
23	El Camino Real & Garden View Rd	S	27.7	C	49.6	D
24	El Camino Real & Mountain Vista Dr	S	49.4	D	30.9	C
25	Rancho Santa Fe Rd & Lone Jack Rd	U	40.1	E	41.1	E
26	El Camino Real & Via Molena	S	27.0	C	35.1	D
27	Rancho Santa Fe Rd & El Camino Del Norte	U	34.6	D	41.9	E
28	Highway 101 & Encinitas Blvd	S	35.3	D	34.0	C
29	Vulcan Ave & Encinitas Blvd	S	39.1	D	32.3	C
30	I-5 SB Ramp/I-5 SB Ramp & Encinitas Blvd	S	29.1	C	47.8	D

TABLE 3
SUMMARY OF INTERSECTION OPERATION
FUTURE YEAR 2035 WITHOUT PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
31	I-5 NB Ramp/I-5 NB Ramp & Encinitas Blvd	S	20.9	C	27.5	C
32	Encinitas Blvd & Saxony Rd	S	32.0	C	17.3	B
33	Westlake Dr/Quail Gardens Dr & Encinitas Blvd	S	32.2	C	53.9	D
34	Balour Dr & Encinitas Blvd	S	12.1	B	17.7	B
35	Encinitas Blvd & Via Cantebria	S	21.5	C	20.7	C
36	El Camino Real & Encinitas Blvd	S	50.7	D	70.4	E
37	Village Square Dr & Encinitas Blvd	S	18.4	B	44.5	D
38	Encinitas Blvd & Village Park Way	S	26.0	C	44.8	D
39	Manchester/Rancho Santa Fe & Encinitas Blvd	S	77.1	E	48.0	D
40	San Elijo Ave/Vulcan Ave & Santa Fe Dr	U	37.0	E	18.8	C
41	I-5 SB Ramp/I-5 SB Ramp & Santa Fe Dr	S	24.3	C	30.7	C
42	Santa Fe Dr & I-5 NB Ramp	S	5.5	A	4.1	A
43	I-5 NB Ramp/Regal Rd & Santa Fe Dr	S	38.5	D	42.9	D
44	MacKinnon Ave/Nardo Rd & Santa Fe Dr	S	28.5	C	20.1	C
45	Santa Fe Dr & Balour Dr	U	84.7	F	51.7	F
46	Lake Dr & Santa Fe Dr	S	9.3	A	8.9	A
47	El Camino Real & Santa Fe Dr	S	20.0	B	23.4	C
48	San Elijo Ave & Birmingham Dr	S	13.0	B	24.2	C
49	I-5 SB Ramp/I-5 SB Ramp & Birmingham Dr	U	250.6	F	47.5	E
50	I-5 NB Ramp/I-5 NB Ramp & Birmingham Dr	U	45.5	E	41.1	E
51	Manchester Ave & I-5 SB Ramps	U	54.5	F	35.5	E
52	Manchester Ave & I-5 NB Ramps	S	57.5	E	45.0	D
53	Manchester Ave & El Camino Real	S	36.2	D	38.8	D

Notes:
Bold and shaded values indicate intersections operating at LOS E or F or significant impact to intersection per City standards.
Delay values are based on the methodology outlined in the 2010 Highway Capacity Manual.
At a signalized intersection and an all-way stop-controlled intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst movement.
S = Signalized; U = Unsignalized; LOS = Level of Service

Future Year 2035 With Project Conditions

Roadway Segment Analysis

The results of the Future Year 2035 With Project Conditions roadway segment analysis are summarized on Table 4. The table shows the Without Project and With Project daily forecast volumes and v/c ratios for each roadway segment, and the change in v/c due to the project. Review of this table indicates that the 28 roadway segments forecasted to operate at an unacceptable Level of Service E or F without the project would continue to do so with the implementation of the project. In addition, four additional roadway segments would worsen to an unacceptable Level of Service E or F with implementation of the project:

City of Encinitas (4 additional segments)

- Santa Fe Drive: Nardo Road to Windsor Road/Bonita Drive – LOS E
- Santa Fe Drive: Windsor Road/Bonita Drive to Balour Drive – LOS E
- Santa Fe Drive: Lake Drive to Crest Drive – LOS E
- Santa Fe Drive: Crest Drive to El Camino Real – LOS E

Of the 32 deficient roadway segments, the project impact would be significant on the following 13 segments:

- La Costa Avenue: N. Coast Highway 101 to Vulcan Avenue – LOS F
- La Costa Avenue: Vulcan Avenue to Sheridan Road – LOS F
- Encinitas Boulevard: I-5 SB Ramps to I-5 NB Ramps – LOS F
- Encinitas Boulevard: I-5 NB Ramps to Saxony Road – LOS F
- Encinitas Boulevard: Quail Gardens Drive to Delphinium Street – LOS F
- Encinitas Boulevard: Delphinium Street to Balour Drive – LOS F
- Encinitas Boulevard: Balour Drive to Via Cantebria – LOS F
- Santa Fe Drive: Nardo Road to Windsor Road/Bonita Drive – LOS E
- Santa Fe Drive: Windsor Road/Bonita Drive to Balour Drive – LOS E
- Santa Fe Drive: Balour Drive to Lake Drive – LOS E
- Santa Fe Drive: Lake Drive to Crest Drive – LOS E
- Santa Fe Drive: Crest Drive to El Camino Real – LOS E
- S. Rancho Santa Fe Road: City of Encinitas Limits to El Mirlo – LOS F

Each of these roadway segments was identified as being significantly impacted by the project previously analyzed in the 2016 PEIR TIS. Mitigation measures to address the roadway segments impacts are presented in the Mitigation Measures section of this report.

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
Carlsbad Blvd	Poinsettia Lane to Avenida Encinas	4-Lane Major Arterial	25,300	200	25,500	40,000	0.638	C	0.005	No	Carlsbad
	Avenida Encinas to La Costa Avenue	4-Lane Major Arterial	24,700	200	24,900	40,000	0.623	C	0.005	No	Carlsbad
North Coast Highway 101	La Costa Avenue to 600 feet south of La Costa Avenue	4-Lane Major Roadway	19,900	300	20,200	35,200	0.574	C or better	0.009	No	Encinitas
	600 feet south of La Costa Avenue to Leucadia Blvd	4-Lane Major Roadway	18,100	600	18,700	26,400	0.708	C or better	0.023	No	Encinitas
	Leucadia Blvd to Cadmus Street	4-Lane Major Roadway	19,900	400	20,300	35,200	0.577	C or better	0.011	No	Encinitas
	Cadmus Street to Marcheta Street	4-Lane Major Roadway	19,900	400	20,300	35,200	0.577	C or better	0.011	No	Encinitas
	Marcheta Street to 660 feet south of Marcheta Street	4-Lane Major Roadway	19,900	400	20,300	35,200	0.577	C or better	0.011	No	Encinitas
	660 feet south of Marcheta Street to Encinitas Blvd	4-Lane Major Roadway	19,900	400	20,300	35,200	0.577	C or better	0.011	No	Encinitas
South Coast Highway 101	Encinitas Blvd to D Street	4-Lane Major Roadway	19,400	700	20,100	35,200	0.571	C or better	0.020	No	Encinitas
	D Street to E Street	4-Lane Major Roadway	19,400	700	20,100	35,200	0.571	C or better	0.020	No	Encinitas
	E Street to F Street	4-Lane Major Roadway	19,400	700	20,100	35,200	0.571	C or better	0.020	No	Encinitas
	F Street to H Street	4-Lane Major Roadway	19,400	100	19,500	35,200	0.554	C or better	0.003	No	Encinitas
	H Street to J Street	4-Lane Major Roadway	21,100	100	21,200	35,200	0.602	C or better	0.003	No	Encinitas
	J Street to Swami's Parking	3-Lane Major Roadway	21,100	100	21,200	26,400	0.803	D	0.004	No	Encinitas
	Swami's Parking to San Elijo State Beach	2-Lane Local Roadway	21,300	100	21,400	14,000	1.529	F	0.007	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
	San Elijo State Beach to Chesterfield	4-Lane Major Roadway	21,300	100	21,400	35,200	0.608	C or better	0.003	No	Encinitas
	Chesterfield to Cardiff State Beach traffic signal	4-Lane Major Roadway	23,200	100	23,300	35,200	0.662	C or better	0.003	No	Encinitas
	Cardiff Beach State to Chart House traffic signal	4-Lane Major Roadway	23,200	100	23,300	35,200	0.662	C or better	0.003	No	Encinitas
	Chart House traffic signal to Las Olas Mexican Restaurant traffic signal	4-Lane Major Roadway	23,200	100	23,300	35,200	0.662	C or better	0.003	No	Encinitas
	Las Olas Mexican Restaurant to City of Solana Beach boundary	4-Lane Major Roadway	23,200	100	23,300	35,200	0.662	C or better	0.003	No	Encinitas
North Highway 101	City of Solana Beach boundary to West Cliff Street	4-Lane Major Arterial	22,500	100	22,600	40,000	0.565	C	0.002	No	Solana Beach
	West Cliff to Lomas Santa Fe	4-Lane Major Arterial	25,000	100	25,100	40,000	0.628	C	0.002	No	Solana Beach
	Lomas Santa Fe Drive to Via De La Valle	4-Lane Major Arterial	23,600	100	23,700	40,000	0.593	C	0.003	No	Solana Beach
Vulcan Avenue	La Costa Avenue to Leucadia Boulevard	2-Lane Local Roadway	7,000	300	7,300	14,000	0.521	C or better	0.021	No	Encinitas
	Leucadia Blvd to Encinitas Boulevard	2-Lane Local Roadway	7,500	600	8,100	14,000	0.579	C or better	0.043	No	Encinitas
	Encinitas Boulevard to D Street	4-Lane Collector	12,900	300	13,200	32,400	0.407	C or better	0.009	No	Encinitas
	D Street to E Street	4-Lane Collector	12,900	300	13,200	32,400	0.407	C or better	0.009	No	Encinitas
	E Street to Santa Fe Drive	2-Lane Local Roadway - Augmented	13,100	300	13,400	20,000	0.670	C or better	0.015	No	Encinitas
San Elijo Avenue	Santa Fe Drive to Birmingham Drive	2-Lane Local Roadway	10,100	0	10,100	14,000	0.721	C or better	0.000	No	Encinitas
	Birmingham Drive to Chesterfield Drive	2-Lane Local Roadway - Augmented	12,500	0	12,500	20,000	0.625	C or better	0.000	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
	Chesterfield Drive to Manchester Avenue	2-Lane Local Roadway - Augmented	9,500	0	9,500	20,000	0.475	C or better	0.000	No	Encinitas
Saxony Road	La Costa Avenue to Quail Gardens Drive	2-Lane Local Roadway	4,600	200	4,800	14,000	0.343	C or better	0.014	No	Encinitas
	Quail Hollow Drive to Normandy Road	2-Lane Local Roadway	3,400	100	3,500	14,000	0.250	C or better	0.007	No	Encinitas
	Normandy Road to Brittany Avenue	2-Lane Local Roadway	3,900	100	4,000	14,000	0.286	C or better	0.007	No	Encinitas
	Brittany Avenue to Leucadia Blvd	2-Lane Local Roadway	3,500	100	3,600	14,000	0.257	C or better	0.007	No	Encinitas
	Leucadia Blvd to Silver Berry Place	2-Lane Local Roadway	11,800	100	11,900	14,000	0.850	D	0.007	No	Encinitas
	Silver Berry Place to Encinitas Blvd	2-Lane Local Roadway - Augmented	13,800	300	14,100	20,000	0.705	C or better	0.015	No	Encinitas
Quail Hollow Drive	Swallow Tail Road to Saxony Road	2-Lane Local Roadway	5,000	200	5,200	14,000	0.371	C or better	0.014	No	Encinitas
Quail Gardens Drive	Swallow Tail Road to Lauren Court	2-Lane Local Roadway - Augmented	4,900	200	5,100	20,000	0.255	C or better	0.010	No	Encinitas
	Lauren Court to Leucadia Boulevard	2-Lane Local Roadway - Augmented	5,300	200	5,500	20,000	0.275	C or better	0.010	No	Encinitas
	Leucadia Boulevard to Paseo De Las Flores	2-Lane Local Roadway - Augmented	9,100	800	9,900	20,000	0.495	C or better	0.040	No	Encinitas
	Paseo De Las Flores to Paseo De Las Verdes	2-Lane Local Roadway - Augmented	8,900	700	9,600	20,000	0.480	C or better	0.035	No	Encinitas
	Paseo De Las Verdes to Encinitas Boulevard	2-Lane Local Roadway - Augmented	8,200	700	8,900	20,000	0.445	C or better	0.035	No	Encinitas
Westlake Street	Encinitas Boulevard to Requeza Street	2-Lane Local Roadway - Augmented	11,800	1,800	13,600	20,000	0.680	C or better	0.090	No	Encinitas
Nardo Drive	Requeza Street to Melba Road	2-Lane Local Roadway	5,100	0	5,100	14,000	0.364	C or better	0.000	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
Nardo Drive	Melba Road Santa Fe Drive	2-Lane Local Roadway	5,100	0	5,100	14,000	0.364	C or better	0.000	No	Encinitas
MacKinnon Avenue	Santa Fe Drive to Villa Cardiff Drive	2-Lane Local Roadway	6,200	0	6,200	14,000	0.443	C or better	0.000	No	Encinitas
Villa Cardiff Drive	MacKinnon Avenue to Windsor Road	2-Lane Local Roadway	6,500	0	6,500	14,000	0.464	C or better	0.000	No	Encinitas
	Windsor Road to Birmingham Drive	2-Lane Local Roadway	5,700	0	5,700	14,000	0.407	C or better	0.000	No	Encinitas
Garden View Road	Leucadia Boulevard to Via Cantebria	4-Lane Major Roadway	11,500	0	11,500	35,200	0.327	C or better	0.000	No	Encinitas
	Via Cantebria to El Camino Real	4-Lane Major Roadway	12,900	0	12,900	35,200	0.366	C or better	0.000	No	Encinitas
Town Center Place	Leucadia Boulevard to Town Center Place	4-Lane Collector (Not a CE)	20,000	100	20,100	32,400	0.620	C or better	0.003	No	Encinitas
	Town Center Place to Town Center Drive	4-Lane Collector (Not a CE)	17,800	100	17,900	32,400	0.552	C or better	0.003	No	Encinitas
Via Cantebria	Town Center Drive to Garden View Road	2-Lane Local Roadway (Not a CE)	15,800	100	15,900	14,000	1.136	F	0.007	No	Encinitas
	Garden View Road to Forrest Bluff	3-Lane Collector	14,900	0	14,900	24,300	0.613	C or better	0.000	No	Encinitas
	Forrest Bluff to Via Montoro	4-Lane Collector	15,200	0	15,200	32,400	0.469	C or better	0.000	No	Encinitas
	Via Montoro to Via Molena	4-Lane Collector	17,900	0	17,900	32,400	0.552	C or better	0.000	No	Encinitas
	Via Molena to Encinitas Boulevard	4-Lane Collector	17,500	0	17,500	32,400	0.540	C or better	0.000	No	Encinitas
Balour Drive	Encinitas Blvd to Melba Road	2-Lane Local Roadway	11,200	800	12,000	14,000	0.857	D	0.057	No	Encinitas
	Melba Road to Santa Fe Drive	2-Lane Local Roadway	10,700	700	11,400	14,000	0.814	D	0.050	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
Lake Drive	Santa Fe Drive to Woodlake Drive	2-Lane Local Roadway	6,600	0	6,600	14,000	0.471	C or better	0.000	No	Encinitas
	Woodlake Drive to Birmingham Drive	2-Lane Local Roadway	6,600	0	6,600	14,000	0.471	C or better	0.000	No	Encinitas
El Camino Real	Aviara Parkway to La Costa Avenue	5-Lane Prime Arterial	54,300	100	54,400	50,000	1.088	F	0.002	No	Carlsbad
	La Costa Avenue to Calle Barcelona	6-Lane Prime Arterial	38,400	300	38,700	60,000	0.645	C	0.005	No	Carlsbad
	Calle Barcelona to City of Carlsbad boundary	6-Lane Prime Arterial	36,500	300	36,800	60,000	0.613	C	0.005	No	Carlsbad
	City of Carlsbad boundary to Leucadia Boulevard	6-Lane Prime Arterial - Augmented	46,700	300	47,000	66,000	0.712	C or better	0.005	No	Encinitas
	Leucadia Boulevard to Town Center Drive	6-Lane Prime Arterial - Augmented	58,600	700	59,300	66,000	0.898	D	0.011	No	Encinitas
	Town Center Drive to Garden View Road	6-Lane Prime Arterial - Augmented	54,200	700	54,900	66,000	0.832	D	0.011	No	Encinitas
	Garden View Road to 331-339 El Camino Real	6-Lane Prime Arterial - Augmented	42,900	800	43,700	66,000	0.662	C or better	0.012	No	Encinitas
	331-339 El Camino Real to Via Montoro	6-Lane Prime Arterial - Augmented	48,900	800	49,700	66,000	0.753	C or better	0.012	No	Encinitas
	Via Montoro to Mountain Vista	6-Lane Prime Arterial - Augmented	44,300	800	45,100	66,000	0.683	C or better	0.012	No	Encinitas
	Mountain Vista to Via Molena	6-Lane Prime Arterial - Augmented	47,000	900	47,900	66,000	0.726	C or better	0.014	No	Encinitas
	Via Molena to Encinitas Boulevard	6-Lane Prime Arterial - Augmented	56,900	900	57,800	66,000	0.876	D	0.014	No	Encinitas
	Encinitas Boulevard to 213 S El Camino Real	6-Lane Prime Arterial	39,400	1,200	40,600	57,000	0.712	C or better	0.021	No	Encinitas
	213 S El Camino to Crest Drive	6-Lane Prime Arterial	33,800	1,200	35,000	57,000	0.614	C or better	0.021	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
	Crest Drive to Willowspring Drive	6-Lane Prime Arterial	36,200	1,200	37,400	57,000	0.656	C or better	0.021	No	Encinitas
	Willowspring Drive to Santa Fe Drive	4-Lane Major Roadway - Augmented	37,500	1,200	38,700	45,400	0.852	D	0.026	No	Encinitas
	Santa Fe Drive to Sage Canyon Drive	4-Lane Major Roadway - Augmented	28,400	1,800	30,200	45,400	0.665	C or better	0.040	No	Encinitas
	Sage Canyon Drive to Manchester Avenue	4-Lane Major Roadway	27,700	1,300	29,000	35,200	0.824	D	0.037	No	Encinitas
Village Park Way	Mountain Vista Drive to Parkdale Drive	4-Lane Major Roadway	10,900	200	11,100	35,200	0.315	C or better	0.006	No	Encinitas
	Parkdale Drive to Encinitas Boulevard	4-Lane Major Roadway	14,200	100	14,300	35,200	0.406	C or better	0.003	No	Encinitas
Rancho Santa Fe Road	Olivenhain Road to Calle Acervo	4-Lane Major Arterial	17,400	400	17,800	40,000	0.445	C or better	0.010	No	Encinitas
	Calle Acervo/Avenida La Posta to Olive Crest Drive	2-Lane Local Roadway - Augmented	15,900	100	16,000	20,000	0.800	C or better	0.005	No	Encinitas
	Olive Crest Drive to 13th Street	2-Lane Local Roadway - Augmented	15,800	100	15,900	20,000	0.795	C or better	0.005	No	Encinitas
	13th Street to 11th Street	2-Lane Local Roadway - Augmented	15,700	100	15,800	20,000	0.790	C or better	0.005	No	Encinitas
	11th Street to El Camino Del Norte	2-Lane Local Roadway - Augmented	15,800	100	15,900	20,000	0.795	C or better	0.005	No	Encinitas
	El Camino Del Norte to 9th Street	2-Lane Local Roadway - Augmented	13,300	100	13,400	20,000	0.670	C or better	0.005	No	Encinitas
	9th Street to 8th Street	2-Lane Local Roadway	13,500	100	13,600	14,000	0.971	E	0.007	No	Encinitas
	8th Street to 7th Street	2-Lane Local Roadway	13,900	100	14,000	14,000	1.000	E	0.007	No	Encinitas
	7th Street to Encinitas Boulevard	2-Lane Local Roadway - Augmented	15,200	100	15,300	20,000	0.765	C or better	0.005	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
Manchester Avenue	Encinitas Boulevard to El Camino Real	2-Lane Local Roadway - Augmented	12,300	20,000	32,300	45,400	0.711	C or better	0.096	No	Encinitas
	Manchester Avenue to Mira Costa College	4-Lane Major Roadway - Augmented	35,400	1,400	36,800	45,400	0.811	D	0.031	No	Encinitas
	Mira Costa College to I-5 NB On-Ramp	4-Lane Major Roadway - Augmented	35,700	300	36,000	45,400	0.793	C or better	0.007	No	Encinitas
	I-5 NB Ramps to I-5 SB Ramps	2-Lane Major Roadway - Augmented	40,200	100	40,300	20,000	2.015	F	0.005	No	Encinitas
	I-5 SB Ramps to Ocean Cove Drive	2-Lane Major Roadway - Augmented	11,900	100	12,000	20,000	0.600	C or better	0.005	No	Encinitas
	Ocean Cove Drive to Seaside Cardiff-by-the-sea residential area driveway	2-Lane Local Roadway	11,900	100	12,000	14,000	0.857	D	0.007	No	Encinitas
	Seaside Cardiff-by-the-sea residential area driveway to San Elijo Water Reclamation Facility Driveway	2-Lane Local Roadway - Augmented	11,900	100	12,000	20,000	0.600	C or better	0.005	No	Encinitas
	San Elijo Water Reclamation Facility Driveway to Manchester Avenue	2-Lane Local Roadway	11,800	100	11,900	14,000	0.850	D	0.007	No	Encinitas
La Costa Avenue	North Coast Highway 101 to Vulcan Avenue	2-Lane Local Roadway	16,400	300	16,700	14,000	1.193	F	0.021	Yes	Encinitas
	Vulcan Avenue to Sheridan Road	2-Lane Local Roadway	16,300	400	16,700	14,000	1.193	F	0.029	Yes	Encinitas
	Sheridan Road to I-5 SB Ramps	2-Lane Local Roadway - Augmented	22,000	400	22,400	20,000	1.120	F	0.020	No	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	4-Lane Major Arterial	29,300	600	29,900	40,000	0.748	C	0.015	No	Carlsbad
	I-5 NB Ramps to Piraeus Street	5-Lane Major Arterial	39,500	600	40,100	41,667	0.962	E	0.014	No	Carlsbad
	Piraeus Street to Saxony Road	4-Lane Major Arterial	39,600	300	39,900	40,000	0.998	E	0.008	No	Carlsbad
	Saxony Road to El Camino Real	4-Lane Major Arterial	42,000	300	42,300	40,000	1.058	F	0.008	No	Carlsbad

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
	El Camino Real to La Costa Towne Center traffic signal	4-Lane Major Arterial	20,700	100	20,800	40,000	0.520	B	0.003	No	Carlsbad
	La Costa Towne Center traffic signal to Fairway Lane	4-Lane Major Arterial	20,900	100	21,000	40,000	0.525	C	0.003	No	Carlsbad
	Fairway Lane to Calle Madero	3-Lane Collector	20,700	100	20,800	22,500	0.924	E	0.004	No	Carlsbad
Leucadia Blvd	North Coast Highway 101 to Vulcan Avenue	4-Lane Collector	14,300	400	14,700	32,400	0.454	C or better	0.012	No	Encinitas
	Vulcan Avenue to Hermes Avenue	2-Lane Local Roadway - Augmented	16,300	200	16,500	20,000	0.825	D	0.010	No	Encinitas
	Hermes Avenue to Hygeia Avenue	2-Lane Local Roadway - Augmented	15,700	200	15,900	20,000	0.795	C or better	0.010	No	Encinitas
	Hygeia Avenue to Hymettus Avenue	2-Lane Local Roadway - Augmented	17,400	200	17,600	20,000	0.880	D	0.010	No	Encinitas
	Hymettus Avenue to Orpheus Avenue	2-Lane Local Roadway - Augmented	19,200	200	19,400	20,000	0.970	E	0.010	No	Encinitas
	Orpheus Avenue to I-5 SB Ramps	4-Lane Major Roadway	17,700	200	17,900	35,200	0.509	C or better	0.006	No	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	4-Lane Major Roadway	28,600	400	29,000	35,200	0.824	D	0.011	No	Encinitas
	Piraeus Street to Urania Avenue	4-Lane Major Roadway - Augmented	44,100	600	44,700	45,400	0.985	E	0.013	No	Encinitas
	Urania Avenue to Saxony Road	4-Lane Major Roadway - Augmented	44,100	800	44,900	45,400	0.989	E	0.018	No	Encinitas
	Saxony Road to Sidonia Street	4-Lane Major Roadway - Augmented	42,400	800	43,200	45,400	0.952	E	0.018	No	Encinitas
	Sidonia Street to Quail Gardens Drive	4-Lane Major Roadway - Augmented	42,400	800	43,200	45,400	0.952	E	0.018	No	Encinitas
	Quail Gardens Drive to Garden View Road	4-Lane Major Roadway - Augmented	47,100	500	47,600	45,400	1.048	F	0.011	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
	Garden View Road to Town Center Place	4-Lane Major Roadway - Augmented	34,700	400	35,100	45,400	0.773	C or better	0.009	No	Encinitas
	Town Center Place to El Camino Real	6-Lane Prime Arterial	39,000	500	39,500	57,000	0.693	C or better	0.009	No	Encinitas
Mountain Vista Drive	El Camino Real to Wandering Road	2-Lane Local Roadway - Augmented	15,000	200	15,200	20,000	0.760	C or better	0.010	No	Encinitas
	Wandering Road to Village Park Way	2-Lane Local Roadway - Augmented	9,300	300	9,600	20,000	0.480	C or better	0.015	No	Encinitas
Lone Jack Drive	Rancho Santa Fe Road to northern terminus	2-Lane Local Roadway	8,400	0	8,400	14,000	0.600	C or better	0.000	No	Encinitas
El Camino Del Norte	Rancho Santa Fe Road to San Dieguito CPA boundary	2-Lane Local Roadway	7,900	0	7,900	14,000	0.564	C or better	0.000	No	Encinitas
	San Dieguito CPA boundary to Via De Fortuna	2-Lane Light Collector with Reduced Shoulder	7,800	0	7,800	9,700	0.804	D	0.000	No	San Diego
	North Coast Highway 101 to Vulcan Avenue	4-Lane Collector	22,300	700	23,000	32,400	0.710	C or better	0.022	No	Encinitas
	Vulcan Avenue to I-5 SB Ramps	4-Lane Major Roadway - Augmented	34,100	1,100	35,200	45,400	0.775	C or better	0.024	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
Encinitas Blvd	I-5 SB Ramps to I-5 NB Ramps	4-Lane Major Roadway	38,500	1,400	39,900	35,200	1.134	F	0.040	Yes	Encinitas
	I-5 NB Ramps to Saxony Road	4-Lane Major Roadway	41,400	1,800	43,200	35,200	1.227	F	0.051	Yes	Encinitas
	Saxony Road to Calle Magdalena	6-Lane Prime Arterial - Augmented	35,400	1,900	37,300	66,000	0.565	C or better	0.029	No	Encinitas
	Calle Magdalena to Encinitas Town Country traffic signal	6-Lane Prime Arterial	40,000	1,900	41,900	57,000	0.735	C or better	0.033	No	Encinitas
	Encinitas Town Country traffic signal to Quail Gardens Drive	4-Lane Major Roadway - Augmented	36,000	1,900	37,900	45,400	0.835	D	0.042	No	Encinitas
	Quail Gardens Drive to Delphinium Street	4-Lane Major Roadway	37,700	1,600	39,300	35,200	1.116	F	0.045	Yes	Encinitas
	Delphinium Street to Balour Drive	4-Lane Major Roadway	38,300	1,600	39,900	35,200	1.134	F	0.045	Yes	Encinitas
	Balour Drive to Via Cantebria	4-Lane Major Roadway	47,500	800	48,300	35,200	1.372	F	0.023	Yes	Encinitas
	Via Cantebria to El Camino Real	4-Lane Major Roadway	29,400	900	30,300	35,200	0.861	D	0.026	No	Encinitas
	El Camino Real to Village Square Drive	4-Lane Major Roadway	31,000	400	31,400	35,200	0.892	D	0.011	No	Encinitas
	Village Square Drive to Turner Avenue	4-Lane Major Roadway	29,300	400	29,700	35,200	0.844	D	0.011	No	Encinitas
	Turner Avenue to Cerro Street	4-Lane Major Roadway	29,300	400	29,700	35,200	0.844	D	0.011	No	Encinitas
	Cerro Street to Village Park Way	4-Lane Major Roadway	29,700	400	30,100	35,200	0.855	D	0.011	No	Encinitas
	Village Park Way to Willowspring Drive	4-Lane Major Roadway	27,900	600	28,500	35,200	0.810	D	0.017	No	Encinitas
	Willowspring Drive to Rancho Santa Fe Road	4-Lane Major Roadway	22,700	600	23,300	35,200	0.662	C or better	0.017	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
South Rancho Santa Fe Road	Manchester Avenue to City of Encinitas Limits	2-Lane Local Roadway - Augmented	18,580	300	18,880	20,000	0.944	E	0.015	No	Encinitas
	City of Encinitas Limits to El Mirlo	2-Lane Light Collector with Reduced Shoulder	18,580	300	18,880	9,700	1.946	F	0.031	Yes	San Diego
F Street	Vulcan Avenue to Cornish Drive	2-Lane Local Roadway	6,200	0	6,200	14,000	0.443	C or better	0.000	No	Encinitas
Requeza Street	Cornish Drive to San Dieguito Drive	2-Lane Local Roadway	6,300	0	6,300	14,000	0.450	C or better	0.000	No	Encinitas
	San Dieguito Drive to Stratford Drive	2-Lane Local Roadway	6,300	0	6,300	14,000	0.450	C or better	0.000	No	Encinitas
	Stratford Drive to Regal Road	2-Lane Local Roadway	6,800	0	6,800	14,000	0.486	C or better	0.000	No	Encinitas
	Regal Road to West Lake Drive	2-Lane Local Roadway	6,400	0	6,400	14,000	0.457	C or better	0.000	No	Encinitas
	West Lake Drive to Nardo Drive	2-Lane Local Roadway	4,800	0	4,800	14,000	0.343	C or better	0.000	No	Encinitas
Santa Fe Drive	Vulcan Avenue to Cornish Drive	2-Lane Local Roadway	9,000	300	9,300	14,000	0.664	C or better	0.021	No	Encinitas
	Cornish Drive to Summit Avenue	2-Lane Local Roadway	9,000	300	9,300	14,000	0.664	C or better	0.021	No	Encinitas
	Summit Avenue to Devonshire	2-Lane Local Roadway	10,100	300	10,400	14,000	0.743	C or better	0.021	No	Encinitas
	Devonshire Drive to Scripps Memorial Encinitas traffic signal	2-Lane Local Roadway - Augmented	15,200	300	15,500	20,000	0.775	C or better	0.015	No	Encinitas
	Scripps Memorial Hospital Encinitas traffic signal to I-5 SB Ramps	4-Lane Collector	15,200	800	16,000	32,400	0.494	C or better	0.025	No	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	3-Lane Major Roadway	22,400	900	23,300	26,400	0.883	D	0.034	No	Encinitas
	I-5 NB Ramps to Regal Road	2-Lane Local Roadway - Augmented	16,100	1,000	17,100	20,000	0.855	D	0.050	No	Encinitas

TABLE 4
SUMMARY OF ROADWAY SEGMENT OPERATION
FUTURE YEAR 2035 WITH PROJECT

Roadway	Segment	Functional Classification	Year 2035 Future ADT	Project ADT	Future With Project ADT	Capacity (LOS E)	V/C	LOS	Change in V/C	Signif Impact?	Jurisdiction
Santa Fe Drive	Regal Road to Gardena Road	2-Lane Local Roadway - Augmented	16,100	900	17,000	20,000	0.850	D	0.045	No	Encinitas
	Gardena Road to Nardo Road	2-Lane Local Roadway - Augmented	16,100	900	17,000	20,000	0.850	D	0.045	No	Encinitas
	Nardo Road to Windsor Road/Bonita Drive	2-Lane Local Roadway - Augmented	17,700	900	18,600	20,000	0.930	E	0.045	Yes	Encinitas
	Windsor Road/Bonita Drive to Balour Drive	2-Lane Local Roadway - Augmented	17,700	1,000	18,700	20,000	0.935	E	0.050	Yes	Encinitas
	Balour Drive to Lake Drive	2-Lane Local Roadway - Augmented	18,600	1,100	19,700	20,000	0.985	E	0.055	Yes	Encinitas
	Lake Drive to Crest Drive	2-Lane Local Roadway - Augmented	17,700	1,100	18,800	20,000	0.940	E	0.055	Yes	Encinitas
	Crest Drive to El Camino Real	2-Lane Local Roadway - Augmented	17,700	1,100	18,800	20,000	0.940	E	0.055	Yes	Encinitas
Birmingham Drive	San Elijo Avenue to MacKinnon Avenue	2-Lane Local Roadway - Augmented	15,500	0	15,500	20,000	0.775	C or better	0.000	No	Encinitas
	MacKinnon Avenue to Carol View Drive	2-Lane Local Roadway - Augmented	15,500	0	15,500	20,000	0.775	C or better	0.000	No	Encinitas
	Carol View Drive to I-5 SB Ramps	2-Lane Local Roadway - Augmented	15,500	0	15,500	20,000	0.775	C or better	0.000	No	Encinitas
	I-5 SB Ramps to I-5 NB Ramps	2-Lane Local Roadway	17,400	0	17,400	14,000	1.243	F	0.000	No	Encinitas
	I-5 NB Ramps to Villa Cardiff Drive	2-Lane Local Roadway	8,800	0	8,800	14,000	0.629	C or better	0.000	No	Encinitas
	Villa Cardiff to Playa Riviera	2-Lane Local Roadway	8,800	0	8,800	14,000	0.629	C or better	0.000	No	Encinitas
	Playa Riviera to Freda Lane	2-Lane Local Roadway	8,800	0	8,800	14,000	0.629	C or better	0.000	No	Encinitas
	Freda Lane to Lake Drive	2-Lane Local Roadway	8,800	0	8,800	14,000	0.629	C or better	0.000	No	Encinitas

Intersection Analysis

The results of the Future Year 2035 With Project Conditions intersection analysis are summarized on Table 5. This table shows the Without Project and With Project delay for each intersection, and the change in delay due to the project. Review of this table indicates that the 14 intersections forecasted to operate at an unacceptable Level of Service E or F without the project would continue to do so with the implementation of the project. Of the 14 deficient intersections, the project impact would be significant at the following 3 intersections:

- Int. # 6 – Vulcan Avenue at La Costa Avenue – AM LOS E, PM LOS E
- Int. # 17 – Saxony Road at Leucadia Boulevard – AM LOS E, PM LOS E
- Int. # 45 – Balour Drive at Santa Fe Drive – AM LOS F, PM LOS F

Of these three intersections, Intersection #6 and #51 were identified as being significantly impacted by the project previously analyzed in the 2016 PEIR TIS. Intersection #17 is a new significantly impacted location. Mitigation measures to address the intersection impacts are presented in the Mitigation Measures section of this report.

MITIGATION MEASURES

Roadway Segment Mitigation

Improvements were identified that would achieve improved Level of Service under Future Year 2035 conditions for the impacted roadway segments. In each case, these improvements were identified previously as mitigation in the 2016 PEIR TIS. The significant traffic impact associated with the currently proposed project would be fully mitigated with the implementation of the recommended improvements.

La Costa Avenue: N. Coast Highway 101 to Vulcan Avenue – Provide additional right-of-way and widen the roadway to a 4-Lane Collector. This improvement is consistent with the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

La Costa Avenue: Vulcan Avenue to Sheridan Road – Provide additional right-of-way and widen the roadway to a 4-Lane Collector. This improvement is consistent with the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Encinitas Boulevard: I-5 SB Ramps to I-5 NB Ramps – Provide additional right-of-way and widen the roadway to a 4-Lane Major Roadway Augmented. This improvement exceeds the roadway classification designation in the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

TABLE 5
SUMMARY OF INTERSECTION OPERATION
FUTURE YEAR 2035 WITH PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Project Impact	Impact Sig?	Without Project		With Project		Project Impact	Impact Sig?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Carlsbad Blvd & Poinsettia Ln	S	11.7	B	11.7	B	0.0	No	10.6	B	10.6	B	0.0	No
2	I-5 SB Ramp/I-5 SB Ramp & Poinsettia Ln	S	15.2	B	15.2	B	0.0	No	21.6	C	21.6	C	0.0	No
3	I-5 NB Ramp/I-5 NB Ramp & Poinsettia Ln	S	32.4	C	32.4	C	0.0	No	29.7	C	29.7	C	0.0	No
4	Aviara Parkway & Poinsettia Ln	S	29.1	C	29.1	C	0.0	No	30.8	C	30.8	C	0.0	No
5	Highway 101/Carlsbad Blvd & La Costa Ave	S	18.8	B	19.1	B	0.3	No	16.8	B	17.5	B	0.7	No
6	Vulcan Ave & La Costa Ave	U	45.2	E	58.6	F	13.4	Yes	99.1	F	124.5	F	25.4	Yes
7	I-5 SB Ramp/I-5 SB Ramp & La Costa Ave	S	44.3	D	44.9	D	0.6	No	34.1	C	34.6	C	0.5	No
8	I-5 NB Ramp/I-5 NB Ramp & La Costa Ave	S	28.2	C	28.5	C	0.3	No	31.2	C	31.6	C	0.4	No
9	Piraeus Street & La Costa Ave	S	22.4	C	23.3	C	0.9	No	34.9	C	37.2	D	2.3	No
10	Saxony Rd & La Costa Ave	S	19.2	B	20.0	B	0.8	No	28.3	C	29.6	C	1.3	No
11	El Camino Real & La Costa Ave	S	51.7	D	51.8	D	0.1	No	58.3	E	59.0	E	0.7	No
12	Highway 101 & Leucadia Blvd	S	30.1	C	31.3	C	1.2	No	35.3	D	39.8	D	4.5	No
13	Vulcan Ave & Leucadia Blvd	S	12.5	B	13.0	B	0.5	No	11.9	B	12.5	B	0.6	No
14	Orpheus Ave & Leucadia Blvd	S	17.1	B	17.1	B	0.0	No	16.5	B	16.5	B	0.0	No
15	I-5 SB Ramp/I-5 SB Ramp & Leucadia Blvd	S	14.5	B	14.8	B	0.3	No	16.3	B	16.5	B	0.2	No
16	I-5 NB Ramp/I-5 NB Ramp & Leucadia Blvd	S	13.3	B	13.3	B	0.0	No	36.4	D	38.3	D	1.9	No
17	Saxony Rd & Leucadia Blvd	S	60.8	E	62.2	E	1.4	No	79.4	E	84.0	F	4.6	Yes
18	Quail Gardens Dr & Leucadia Blvd	S	31.8	C	35.8	D	4.0	No	42.8	D	49.2	D	6.4	No
19	Garden View Rd/Barcelona & Leucadia Blvd	S	47.1	D	46.8	D	-0.3	No	53.7	D	55.0	D	1.3	No
20	Town Center Place & Leucadia Blvd	S	24.6	C	24.2	C	-0.4	No	43.9	D	43.7	D	-0.2	No
21	El Camino Real & Leucadia Blvd/Olivenhain R	S	48.7	D	49.9	D	1.2	No	67.3	E	68.5	E	1.2	No
22	El Camino Real & Town Center Dr	S	11.6	B	11.5	B	-0.1	No	23.5	C	23.4	C	-0.1	No
23	El Camino Real & Garden View Rd	S	27.7	C	27.7	C	0.0	No	49.6	D	50.1	D	0.5	No
24	El Camino Real & Mountain Vista Dr	S	49.4	D	49.5	D	0.1	No	30.9	C	31.5	C	0.6	No
25	Rancho Santa Fe Rd & Lone Jack Rd	U	40.1	E	40.6	E	0.5	No	41.1	E	41.8	E	0.7	No
26	El Camino Real & Via Molena	S	27.0	C	26.7	C	-0.3	No	35.1	D	33.8	C	-1.3	No
27	Rancho Santa Fe Rd & El Camino Del Norte	U	34.6	D	35.0	D	0.4	No	41.9	E	42.4	E	0.5	No
28	Highway 101 & Encinitas Blvd	S	35.3	D	39.8	D	4.5	No	34.0	C	35.2	D	1.2	No
29	Vulcan Ave & Encinitas Blvd	S	39.1	D	40.9	D	1.8	No	32.3	C	35.6	D	3.3	No
30	I-5 SB Ramp/I-5 SB Ramp & Encinitas Blvd	S	29.1	C	31.2	C	2.1	No	47.8	D	53.8	D	6.0	No

TABLE 5
SUMMARY OF INTERSECTION OPERATION
FUTURE YEAR 2035 WITH PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Project Impact	Impact Sig?	Without Project		With Project		Project Impact	Impact Sig?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
31	I-5 NB Ramp/I-5 NB Ramp & Encinitas Blvd	S	20.9	C	20.7	C	-0.2	No	27.5	C	29.3	C	1.8	No
32	Encinitas Blvd & Saxony Rd	S	32.0	C	30.9	C	-1.1	No	17.3	B	17.1	B	-0.2	No
33	Westlake Dr/Quail Gardens Dr & Encinitas Bl	S	32.2	C	35.3	D	3.1	No	53.9	D	53.6	D	-0.3	No
34	Balour Dr & Encinitas Blvd	S	12.1	B	12.8	B	0.7	No	17.7	B	22.7	C	5.0	No
35	Encinitas Blvd & Via Cantebria	S	21.5	C	21.8	C	0.3	No	20.7	C	21.4	C	0.7	No
36	El Camino Real & Encinitas Blvd	S	50.7	D	48.8	D	-1.9	No	70.4	E	70.9	E	0.5	No
37	Village Square Dr & Encinitas Blvd	S	18.4	B	18.6	B	0.2	No	44.5	D	44.4	D	-0.1	No
38	Encinitas Blvd & Village Park Way	S	26.0	C	26.5	C	0.5	No	44.8	D	46.8	D	2.0	No
39	Manchester/Rancho Santa Fe & Encinitas Blv	S	77.1	E	77.7	E	0.6	No	48.0	D	49.3	D	1.3	No
40	San Elijo Ave/Vulcan Ave & Santa Fe Dr	U	37.0	E	38.5	E	1.5	No	18.8	C	19.8	C	1.0	No
41	I-5 SB Ramp/I-5 SB Ramp & Santa Fe Dr	S	24.3	C	27.6	C	3.3	No	30.7	C	32.0	C	1.3	No
42	Santa Fe Dr & I-5 NB Ramp	S	5.5	A	5.6	A	0.1	No	4.1	A	4.0	A	-0.1	No
43	I-5 NB Ramp/Regal Rd & Santa Fe Dr	S	38.5	D	40.1	D	1.6	No	42.9	D	42.3	D	-0.6	No
44	MacKinnon Ave/Nardo Rd & Santa Fe Dr	S	28.5	C	30.3	C	1.8	No	20.1	C	21.8	C	1.7	No
45	Santa Fe Dr & Balour Dr	U	84.7	F	137.5	F	52.8	Yes	51.7	F	117.9	F	66.2	Yes
46	Lake Dr & Santa Fe Dr	S	9.3	A	9.8	A	0.5	No	8.9	A	9.4	A	0.5	No
47	El Camino Real & Santa Fe Dr	S	20.0	B	23.6	C	3.6	No	23.4	C	29.3	C	5.9	No
48	San Elijo Ave & Birmingham Dr	S	13.0	B	13.0	B	0.0	No	24.2	C	24.2	C	0.0	No
49	I-5 SB Ramp/I-5 SB Ramp & Birmingham Dr	U	250.6	F	250.6	F	0.0	No	47.5	E	47.5	E	0.0	No
50	I-5 NB Ramp/I-5 NB Ramp & Birmingham Dr	U	45.5	E	45.5	E	0.0	No	41.1	E	41.1	E	0.0	No
51	Manchester Ave & I-5 SB Ramps	U	54.5	F	54.5	F	0.0	No	35.5	E	35.5	E	0.0	No
52	Manchester Ave & I-5 NB Ramps	S	57.5	E	58.2	E	0.7	No	45.0	D	45.3	D	0.3	No
53	Manchester Ave & El Camino Real	S	36.2	D	37.4	D	1.2	No	38.8	D	40.8	D	2.0	No

Notes:
Bold and shaded values indicate intersections operating at LOS E or F or significant impact to intersection per City standards.
Delay values are based on the methodology outlined in the 2010 Highway Capacity Manual.
At a signalized intersection and an all-way stop-controlled intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst movement.
S = Signalized; U = Unsignalized; LOS = Level of Service

Encinitas Boulevard: I-5 NB Ramps to Saxony Road – Provide additional right-of-way and widen the roadway to a 6-Lane Prime Arterial. This improvement is consistent with the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Encinitas Boulevard: Quail Gardens Drive to Delphinium Street – Provide additional right-of-way and widen the roadway to a 6-Lane Prime Arterial. This improvement is consistent with the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Encinitas Boulevard: Delphinium Street to Balour Drive – Provide additional right-of-way and widen the roadway to a 6-Lane Prime Arterial. This improvement is consistent with the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Encinitas Boulevard: Balour Drive to Via Cantebria – Provide additional right-of-way and widen the roadway to a 6-Lane Prime Arterial. This improvement is consistent with the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS D.

Santa Fe Drive: Nardo Road to Windsor Road/Bonita Drive – Provide additional right-of-way and widen the roadway to a 4-Lane Collector. This improvement exceeds the roadway classification designation in the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Santa Fe Drive: Windsor Road/Bonita Drive to Balour – Provide additional right-of-way and widen the roadway to a 4-Lane Collector. This improvement exceeds the roadway classification designation in the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Santa Fe Drive: Balour Drive to Lake Drive – Provide additional right-of-way and widen the roadway to a 4-Lane Collector. This improvement exceeds the roadway classification designation in the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Santa Fe Drive: Lake Drive to Crest Drive – Provide additional right-of-way and widen the roadway to a 4-Lane Collector. This improvement exceeds the roadway classification designation in the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Santa Fe Drive: Crest Drive to El Camino Real – Provide additional right-of-way and widen the roadway to a 4-Lane Collector. This improvement exceeds the roadway classification designation in the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

S. Rancho Santa Fe Road: City of Encinitas Limits to El Mirlo – Provide additional right-of-way and widen the roadway to a 2-Lane Community Collector with Improvement Options. This improvement exceeds the roadway classification designation in the currently adopted Circulation Element. The resulting Level of Service with implementation of this improvement would be LOS C or better.

Intersection Mitigation

The project would have a significant impact at three study intersections. The following intersection improvements would fully mitigate the project impacts.

Int. # 6 – Vulcan Avenue at La Costa Avenue – Signalization of the intersection would improve the peak hour operations to LOS C in both the morning and evening peak hours.

Int. # 17 – Saxony Road at Leucadia Boulevard – The project would have a significant impact on this intersection in the PM peak hour, adding 4.6 seconds of delay per vehicle, and causing the intersection to worsen from LOS E to LOS F. The recommended mitigation is modification of the signal operation to convert the northbound and southbound approaches from protected left-turn operation to protected-permissive left-turn operation. This improvement would reduce the peak hour delay by 10.0 seconds in the evening peak hour, and would improve the Level of Service back to LOS E. The final PM peak hour delay would be 5.4 seconds per vehicle better (less) than the Without Project condition in the PM peak hour. The project impact would be fully mitigated with this improvement.

Int. # 45 – Balour Drive at Santa Fe Drive – Signalization of the intersection and the addition of a 2nd eastbound left-turn lane would mitigate the project impact and would improve the intersection operations to LOS D in the morning peak hour and LOS C in the evening peak hour.

APPENDIX A

INTERSECTION ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	370	0	90	10	280	130	160	1050	30
Future Volume (veh/h)	10	20	10	370	0	90	10	280	130	160	1050	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	22	11	402	0	98	11	304	141	174	1141	33
Adj No. of Lanes	1	1	1	2	0	1	1	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	2	2	2	2	2	2	2
Cap, veh/h	319	335	271	0	0	0	20	1455	635	282	1705	739
Arrive On Green	0.18	0.18	0.18	0.00	0.00	0.00	0.01	0.41	0.41	0.08	0.48	0.48
Sat Flow, veh/h	1774	1863	1509		0		1774	3539	1543	3442	3539	1533
Grp Volume(v), veh/h	11	22	11		0.0		11	304	141	174	1141	33
Grp Sat Flow(s),veh/h/ln	1774	1863	1509				1774	1770	1543	1721	1770	1533
Q Serve(g_s), s	0.3	0.5	0.3				0.3	2.8	3.0	2.5	12.4	0.6
Cycle Q Clear(g_c), s	0.3	0.5	0.3				0.3	2.8	3.0	2.5	12.4	0.6
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	335	271				20	1455	635	282	1705	739
V/C Ratio(X)	0.03	0.07	0.04				0.55	0.21	0.22	0.62	0.67	0.04
Avail Cap(c_a), veh/h	1197	1256	1018				141	2205	961	451	2387	1034
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	17.2	17.1				24.8	9.6	9.6	22.4	10.0	6.9
Incr Delay (d2), s/veh	0.1	0.1	0.1				8.3	0.1	0.2	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.1				0.2	1.4	1.3	1.2	6.1	0.2
LnGrp Delay(d),s/veh	17.1	17.3	17.2				33.1	9.6	9.8	23.2	10.5	6.9
LnGrp LOS	B	B	B				C	A	A	C	B	A
Approach Vol, veh/h		44						456			1348	
Approach Delay, s/veh		17.2						10.2			12.0	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	8.6	27.2		14.6	5.1	30.8		
Change Period (Y+Rc), s	4.5	6.5		5.5	4.5	6.5		
Max Green Setting (Gmax), s	6.6	31.4		34.0	4.0	34.0		
Max Q Clear Time (g_c+I1), s	4.5	5.0		2.5	2.3	14.4		
Green Ext Time (p_c), s	0.1	11.4		0.2	0.0	9.8		

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	530	120	460	780	0	0	0	0	230	5	245
Future Volume (veh/h)	0	530	120	460	780	0	0	0	0	230	5	245
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	576	130	500	848	0				254	0	266
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1144	494	617	2100	0				744	0	332
Arrive On Green	0.00	0.32	0.32	0.18	0.59	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	3632	1528	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	576	130	500	848	0				254	0	266
Grp Sat Flow(s),veh/h/ln	0	1770	1528	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	6.8	3.3	7.2	6.6	0.0				3.2	0.0	8.3
Cycle Q Clear(g_c), s	0.0	6.8	3.3	7.2	6.6	0.0				3.2	0.0	8.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1144	494	617	2100	0				744	0	332
V/C Ratio(X)	0.00	0.50	0.26	0.81	0.40	0.00				0.34	0.00	0.80
Avail Cap(c_a), veh/h	0	1326	573	645	2311	0				1097	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.2	13.0	20.4	5.6	0.0				17.4	0.0	19.4
Incr Delay (d2), s/veh	0.0	0.1	0.1	6.8	0.3	0.0				0.1	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	1.4	4.0	3.3	0.0				1.6	0.0	3.9
LnGrp Delay(d),s/veh	0.0	14.3	13.1	27.2	5.9	0.0				17.5	0.0	22.8
LnGrp LOS		B	B	C	A					B		C
Approach Vol, veh/h		706			1348						520	
Approach Delay, s/veh		14.1			13.8						20.2	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.0	21.8		16.0		35.8		
Change Period (Y+Rc), s	4.7	5.1		5.1		5.1		
Max Green Setting (Gmax), s	9.3	19.4		16.0		33.8		
Max Q Clear Time (g_c+I1), s	10.2	8.8		10.3		8.6		
Green Ext Time (p_c), s	0.1	7.6		0.6		14.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	610	0	0	1010	460	320	5	780	0	0	0
Future Volume (veh/h)	150	610	0	0	1010	460	320	5	780	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	163	663	0	0	1098	500	348	5	848			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	205	1886	0	0	1710	513	510	7	812			
Arrive On Green	0.12	0.53	0.00	0.00	0.34	0.34	0.29	0.29	0.29			
Sat Flow, veh/h	1774	3632	0	0	5253	1526	1750	25	2787			
Grp Volume(v), veh/h	163	663	0	0	1098	500	353	0	848			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1526	1775	0	1393			
Q Serve(g_s), s	5.2	6.2	0.0	0.0	10.6	18.8	10.2	0.0	16.9			
Cycle Q Clear(g_c), s	5.2	6.2	0.0	0.0	10.6	18.8	10.2	0.0	16.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	205	1886	0	0	1710	513	517	0	812			
V/C Ratio(X)	0.80	0.35	0.00	0.00	0.64	0.97	0.68	0.00	1.04			
Avail Cap(c_a), veh/h	266	2008	0	0	1710	513	517	0	812			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.0	7.8	0.0	0.0	16.3	19.0	18.2	0.0	20.6			
Incr Delay (d2), s/veh	8.9	0.2	0.0	0.0	0.6	33.1	3.0	0.0	43.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.0	3.1	0.0	0.0	5.0	12.5	5.4	0.0	11.4			
LnGrp Delay(d),s/veh	33.9	8.0	0.0	0.0	16.9	52.1	21.2	0.0	64.3			
LnGrp LOS	C	A			B	D	C		F			
Approach Vol, veh/h		826			1598			1201				
Approach Delay, s/veh		13.1			27.9			51.7				
Approach LOS		B			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		36.0			11.4	24.6		22.0
Change Period (Y+Rc), s		5.1			* 4.7	5.1		5.1
Max Green Setting (Gmax), s		32.9			* 8.7	19.5		16.9
Max Q Clear Time (g_c+I1), s		8.2			7.2	20.8		18.9
Green Ext Time (p_c), s		15.6			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	360	230	20	400	190	250	270	30	110	230	120
Future Volume (veh/h)	390	360	230	20	400	190	250	270	30	110	230	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	424	391	250	22	435	207	272	293	26	120	250	34
Adj No. of Lanes	2	1	2	1	2	0	2	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	514	524	1051	225	617	291	357	594	52	153	512	69
Arrive On Green	0.15	0.28	0.28	0.13	0.27	0.27	0.10	0.18	0.18	0.09	0.16	0.16
Sat Flow, veh/h	3442	1863	2709	1774	2322	1093	3442	3284	289	1774	3130	420
Grp Volume(v), veh/h	424	391	250	22	331	311	272	157	162	120	140	144
Grp Sat Flow(s),veh/h/ln	1721	1863	1354	1774	1770	1645	1721	1770	1804	1774	1770	1781
Q Serve(g_s), s	8.7	13.8	1.8	0.8	12.2	12.4	5.6	5.8	5.9	4.8	5.2	5.3
Cycle Q Clear(g_c), s	8.7	13.8	1.8	0.8	12.2	12.4	5.6	5.8	5.9	4.8	5.2	5.3
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.16	1.00		0.24
Lane Grp Cap(c), veh/h	514	524	1051	225	471	437	357	320	326	153	289	291
V/C Ratio(X)	0.83	0.75	0.24	0.10	0.70	0.71	0.76	0.49	0.50	0.79	0.48	0.49
Avail Cap(c_a), veh/h	547	965	1692	225	734	682	357	758	773	233	807	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	23.7	4.2	27.9	24.0	24.1	31.6	26.6	26.7	32.4	27.5	27.6
Incr Delay (d2), s/veh	9.6	3.0	0.2	0.1	2.7	3.1	9.0	1.4	1.4	7.4	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	7.5	1.0	0.4	6.3	6.0	3.1	2.9	3.1	2.6	2.6	2.7
LnGrp Delay(d),s/veh	39.4	26.7	4.3	28.1	26.7	27.1	40.6	28.0	28.1	39.9	29.0	29.1
LnGrp LOS	D	C	A	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1065			664			591			404	
Approach Delay, s/veh		26.5			26.9			33.8			32.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	19.1	15.2	26.4	13.0	17.8	16.3	25.2
Change Period (Y+Rc), s	5.5	6.0	6.0	* 6	5.5	6.0	5.5	6.0
Max Green Setting (Gmax), s	6.5	31.0	4.0	* 38	7.5	33.0	11.5	30.0
Max Q Clear Time (g_c+I1), s	6.8	7.9	2.8	15.8	7.6	7.3	10.7	14.4
Green Ext Time (p_c), s	0.0	4.4	0.6	4.5	0.0	4.5	0.2	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	390	130	230	220	360	1250
Future Volume (veh/h)	390	130	230	220	360	1250
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	424	0	250	0	391	1359
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	490	437	865	387	439	1970
Arrive On Green	0.28	0.00	0.24	0.00	0.25	0.56
Sat Flow, veh/h	1774	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	424	0	250	0	391	1359
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1774	1770
Q Serve(g_s), s	14.0	0.0	3.5	0.0	13.1	17.0
Cycle Q Clear(g_c), s	14.0	0.0	3.5	0.0	13.1	17.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	490	437	865	387	439	1970
V/C Ratio(X)	0.87	0.00	0.29	0.00	0.89	0.69
Avail Cap(c_a), veh/h	778	694	1247	558	490	2454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	18.9	0.0	22.4	9.8
Incr Delay (d2), s/veh	6.1	0.0	0.2	0.0	16.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	1.8	0.0	8.4	8.3
LnGrp Delay(d),s/veh	27.3	0.0	19.1	0.0	38.3	10.4
LnGrp LOS	C		B		D	B
Approach Vol, veh/h	424		250			1750
Approach Delay, s/veh	27.3		19.1			16.7
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	19.2	20.3		22.0		39.6		
Change Period (Y+Rc), s	4.0	5.3		5.0		5.3		
Max Green Setting (Gmax), s	17.0	21.7		27.0		42.7		
Max Q Clear Time (g_c+I1), s	15.1	5.5		16.0		19.0		
Green Ext Time (p_c), s	0.1	9.5		1.0		11.9		

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	9.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	450	110	230	470	60	230
Future Vol, veh/h	450	110	230	470	60	230
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	489	120	250	511	65	250

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	612	0	1563	552
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	1011	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	967	-	123	533
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	352	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	967	-	78	532
Mov Cap-2 Maneuver	-	-	-	-	78	-
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	225	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	45.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	78	532	-	-	967	-
HCM Lane V/C Ratio	0.836	0.47	-	-	0.259	-
HCM Control Delay (s)	151.1	17.6	-	-	10	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	4.2	2.5	-	-	1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	750	240	640	490	0	0	0	0	700	15	340
Future Volume (veh/h)	0	750	240	640	490	0	0	0	0	700	15	340
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	815	261	696	533	0				772	0	207
Adj No. of Lanes	0	2	0	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	870	279	1003	2365	0				853	0	381
Arrive On Green	0.00	0.33	0.33	0.29	0.67	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	2732	845	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	546	530	696	533	0				772	0	207
Grp Sat Flow(s),veh/h/ln	0	1770	1714	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	34.4	34.5	20.7	6.8	0.0				24.3	0.0	13.1
Cycle Q Clear(g_c), s	0.0	34.4	34.5	20.7	6.8	0.0				24.3	0.0	13.1
Prop In Lane	0.00		0.49	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	584	565	1003	2365	0				853	0	381
V/C Ratio(X)	0.00	0.94	0.94	0.69	0.23	0.00				0.90	0.00	0.54
Avail Cap(c_a), veh/h	0	609	590	1003	2365	0				1006	0	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.4	37.4	36.2	7.5	0.0				42.4	0.0	38.2
Incr Delay (d2), s/veh	0.0	24.4	25.1	1.8	0.2	0.0				9.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	20.8	20.3	10.0	3.3	0.0				13.0	0.0	5.8
LnGrp Delay(d),s/veh	0.0	61.8	62.5	37.9	7.7	0.0				51.8	0.0	38.6
LnGrp LOS		E	E	D	A					D		D
Approach Vol, veh/h		1076			1229						979	
Approach Delay, s/veh		62.1			24.8						49.0	
Approach LOS		E			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	38.9	43.3		32.8		82.2		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	27.6	* 40		32.6		71.9		
Max Q Clear Time (g_c+I1), s	22.7	36.5		26.3		8.8		
Green Ext Time (p_c), s	1.9	1.5		1.4		3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	1160	0	0	1040	610	90	5	600	0	0	0
Future Volume (veh/h)	280	1160	0	0	1040	610	90	5	600	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	304	1261	0	0	1130	89	98	5	390			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	340	2614	0	0	2574	802	276	14	454			
Arrive On Green	0.19	0.74	0.00	0.00	0.17	0.17	0.16	0.16	0.16			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1692	86	2787			
Grp Volume(v), veh/h	304	1261	0	0	1130	89	103	0	390			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1778	0	1393			
Q Serve(g_s), s	19.2	16.6	0.0	0.0	23.0	5.5	5.9	0.0	15.7			
Cycle Q Clear(g_c), s	19.2	16.6	0.0	0.0	23.0	5.5	5.9	0.0	15.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	340	2614	0	0	2574	802	290	0	454			
V/C Ratio(X)	0.89	0.48	0.00	0.00	0.44	0.11	0.36	0.00	0.86			
Avail Cap(c_a), veh/h	437	2614	0	0	2574	802	462	0	725			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.94	0.94	1.00	0.00	1.00			
Uniform Delay (d), s/veh	45.3	6.1	0.0	0.0	33.2	25.9	42.8	0.0	46.8			
Incr Delay (d2), s/veh	18.7	0.6	0.0	0.0	0.5	0.3	0.3	0.0	3.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.2	8.3	0.0	0.0	10.9	2.5	2.9	0.0	6.2			
LnGrp Delay(d),s/veh	64.0	6.7	0.0	0.0	33.7	26.2	43.0	0.0	50.3			
LnGrp LOS	E	A			C	C	D		D			
Approach Vol, veh/h		1565			1219			493				
Approach Delay, s/veh		17.9			33.2			48.8				
Approach LOS		B			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		91.2			26.7	64.4		23.8
Change Period (Y+Rc), s		* 6.2			* 4.7	6.2		5.1
Max Green Setting (Gmax), s		* 74			* 28	40.8		29.9
Max Q Clear Time (g_c+I1), s		18.6			21.2	25.0		17.7
Green Ext Time (p_c), s		17.4			0.8	10.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1550	220	85	1475	130	90
Future Volume (veh/h)	1550	220	85	1475	130	90
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1685	212	92	1603	141	98
Adj No. of Lanes	2	0	1	4	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1837	226	258	5054	185	165
Arrive On Green	0.58	0.58	0.15	0.79	0.10	0.10
Sat Flow, veh/h	3256	389	1774	6669	1774	1583
Grp Volume(v), veh/h	926	971	92	1603	141	98
Grp Sat Flow(s),veh/h/ln	1770	1782	1774	1602	1774	1583
Q Serve(g_s), s	53.0	57.7	5.4	8.1	8.9	6.8
Cycle Q Clear(g_c), s	53.0	57.7	5.4	8.1	8.9	6.8
Prop In Lane		0.22	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1028	1035	258	5054	185	165
V/C Ratio(X)	0.90	0.94	0.36	0.32	0.76	0.59
Avail Cap(c_a), veh/h	1136	1144	258	5054	214	191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	22.2	44.3	3.4	50.1	49.2
Incr Delay (d2), s/veh	9.5	12.9	0.3	0.2	10.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.4	31.8	2.7	3.6	4.9	3.0
LnGrp Delay(d),s/veh	30.7	35.1	44.6	3.6	60.6	50.8
LnGrp LOS	C	D	D	A	E	D
Approach Vol, veh/h	1897			1695	239	
Approach Delay, s/veh	32.9			5.8	56.6	
Approach LOS	C			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.9	74.0				97.9		17.1
Change Period (Y+Rc), s	7.2	* 7.2				7.2		5.1
Max Green Setting (Gmax), s	10.3	* 74				88.8		13.9
Max Q Clear Time (g_c+I1), s	7.4	59.7				10.1		10.9
Green Ext Time (p_c), s	2.8	7.1				58.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1460	180	175	1490	70	120
Future Volume (veh/h)	1460	180	175	1490	70	120
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1587	196	190	1620	76	130
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1800	219	219	2668	196	175
Arrive On Green	0.57	0.57	0.12	0.75	0.11	0.11
Sat Flow, veh/h	3261	385	1774	3632	1774	1583
Grp Volume(v), veh/h	875	908	190	1620	76	130
Grp Sat Flow(s),veh/h/ln	1770	1783	1774	1770	1774	1583
Q Serve(g_s), s	34.1	36.3	8.5	16.8	3.2	6.4
Cycle Q Clear(g_c), s	34.1	36.3	8.5	16.8	3.2	6.4
Prop In Lane		0.22	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1006	1013	219	2668	196	175
V/C Ratio(X)	0.87	0.90	0.87	0.61	0.39	0.74
Avail Cap(c_a), veh/h	1006	1014	219	2669	614	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	15.4	34.8	4.5	33.4	34.9
Incr Delay (d2), s/veh	8.9	11.0	27.5	0.6	1.3	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	20.8	5.8	8.3	1.7	3.1
LnGrp Delay(d),s/veh	23.8	26.4	62.3	5.1	34.7	41.0
LnGrp LOS	C	C	E	A	C	D
Approach Vol, veh/h	1783			1810	206	
Approach Delay, s/veh	25.1			11.1	38.7	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.9	15.0	52.0				67.0
Change Period (Y+Rc), s		5.0	5.0	6.0				6.0
Max Green Setting (Gmax), s		28.0	10.0	46.0				61.0
Max Q Clear Time (g_c+I1), s		8.4	10.5	38.3				18.8
Green Ext Time (p_c), s		0.6	0.0	7.7				41.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	720	320	380	220	800	270	255	940	90	100	1220	590
Future Volume (veh/h)	720	320	380	220	800	270	255	940	90	100	1220	590
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	783	348	304	239	870	239	277	1022	87	109	1326	641
Adj No. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	819	1259	554	262	897	395	317	1222	104	534	1686	894
Arrive On Green	0.24	0.36	0.36	0.15	0.25	0.25	0.15	0.43	0.43	0.26	0.55	0.55
Sat Flow, veh/h	3442	3539	1558	1774	3539	1561	3442	4765	405	3442	5085	1559
Grp Volume(v), veh/h	783	348	304	239	870	239	277	727	382	109	1326	641
Grp Sat Flow(s),veh/h/ln	1721	1770	1558	1774	1770	1561	1721	1695	1779	1721	1695	1559
Q Serve(g_s), s	33.7	10.5	23.4	19.9	36.5	20.2	11.8	28.6	28.7	3.7	30.9	15.8
Cycle Q Clear(g_c), s	33.7	10.5	23.4	19.9	36.5	20.2	11.8	28.6	28.7	3.7	30.9	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	819	1259	554	262	897	395	317	869	456	534	1686	894
V/C Ratio(X)	0.96	0.28	0.55	0.91	0.97	0.60	0.87	0.84	0.84	0.20	0.79	0.72
Avail Cap(c_a), veh/h	821	1259	554	375	897	395	317	1049	550	534	1686	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	34.5	38.7	63.0	55.4	49.4	62.6	40.1	40.1	48.3	29.3	7.3
Incr Delay (d2), s/veh	21.4	0.1	0.9	16.8	23.0	2.6	22.0	9.4	16.6	0.1	3.8	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	5.2	10.2	11.0	20.7	9.0	6.5	14.4	16.1	1.8	14.9	8.2
LnGrp Delay(d),s/veh	77.7	34.6	39.6	79.7	78.4	52.0	84.6	49.4	56.7	48.4	33.1	12.2
LnGrp LOS	E	C	D	E	E	D	F	D	E	D	C	B
Approach Vol, veh/h		1435			1348			1386			2076	
Approach Delay, s/veh		59.2			74.0			58.5			27.4	
Approach LOS		E			E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.3	44.5	26.3	59.2	18.0	55.7	41.5	44.0
Change Period (Y+Rc), s	6.0	* 6	* 4.2	5.8	* 4.2	6.0	5.8	* 6
Max Green Setting (Gmax), s	9.4	* 46	* 32	42.3	* 14	42.0	35.8	* 38
Max Q Clear Time (g_c+I1), s	5.7	30.7	21.9	25.4	13.8	32.9	35.7	38.5
Green Ext Time (p_c), s	3.3	7.7	0.2	6.5	0.0	7.6	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	70	20	210	60	130	10	200	90	330	1220	40
Future Volume (veh/h)	30	70	20	210	60	130	10	200	90	330	1220	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.94	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	33	76	22	217	80	141	11	217	98	359	1326	43
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	96	28	360	118	208	19	891	699	400	1524	49
Arrive On Green	0.09	0.09	0.09	0.20	0.20	0.20	0.01	0.25	0.25	0.23	0.44	0.44
Sat Flow, veh/h	443	1020	295	1774	582	1026	1774	3539	1501	1774	3494	113
Grp Volume(v), veh/h	131	0	0	217	0	221	11	217	98	359	671	698
Grp Sat Flow(s),veh/h/ln	1759	0	0	1774	0	1609	1774	1770	1501	1774	1770	1838
Q Serve(g_s), s	6.0	0.0	0.0	9.1	0.0	10.4	0.5	4.0	3.1	16.1	28.2	28.3
Cycle Q Clear(g_c), s	6.0	0.0	0.0	9.1	0.0	10.4	0.5	4.0	3.1	16.1	28.2	28.3
Prop In Lane	0.25		0.17	1.00		0.64	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	166	0	0	360	0	327	19	891	699	400	772	801
V/C Ratio(X)	0.79	0.00	0.00	0.60	0.00	0.68	0.57	0.24	0.14	0.90	0.87	0.87
Avail Cap(c_a), veh/h	344	0	0	607	0	551	87	891	699	596	889	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	0.0	29.6	0.0	30.1	40.3	24.4	13.0	30.7	21.0	21.0
Incr Delay (d2), s/veh	3.1	0.0	0.0	0.6	0.0	0.9	9.6	0.1	0.0	8.8	7.5	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	4.5	0.0	4.7	0.3	2.0	1.8	8.9	15.2	15.8
LnGrp Delay(d),s/veh	39.4	0.0	0.0	30.2	0.0	31.0	49.9	24.5	13.0	39.5	28.5	28.4
LnGrp LOS	D			C		C	D	C	B	D	C	C
Approach Vol, veh/h		131			438			326			1728	
Approach Delay, s/veh		39.4			30.6			21.9			30.8	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	25.9		12.2	6.9	41.0		21.7
Change Period (Y+Rc), s	3.5	5.3		4.5	6.0	5.3		5.1
Max Green Setting (Gmax), s	7.5	20.1		16.0	4.0	41.1		28.0
Max Q Clear Time (g_c+I1), s	8.1	6.0		8.0	2.5	30.3		12.4
Green Ext Time (p_c), s	0.4	6.4		0.2	0.0	5.4		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	270	190	120	330	40	40	60	100	50	350	50
Future Volume (veh/h)	40	270	190	120	330	40	40	60	100	50	350	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	293	207	130	359	43	43	65	87	54	380	54
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	523	496	350	402	1163	138	249	230	308	457	507	72
Arrive On Green	0.05	0.49	0.49	0.37	0.37	0.37	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	1006	711	889	3175	377	949	721	965	1225	1591	226
Grp Volume(v), veh/h	43	0	500	130	199	203	43	0	152	54	0	434
Grp Sat Flow(s),veh/h/ln	1774	0	1716	889	1770	1783	949	0	1686	1225	0	1817
Q Serve(g_s), s	0.6	0.0	10.1	5.9	3.9	3.9	2.1	0.0	3.3	1.7	0.0	10.3
Cycle Q Clear(g_c), s	0.6	0.0	10.1	9.9	3.9	3.9	12.4	0.0	3.3	4.9	0.0	10.3
Prop In Lane	1.00		0.41	1.00		0.21	1.00		0.57	1.00		0.12
Lane Grp Cap(c), veh/h	523	0	846	402	648	653	249	0	538	457	0	580
V/C Ratio(X)	0.08	0.00	0.59	0.32	0.31	0.31	0.17	0.00	0.28	0.12	0.00	0.75
Avail Cap(c_a), veh/h	1031	0	1489	480	804	810	414	0	833	671	0	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.6	0.0	8.8	14.5	10.9	11.0	20.3	0.0	12.3	14.2	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.7	0.4	0.4	0.1	0.0	0.1	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.9	1.5	1.9	2.0	0.5	0.0	1.5	0.6	0.0	5.3
LnGrp Delay(d),s/veh	7.6	0.0	9.7	15.2	11.3	11.4	20.4	0.0	12.4	14.2	0.0	15.5
LnGrp LOS	A		A	B	B	B	C		B	B		B
Approach Vol, veh/h		543			532			195			488	
Approach Delay, s/veh		9.5			12.3			14.2			15.3	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		27.9		20.5	6.1	21.7		20.5
Change Period (Y+Rc), s		4.0		5.1	3.5	4.0		5.1
Max Green Setting (Gmax), s		42.0		23.9	16.5	22.0		23.9
Max Q Clear Time (g_c+I1), s		12.1		12.3	2.6	11.9		14.4
Green Ext Time (p_c), s		11.0		2.1	0.0	5.8		1.9

Intersection Summary		
HCM 2010 Ctrl Delay		12.5
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	540	30	210	540	210	20	20	170	195	60	40
Future Volume (veh/h)	30	540	30	210	540	210	20	20	170	195	60	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	587	33	228	587	228	22	22	151	212	65	43
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	930	52	481	1208	525	469	64	438	405	324	214
Arrive On Green	0.07	0.27	0.27	0.14	0.34	0.34	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	3404	191	3442	3539	1537	1279	205	1408	1206	1041	689
Grp Volume(v), veh/h	33	305	315	228	587	228	22	0	173	212	0	108
Grp Sat Flow(s),veh/h/ln	1774	1770	1825	1721	1770	1537	1279	0	1613	1206	0	1730
Q Serve(g_s), s	1.0	8.4	8.4	3.4	7.3	6.4	0.7	0.0	4.6	9.1	0.0	2.5
Cycle Q Clear(g_c), s	1.0	8.4	8.4	3.4	7.3	6.4	3.3	0.0	4.6	13.7	0.0	2.5
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.87	1.00		0.40
Lane Grp Cap(c), veh/h	127	484	499	481	1208	525	469	0	502	405	0	538
V/C Ratio(X)	0.26	0.63	0.63	0.47	0.49	0.43	0.05	0.00	0.34	0.52	0.00	0.20
Avail Cap(c_a), veh/h	320	692	713	496	1256	546	878	0	1017	790	0	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.4	17.7	17.7	22.0	14.4	14.1	15.2	0.0	14.8	20.0	0.0	14.0
Incr Delay (d2), s/veh	0.4	0.5	0.5	0.3	0.1	0.2	0.0	0.0	0.2	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.1	4.3	1.6	3.5	2.7	0.3	0.0	2.0	3.0	0.0	1.2
LnGrp Delay(d),s/veh	24.8	18.2	18.2	22.3	14.5	14.3	15.3	0.0	14.9	20.4	0.0	14.1
LnGrp LOS	C	B	B	C	B	B	B		B	C		B
Approach Vol, veh/h		653			1043			195			320	
Approach Delay, s/veh		18.5			16.2			14.9			18.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.9	20.3		22.4	9.1	24.0		22.4
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	8.0	21.7		35.0	10.0	19.7		35.0
Max Q Clear Time (g_c+I1), s	5.4	10.4		15.7	3.0	9.3		6.6
Green Ext Time (p_c), s	0.1	4.6		1.5	0.0	4.4		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	730	270	600	670	0	0	0	0	220	5	140
Future Volume (veh/h)	0	730	270	600	670	0	0	0	0	220	5	140
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	793	293	652	728	0				243	0	152
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1184	521	805	2354	0				504	0	225
Arrive On Green	0.00	0.33	0.33	0.23	0.66	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	3632	1558	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	793	293	652	728	0				243	0	152
Grp Sat Flow(s),veh/h/ln	0	1770	1558	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	10.2	8.1	9.5	4.6	0.0				3.3	0.0	4.8
Cycle Q Clear(g_c), s	0.0	10.2	8.1	9.5	4.6	0.0				3.3	0.0	4.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1184	521	805	2354	0				504	0	225
V/C Ratio(X)	0.00	0.67	0.56	0.81	0.31	0.00				0.48	0.00	0.68
Avail Cap(c_a), veh/h	0	1446	637	1179	3000	0				2350	0	1049
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.1	14.4	19.1	3.7	0.0				20.9	0.0	21.5
Incr Delay (d2), s/veh	0.0	0.5	0.4	1.7	0.0	0.0				0.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	3.6	4.6	2.2	0.0				1.6	0.0	2.2
LnGrp Delay(d),s/veh	0.0	15.6	14.8	20.8	3.8	0.0				21.2	0.0	22.8
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		1086			1380						395	
Approach Delay, s/veh		15.4			11.8						21.8	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.5	22.8		12.6		40.2		
Change Period (Y+Rc), s	5.1	5.1		5.1		5.1		
Max Green Setting (Gmax), s	18.1	21.6		35.0		44.8		
Max Q Clear Time (g_c+I1), s	11.5	12.2		6.8		6.6		
Green Ext Time (p_c), s	0.9	5.4		0.7		10.2		

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	660	0	0	1110	450	170	80	310	0	0	0
Future Volume (veh/h)	240	660	0	0	1110	450	170	80	310	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	261	717	0	0	1207	489	136	156	337			
Adj No. of Lanes	1	2	0	0	3	0	1	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	293	2647	0	0	1858	750	240	252	429			
Arrive On Green	0.28	1.00	0.00	0.00	0.88	0.88	0.14	0.14	0.14			
Sat Flow, veh/h	1774	3632	0	0	3700	1425	1774	1863	3167			
Grp Volume(v), veh/h	261	717	0	0	1158	538	136	156	337			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1568	1774	1863	1583			
Q Serve(g_s), s	12.7	0.0	0.0	0.0	8.7	8.8	6.5	7.1	9.3			
Cycle Q Clear(g_c), s	12.7	0.0	0.0	0.0	8.7	8.8	6.5	7.1	9.3			
Prop In Lane	1.00		0.00	0.00		0.91	1.00		1.00			
Lane Grp Cap(c), veh/h	293	2647	0	0	1783	825	240	252	429			
V/C Ratio(X)	0.89	0.27	0.00	0.00	0.65	0.65	0.57	0.62	0.79			
Avail Cap(c_a), veh/h	392	2647	0	0	1783	825	333	350	595			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.70	0.70	0.00	0.00	0.59	0.59	1.00	1.00	1.00			
Uniform Delay (d), s/veh	31.8	0.0	0.0	0.0	3.1	3.1	36.4	36.7	37.6			
Incr Delay (d2), s/veh	10.9	0.2	0.0	0.0	1.1	2.4	0.8	0.9	3.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.0	0.1	0.0	0.0	4.0	4.0	3.2	3.7	4.3			
LnGrp Delay(d),s/veh	42.7	0.2	0.0	0.0	4.2	5.5	37.2	37.6	40.7			
LnGrp LOS	D	A			A	A	D	D	D			
Approach Vol, veh/h		978			1696			629				
Approach Delay, s/veh		11.5			4.6			39.2				
Approach LOS		B			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		72.7			20.0	52.7		17.3
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		62.6			19.9	37.6		16.9
Max Q Clear Time (g_c+I1), s		2.0			14.7	10.8		11.3
Green Ext Time (p_c), s		21.7			0.2	15.4		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1070	310	290	1160	60	120	70	110	100	250	60
Future Volume (veh/h)	100	1070	310	290	1160	60	120	70	110	100	250	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	109	1163	282	315	1261	58	130	76	120	109	272	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	1217	292	312	1833	84	134	135	213	108	280	67
Arrive On Green	0.07	0.43	0.43	0.18	0.53	0.53	0.08	0.21	0.21	0.06	0.19	0.19
Sat Flow, veh/h	1774	2824	678	1774	3441	158	1774	648	1023	1774	1445	345
Grp Volume(v), veh/h	109	724	721	315	648	671	130	0	196	109	0	337
Grp Sat Flow(s),veh/h/ln	1774	1770	1732	1774	1770	1830	1774	0	1672	1774	0	1791
Q Serve(g_s), s	8.4	54.9	56.5	24.5	37.5	37.7	10.2	0.0	14.6	8.5	0.0	26.0
Cycle Q Clear(g_c), s	8.4	54.9	56.5	24.5	37.5	37.7	10.2	0.0	14.6	8.5	0.0	26.0
Prop In Lane	1.00		0.39	1.00		0.09	1.00		0.61	1.00		0.19
Lane Grp Cap(c), veh/h	132	762	746	312	943	975	134	0	348	108	0	347
V/C Ratio(X)	0.83	0.95	0.97	1.01	0.69	0.69	0.97	0.00	0.56	1.01	0.00	0.97
Avail Cap(c_a), veh/h	198	782	765	312	943	975	134	0	348	108	0	347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.5	38.2	38.6	57.3	24.0	24.0	64.2	0.0	49.4	65.3	0.0	55.7
Incr Delay (d2), s/veh	10.2	20.5	24.0	53.1	2.0	1.9	68.4	0.0	1.3	88.1	0.0	40.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	31.1	32.0	16.6	18.9	19.5	7.5	0.0	6.9	6.8	0.0	16.7
LnGrp Delay(d),s/veh	73.7	58.7	62.6	110.5	25.9	25.9	132.6	0.0	50.7	153.4	0.0	95.6
LnGrp LOS	E	E	E	F	C	C	F		D	F		F
Approach Vol, veh/h		1554			1634			326			446	
Approach Delay, s/veh		61.6			42.2			83.3			109.8	
Approach LOS		E			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	65.3	14.0	31.9	13.8	79.4	12.0	33.9
Change Period (Y+Rc), s	3.5	5.3	3.5	* 4.9	3.5	5.3	3.5	4.9
Max Green Setting (Gmax), s	24.5	61.5	10.5	* 27	15.5	70.5	8.5	28.3
Max Q Clear Time (g_c+I1), s	26.5	58.5	12.2	28.0	10.4	39.7	10.5	16.6
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.1	22.2	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	60.8
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	930	160	390	1180	110	135	55	160	100	100	60
Future Volume (veh/h)	60	930	160	390	1180	110	135	55	160	100	100	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	65	1011	150	424	1283	111	147	60	174	109	109	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	1139	169	455	1907	165	270	386	327	286	386	323
Arrive On Green	0.05	0.37	0.37	0.26	0.58	0.58	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	3087	458	1774	3298	285	1203	1863	1579	1139	1863	1558
Grp Volume(v), veh/h	65	579	582	424	687	707	147	60	174	109	109	65
Grp Sat Flow(s),veh/h/ln	1774	1770	1775	1774	1770	1813	1203	1863	1579	1139	1863	1558
Q Serve(g_s), s	3.3	27.7	27.8	21.1	24.1	24.3	10.6	2.4	8.9	7.8	4.4	3.1
Cycle Q Clear(g_c), s	3.3	27.7	27.8	21.1	24.1	24.3	15.0	2.4	8.9	10.2	4.4	3.1
Prop In Lane	1.00		0.26	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	653	655	455	1023	1048	270	386	327	286	386	323
V/C Ratio(X)	0.78	0.89	0.89	0.93	0.67	0.67	0.54	0.16	0.53	0.38	0.28	0.20
Avail Cap(c_a), veh/h	128	675	677	462	1023	1048	381	557	472	391	557	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	26.7	26.7	32.8	13.1	13.2	36.4	29.3	31.8	33.5	30.1	29.6
Incr Delay (d2), s/veh	6.8	13.9	14.1	25.3	1.8	1.8	0.6	0.1	0.5	0.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	16.0	16.1	13.4	12.2	12.5	3.6	1.2	3.9	2.5	2.3	1.4
LnGrp Delay(d),s/veh	49.4	40.7	40.8	58.1	14.9	15.0	37.1	29.4	32.3	33.8	30.2	29.7
LnGrp LOS	D	D	D	E	B	B	D	C	C	C	C	C
Approach Vol, veh/h		1226			1818			381			283	
Approach Delay, s/veh		41.2			25.0			33.7			31.5	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.6	40.0		23.6	7.7	58.9		23.6
Change Period (Y+Rc), s	3.5	6.7		4.9	3.5	6.7		4.9
Max Green Setting (Gmax), s	23.1	34.4		27.0	6.5	51.4		27.0
Max Q Clear Time (g_c+I1), s	23.1	29.8		12.2	5.3	26.3		17.0
Green Ext Time (p_c), s	0.0	3.5		1.4	0.0	22.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	710	280	200	1210	90	210	90	50	40	160	330
Future Volume (veh/h)	170	710	280	200	1210	90	210	90	50	40	160	330
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	185	772	218	217	1315	86	228	98	54	43	174	359
Adj No. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	539	1412	399	270	1432	93	279	539	277	83	323	288
Arrive On Green	0.26	0.87	0.87	0.13	0.71	0.71	0.08	0.24	0.24	0.02	0.18	0.18
Sat Flow, veh/h	3442	2716	767	3442	3373	220	3442	2251	1157	3442	1770	1581
Grp Volume(v), veh/h	185	503	487	217	689	712	228	76	76	43	174	359
Grp Sat Flow(s),veh/h/ln	1721	1770	1714	1721	1770	1824	1721	1770	1639	1721	1770	1581
Q Serve(g_s), s	5.7	9.3	9.3	8.0	42.0	42.5	8.5	4.4	4.8	1.6	11.6	23.7
Cycle Q Clear(g_c), s	5.7	9.3	9.3	8.0	42.0	42.5	8.5	4.4	4.8	1.6	11.6	23.7
Prop In Lane	1.00		0.45	1.00		0.12	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	539	920	891	270	751	775	279	423	392	83	323	288
V/C Ratio(X)	0.34	0.55	0.55	0.80	0.92	0.92	0.82	0.18	0.20	0.52	0.54	1.25
Avail Cap(c_a), veh/h	539	920	891	357	903	930	304	423	392	146	323	288
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	4.7	4.7	55.5	17.0	17.1	58.8	39.3	39.5	62.7	48.2	53.2
Incr Delay (d2), s/veh	0.4	2.3	2.4	8.0	15.5	15.5	14.7	0.2	0.2	4.8	1.8	136.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.7	4.6	4.1	23.0	24.1	4.6	2.2	2.2	0.8	5.8	21.2
LnGrp Delay(d),s/veh	43.0	7.1	7.2	63.6	32.4	32.6	73.5	39.5	39.7	67.5	50.0	189.4
LnGrp LOS	D	A	A	E	C	C	E	D	D	E	D	F
Approach Vol, veh/h		1175			1618			380			576	
Approach Delay, s/veh		12.8			36.7			59.9			138.2	
Approach LOS		B			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	73.3	14.1	29.0	26.0	60.9	6.7	36.4
Change Period (Y+Rc), s	3.5	5.7	3.5	5.3	5.7	* 5.7	3.5	5.3
Max Green Setting (Gmax), s	10.5	63.3	11.5	23.7	10.5	* 66	5.5	29.7
Max Q Clear Time (g_c+I1), s	11.0	11.3	10.5	25.7	7.7	44.5	3.6	6.8
Green Ext Time (p_c), s	0.2	9.5	0.1	0.0	1.8	10.7	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	680	150	280	1160	260	95	55	155	100	70	100
Future Volume (veh/h)	70	680	150	280	1160	260	95	55	155	100	70	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	76	739	163	304	1261	283	82	90	168	92	99	109
Adj No. of Lanes	2	2	1	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	695	1986	876	357	1589	845	214	225	191	151	159	135
Arrive On Green	0.34	0.94	0.94	0.17	0.75	0.75	0.12	0.12	0.12	0.09	0.09	0.09
Sat Flow, veh/h	3442	3539	1561	3442	3539	1581	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	76	739	163	304	1261	283	82	90	168	92	99	109
Grp Sat Flow(s),veh/h/ln	1721	1770	1561	1721	1770	1581	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.0	2.6	1.0	11.1	28.6	7.0	5.5	5.8	13.6	6.5	6.7	8.8
Cycle Q Clear(g_c), s	2.0	2.6	1.0	11.1	28.6	7.0	5.5	5.8	13.6	6.5	6.7	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	695	1986	876	357	1589	845	214	225	191	151	159	135
V/C Ratio(X)	0.11	0.37	0.19	0.85	0.79	0.33	0.38	0.40	0.88	0.61	0.62	0.81
Avail Cap(c_a), veh/h	695	1986	876	543	2006	1031	232	244	207	205	215	183
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	1.9	1.8	52.7	12.5	7.1	52.7	52.8	56.2	57.4	57.5	58.4
Incr Delay (d2), s/veh	0.0	0.4	0.4	3.0	2.5	0.6	0.4	0.4	29.1	1.5	1.5	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.3	0.5	5.4	13.9	3.7	2.7	3.0	7.5	3.3	3.5	4.3
LnGrp Delay(d),s/veh	35.0	2.3	2.2	55.8	15.0	7.8	53.1	53.2	85.3	58.9	59.0	71.1
LnGrp LOS	D	A	A	E	B	A	D	D	F	E	E	E
Approach Vol, veh/h		978			1848			340			300	
Approach Delay, s/veh		4.8			20.6			69.0			63.3	
Approach LOS		A			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	78.2		15.1	31.6	63.7		19.7
Change Period (Y+Rc), s	3.5	5.3		4.0	5.3	* 5.3		4.0
Max Green Setting (Gmax), s	20.5	60.7		15.0	7.5	* 74		17.0
Max Q Clear Time (g_c+I1), s	13.1	4.6		10.8	4.0	30.6		15.6
Green Ext Time (p_c), s	0.4	15.0		0.3	2.5	27.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	650	190	1160	1390	160	145	665	500	190	1320	140
Future Volume (veh/h)	130	650	190	1160	1390	160	145	665	500	190	1320	140
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	141	707	207	1261	1511	174	158	723	543	207	1435	132
Adj No. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	746	229	1290	2159	248	184	1022	902	341	1567	144
Arrive On Green	0.09	0.24	0.24	0.37	0.47	0.47	0.09	0.34	0.34	0.17	0.44	0.44
Sat Flow, veh/h	3442	5085	1564	3442	4627	532	3442	5085	1537	3442	6010	552
Grp Volume(v), veh/h	141	707	207	1261	1107	578	158	723	543	207	1147	420
Grp Sat Flow(s),veh/h/ln	1721	1695	1564	1721	1695	1769	1721	1695	1537	1721	1602	1756
Q Serve(g_s), s	5.4	18.5	17.3	48.8	34.9	35.0	6.1	16.7	18.8	7.5	30.2	30.4
Cycle Q Clear(g_c), s	5.4	18.5	17.3	48.8	34.9	35.0	6.1	16.7	18.8	7.5	30.2	30.4
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	189	746	229	1290	1582	825	184	1022	902	341	1253	458
V/C Ratio(X)	0.75	0.95	0.90	0.98	0.70	0.70	0.86	0.71	0.60	0.61	0.92	0.92
Avail Cap(c_a), veh/h	260	746	229	1290	1582	825	184	1254	973	341	1253	458
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.4	50.5	50.0	41.6	28.5	28.5	61.0	41.4	5.4	53.9	36.7	36.7
Incr Delay (d2), s/veh	3.9	19.9	32.5	19.7	1.5	2.8	29.2	3.9	2.8	7.8	11.8	25.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	10.0	9.6	26.7	16.6	17.7	3.6	8.2	8.3	4.0	14.6	17.9
LnGrp Delay(d),s/veh	64.3	70.4	82.5	61.4	30.0	31.3	90.2	45.3	8.2	61.7	48.6	62.5
LnGrp LOS	E	E	F	E	C	C	F	D	A	E	D	E
Approach Vol, veh/h		1055			2946			1424			1774	
Approach Delay, s/veh		72.0			43.7			36.2			53.4	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	26.3	11.8	41.7	12.0	69.5	19.9	33.6
Change Period (Y+Rc), s	4.6	6.5	4.6	6.5	4.6	6.5	6.5	* 6.5
Max Green Setting (Gmax), s	10.6	19.8	7.2	35.2	10.2	60.2	9.1	* 33
Max Q Clear Time (g_c+I1), s	10.8	20.5	8.1	32.4	7.4	37.0	9.5	20.8
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.1	19.9	0.0	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	48.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	40	70	120	30	80	65	955	125	160	2450	140
Future Volume (veh/h)	150	40	70	120	30	80	65	955	125	160	2450	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	103	127	76	82	101	87	71	1038	136	174	2663	139
Adj No. of Lanes	1	1	1	1	1	1	2	4	0	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	161	135	126	132	112	642	3650	473	222	3123	162
Arrive On Green	0.09	0.09	0.09	0.07	0.07	0.07	0.37	1.00	1.00	0.13	0.99	0.99
Sat Flow, veh/h	1774	1863	1560	1774	1863	1583	3442	5775	749	3442	6280	326
Grp Volume(v), veh/h	103	127	76	82	101	87	71	862	312	174	2035	767
Grp Sat Flow(s),veh/h/ln	1774	1863	1560	1774	1863	1583	1721	1602	1719	1721	1602	1800
Q Serve(g_s), s	7.6	9.0	6.3	6.1	7.2	7.3	1.8	0.0	0.0	6.6	2.0	2.1
Cycle Q Clear(g_c), s	7.6	9.0	6.3	6.1	7.2	7.3	1.8	0.0	0.0	6.6	2.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		0.18
Lane Grp Cap(c), veh/h	154	161	135	126	132	112	642	3037	1086	222	2390	895
V/C Ratio(X)	0.67	0.79	0.56	0.65	0.76	0.77	0.11	0.28	0.29	0.78	0.85	0.86
Avail Cap(c_a), veh/h	230	241	202	191	200	170	642	3037	1086	344	2698	1011
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.74	0.74	0.23	0.23	0.23
Uniform Delay (d), s/veh	59.8	60.4	59.2	61.1	61.6	61.6	35.0	0.0	0.0	57.9	0.2	0.2
Incr Delay (d2), s/veh	5.0	9.7	3.6	2.1	3.8	5.3	0.0	0.2	0.5	0.6	1.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	5.1	2.9	3.1	3.8	3.4	0.9	0.0	0.1	3.1	0.4	0.9
LnGrp Delay(d),s/veh	64.8	70.1	62.8	63.2	65.4	66.9	35.0	0.2	0.5	58.5	1.2	2.9
LnGrp LOS	E	E	E	E	E	E	C	A	A	E	A	A
Approach Vol, veh/h		306			270			1245			2976	
Approach Delay, s/veh		66.5			65.2			2.2			5.0	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.2	91.5		16.2	31.4	73.3		14.1
Change Period (Y+Rc), s	4.5	6.2		4.5	6.2	* 6.2		4.5
Max Green Setting (Gmax), s	13.5	69.8		17.5	7.5	* 76		14.5
Max Q Clear Time (g_c+I1), s	9.6	2.0		11.0	3.8	4.1		9.3
Green Ext Time (p_c), s	0.1	18.3		0.7	2.8	63.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	190	150	160	210	250	100	760	160	290	2220	110
Future Volume (veh/h)	70	190	150	160	210	250	100	760	160	290	2220	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	76	207	34	174	228	272	109	826	174	315	2413	120
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	260	42	242	316	276	131	1111	341	724	2880	884
Arrive On Green	0.05	0.09	0.09	0.14	0.18	0.18	0.12	0.36	0.36	0.82	1.00	1.00
Sat Flow, veh/h	1774	3044	491	1774	1770	1547	1774	5085	1561	1774	5085	1561
Grp Volume(v), veh/h	76	119	122	174	228	272	109	826	174	315	2413	120
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1770	1547	1774	1695	1561	1774	1695	1561
Q Serve(g_s), s	5.7	8.9	9.2	12.7	16.4	23.7	8.1	19.1	11.7	6.8	0.0	0.0
Cycle Q Clear(g_c), s	5.7	8.9	9.2	12.7	16.4	23.7	8.1	19.1	11.7	6.8	0.0	0.0
Prop In Lane	1.00		0.28	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	151	151	242	316	276	131	1111	341	724	2880	884
V/C Ratio(X)	0.80	0.78	0.81	0.72	0.72	0.98	0.83	0.74	0.51	0.43	0.84	0.14
Avail Cap(c_a), veh/h	112	198	197	242	316	276	151	1872	575	724	2880	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78	0.66	0.66	0.66
Uniform Delay (d), s/veh	63.1	60.5	60.6	55.8	52.3	55.3	58.4	39.6	37.2	7.9	0.0	0.0
Incr Delay (d2), s/veh	23.9	12.6	15.4	8.6	7.4	49.7	23.0	3.5	4.2	0.3	2.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.9	5.1	6.8	8.7	13.9	4.8	9.3	5.4	3.3	0.6	0.1
LnGrp Delay(d),s/veh	87.0	73.1	76.0	64.4	59.7	105.0	81.3	43.1	41.4	8.2	2.1	0.2
LnGrp LOS	F	E	E	E	E	F	F	D	D	A	A	A
Approach Vol, veh/h		317			674			1109			2848	
Approach Delay, s/veh		77.6			79.2			46.6			2.7	
Approach LOS		E			E			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	34.8	23.3	16.5	13.5	81.8	10.8	29.0
Change Period (Y+Rc), s	5.3	* 5.3	4.9	* 4.9	3.5	5.3	3.5	4.9
Max Green Setting (Gmax), s	35.5	* 50	17.5	* 15	11.5	73.7	8.5	24.1
Max Q Clear Time (g_c+I1), s	9.8	21.1	14.7	11.2	10.1	2.0	7.7	25.7
Green Ext Time (p_c), s	23.3	8.4	0.8	0.4	0.0	51.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	40	50	320	100	260	140	810	150	200	1800	100
Future Volume (veh/h)	30	40	50	320	100	260	140	810	150	200	1800	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.99	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	60	43	228	276	283	152	880	163	217	1957	109
Adj No. of Lanes	0	2	1	1	1	1	1	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	99	60	345	363	305	178	1454	268	970	2632	146
Arrive On Green	0.04	0.04	0.04	0.19	0.19	0.19	0.03	0.11	0.11	0.19	0.36	0.36
Sat Flow, veh/h	1226	2438	1469	1774	1863	1566	1774	4298	792	3442	4923	273
Grp Volume(v), veh/h	48	45	43	228	276	283	152	693	350	217	1345	721
Grp Sat Flow(s),veh/h/ln	1801	1863	1469	1774	1863	1566	1774	1695	1699	1721	1695	1806
Q Serve(g_s), s	3.6	3.2	3.9	16.0	18.9	24.0	11.5	26.3	26.5	7.2	46.8	47.2
Cycle Q Clear(g_c), s	3.6	3.2	3.9	16.0	18.9	24.0	11.5	26.3	26.5	7.2	46.8	47.2
Prop In Lane	0.68		1.00	1.00		1.00	1.00		0.47	1.00		0.15
Lane Grp Cap(c), veh/h	73	76	60	345	363	305	178	1147	575	970	1813	966
V/C Ratio(X)	0.66	0.59	0.72	0.66	0.76	0.93	0.85	0.60	0.61	0.22	0.74	0.75
Avail Cap(c_a), veh/h	73	76	60	355	373	313	243	1796	900	970	1813	966
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71	0.44	0.44	0.44
Uniform Delay (d), s/veh	63.8	63.6	64.0	50.2	51.4	53.4	64.3	51.3	51.4	42.3	35.2	35.3
Incr Delay (d2), s/veh	22.1	13.4	36.4	3.4	7.7	31.7	11.2	1.7	3.4	0.0	1.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.9	2.2	8.2	10.5	13.0	6.2	12.6	13.0	3.4	22.3	24.2
LnGrp Delay(d),s/veh	85.9	77.1	100.4	53.6	59.1	85.2	75.5	53.0	54.8	42.3	36.4	37.7
LnGrp LOS	F	E	F	D	E	F	E	D	D	D	D	D
Approach Vol, veh/h		136			787			1195			2283	
Approach Delay, s/veh		87.6			66.9			56.4			37.4	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		9.0	17.0	77.7		31.3	43.5	51.2
Change Period (Y+Rc), s		3.5	3.5	5.5		5.0	5.5	* 5.5
Max Green Setting (Gmax), s		5.5	18.5	66.5		27.0	13.5	* 72
Max Q Clear Time (g_c+I1), s		5.9	13.5	49.2		26.0	9.2	28.5
Green Ext Time (p_c), s		0.0	0.1	16.1		0.3	4.2	17.2

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	99.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	10	20	200	30	220	25	330	25	140	620	30
Future Vol, veh/h	20	10	20	200	30	220	25	330	25	140	620	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	11	22	217	33	239	27	359	27	152	674	33
Number of Lanes	0	1	1	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	13.1	19.4	35.1	180.9
HCM LOS	B	C	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	7%	0%	67%	0%	100%	0%	100%	0%
Vol Thru, %	93%	0%	33%	0%	0%	12%	0%	95%
Vol Right, %	0%	100%	0%	100%	0%	88%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	355	25	30	20	200	250	140	650
LT Vol	25	0	20	0	200	0	140	0
Through Vol	330	0	10	0	0	30	0	620
RT Vol	0	25	0	20	0	220	0	30
Lane Flow Rate	386	27	33	22	217	272	152	707
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.807	0.051	0.083	0.049	0.495	0.535	0.327	1.41
Departure Headway (Hd)	8.094	7.334	10.117	9.03	8.869	7.712	7.729	7.184
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	451	491	356	399	409	470	463	509
Service Time	5.794	5.034	7.817	6.73	6.569	5.412	5.51	4.964
HCM Lane V/C Ratio	0.856	0.055	0.093	0.055	0.531	0.579	0.328	1.389
HCM Control Delay	36.8	10.4	13.7	12.2	20	18.9	14.3	216.8
HCM Lane LOS	E	B	B	B	C	C	B	F
HCM 95th-tile Q	7.4	0.2	0.3	0.2	2.7	3.1	1.4	33.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	30	80	50	20	40	170	1050	40	150	1910	140
Future Volume (veh/h)	80	30	80	50	20	40	170	1050	40	150	1910	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	87	33	87	54	22	43	185	1141	43	163	2076	152
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	40	127	64	26	51	209	1469	55	696	2786	202
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.20	0.49	0.49	0.52	0.77	0.77
Sat Flow, veh/h	1303	494	1548	771	314	614	1774	5029	189	1774	4831	351
Grp Volume(v), veh/h	120	0	87	119	0	0	185	769	415	163	1452	776
Grp Sat Flow(s),veh/h/ln	1798	0	1548	1700	0	0	1774	1695	1829	1774	1695	1791
Q Serve(g_s), s	8.9	0.0	7.4	9.3	0.0	0.0	13.7	25.2	25.3	6.8	31.3	32.1
Cycle Q Clear(g_c), s	8.9	0.0	7.4	9.3	0.0	0.0	13.7	25.2	25.3	6.8	31.3	32.1
Prop In Lane	0.72		1.00	0.45		0.36	1.00		0.10	1.00		0.20
Lane Grp Cap(c), veh/h	147	0	127	142	0	0	209	990	534	696	1955	1033
V/C Ratio(X)	0.82	0.00	0.69	0.84	0.00	0.00	0.89	0.78	0.78	0.23	0.74	0.75
Avail Cap(c_a), veh/h	186	0	161	164	0	0	263	1700	917	696	1955	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.53	0.53	0.53	0.59	0.59	0.59
Uniform Delay (d), s/veh	61.0	0.0	60.3	61.0	0.0	0.0	53.4	30.9	30.9	21.2	10.3	10.4
Incr Delay (d2), s/veh	15.8	0.0	4.8	24.8	0.0	0.0	14.8	3.2	5.9	0.1	1.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	3.3	5.4	0.0	0.0	7.5	12.2	13.5	3.3	14.8	16.2
LnGrp Delay(d),s/veh	76.8	0.0	65.1	85.8	0.0	0.0	68.2	34.2	36.8	21.3	11.9	13.4
LnGrp LOS	E		E	F			E	C	D	C	B	B
Approach Vol, veh/h		207			119			1369			2391	
Approach Delay, s/veh		71.9			85.8			39.6			13.0	
Approach LOS		E			F			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	44.7		16.0	19.9	82.9		16.2
Change Period (Y+Rc), s	5.0	* 5.3		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	24.0	* 68		14.0	20.0	69.0		13.0
Max Q Clear Time (g_c+I1), s	3.8	27.3		10.9	15.7	34.1		11.3
Green Ext Time (p_c), s	10.9	12.2		0.2	0.2	26.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	44.3
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	5	10	180	15	205	10	290	70	270	520	10
Future Vol, veh/h	10	5	10	180	15	205	10	290	70	270	520	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	11	196	16	223	11	315	76	293	565	11
Number of Lanes	0	1	0	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	12.6	16.7	22	69.4
HCM LOS	B	C	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	40%	100%	0%	100%	0%
Vol Thru, %	97%	0%	20%	0%	7%	0%	98%
Vol Right, %	0%	100%	40%	0%	93%	0%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	70	25	180	220	270	530
LT Vol	10	0	10	180	0	270	0
Through Vol	290	0	5	0	15	0	520
RT Vol	0	70	10	0	205	0	10
Lane Flow Rate	326	76	27	196	239	293	576
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.671	0.141	0.065	0.442	0.464	0.602	1.098
Departure Headway (Hd)	7.66	6.923	8.936	8.399	7.216	7.389	6.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	476	521	403	432	502	487	530
Service Time	5.36	4.623	6.936	6.099	4.916	5.154	4.629
HCM Lane V/C Ratio	0.685	0.146	0.067	0.454	0.476	0.602	1.087
HCM Control Delay	24.6	10.8	12.6	17.6	16	20.8	94.2
HCM Lane LOS	C	B	B	C	C	C	F
HCM 95th-tile Q	4.9	0.5	0.2	2.2	2.4	3.9	18.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	160	30	380	130	200	20	200	180	410	890	70
Future Volume (veh/h)	40	160	30	380	130	200	20	200	180	410	890	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	43	174	33	413	141	217	22	217	196	446	967	76
Adj No. of Lanes	0	2	0	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	274	54	460	483	828	32	672	694	477	1462	115
Arrive On Green	0.11	0.11	0.11	0.26	0.26	0.26	0.02	0.19	0.19	0.27	0.44	0.44
Sat Flow, veh/h	597	2508	494	1774	1863	1551	1774	3539	1493	1774	3318	261
Grp Volume(v), veh/h	132	0	118	413	141	217	22	217	196	446	516	527
Grp Sat Flow(s),veh/h/ln	1833	0	1766	1774	1863	1551	1774	1770	1493	1774	1770	1809
Q Serve(g_s), s	7.1	0.0	6.6	23.2	6.3	7.9	1.3	5.5	8.6	25.4	23.8	23.8
Cycle Q Clear(g_c), s	7.1	0.0	6.6	23.2	6.3	7.9	1.3	5.5	8.6	25.4	23.8	23.8
Prop In Lane	0.33		0.28	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	201	0	193	460	483	828	32	672	694	477	780	797
V/C Ratio(X)	0.66	0.00	0.61	0.90	0.29	0.26	0.68	0.32	0.28	0.94	0.66	0.66
Avail Cap(c_a), veh/h	479	0	461	534	561	892	103	894	788	567	909	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	0.0	43.9	36.9	30.6	13.4	50.4	36.1	18.0	36.9	22.8	22.8
Incr Delay (d2), s/veh	1.4	0.0	1.2	16.3	0.3	0.2	9.1	0.3	0.2	19.7	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	3.3	13.4	3.3	3.4	0.7	2.7	5.3	15.0	11.9	12.2
LnGrp Delay(d),s/veh	45.5	0.0	45.1	53.2	31.0	13.5	59.6	36.4	18.2	56.6	24.2	24.2
LnGrp LOS	D		D	D	C	B	E	D	B	E	C	C
Approach Vol, veh/h		250			771			435			1489	
Approach Delay, s/veh		45.3			38.0			29.4			33.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	24.5		15.3	5.9	50.4		31.7
Change Period (Y+Rc), s	4.0	4.9		4.0	4.0	4.9		4.9
Max Green Setting (Gmax), s	8.0	26.1		27.0	6.0	53.1		31.1
Max Q Clear Time (g_c+I1), s	27.4	10.6		9.1	3.3	25.8		25.2
Green Ext Time (p_c), s	0.4	7.9		0.7	0.0	10.4		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	540	110	360	580	80	65	140	160	225	610	100
Future Volume (veh/h)	30	540	110	360	580	80	65	140	160	225	610	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	33	587	120	391	630	62	71	152	174	245	663	109
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	691	141	423	1465	144	95	694	580	408	694	578
Arrive On Green	0.02	0.24	0.24	0.24	0.45	0.45	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1774	2918	595	1774	3249	319	695	1863	1556	1047	1863	1551
Grp Volume(v), veh/h	33	355	352	391	343	349	71	152	174	245	663	109
Grp Sat Flow(s),veh/h/ln	1774	1770	1743	1774	1770	1799	695	1863	1556	1047	1863	1551
Q Serve(g_s), s	1.7	18.1	18.2	20.3	12.4	12.5	2.5	5.2	7.4	19.7	32.6	4.5
Cycle Q Clear(g_c), s	1.7	18.1	18.2	20.3	12.4	12.5	35.1	5.2	7.4	24.9	32.6	4.5
Prop In Lane	1.00		0.34	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	419	413	423	798	811	95	694	580	408	694	578
V/C Ratio(X)	0.76	0.85	0.85	0.92	0.43	0.43	0.75	0.22	0.30	0.60	0.95	0.19
Avail Cap(c_a), veh/h	535	509	502	443	798	811	95	694	580	408	694	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	34.3	34.3	35.0	17.6	17.6	46.8	20.2	20.9	28.7	28.8	19.9
Incr Delay (d2), s/veh	23.0	10.8	11.4	24.6	0.4	0.4	27.9	0.2	0.3	2.4	23.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	10.0	10.0	12.8	6.1	6.3	2.6	2.7	3.2	5.9	21.3	1.9
LnGrp Delay(d),s/veh	68.7	45.1	45.7	59.7	18.0	18.0	74.7	20.3	21.1	31.1	52.3	20.1
LnGrp LOS	E	D	D	E	B	B	E	C	C	C	D	C
Approach Vol, veh/h		740			1083			397			1017	
Approach Delay, s/veh		46.4			33.0			30.4			43.8	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.0	28.2		40.0	5.8	48.4		40.0
Change Period (Y+Rc), s	3.5	5.9		4.9	3.5	5.9		4.9
Max Green Setting (Gmax), s	22.5	27.1		35.1	28.4	22.2		35.1
Max Q Clear Time (g_c+I1), s	22.3	20.2		34.6	3.7	14.5		37.1
Green Ext Time (p_c), s	0.2	2.2		0.3	0.1	4.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	740	480	520	990	0	0	0	0	220	5	210
Future Volume (veh/h)	0	740	480	520	990	0	0	0	0	220	5	210
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	804	406	565	1076	0				239	5	80
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	854	429	635	2743	0				265	6	241
Arrive On Green	0.00	0.63	0.63	0.72	1.00	0.00				0.15	0.15	0.15
Sat Flow, veh/h	0	2344	1129	1774	3632	0				1739	36	1583
Grp Volume(v), veh/h	0	631	579	565	1076	0				244	0	80
Grp Sat Flow(s),veh/h/ln	0	1770	1610	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	46.8	47.7	36.1	0.0	0.0				19.6	0.0	6.5
Cycle Q Clear(g_c), s	0.0	46.8	47.7	36.1	0.0	0.0				19.6	0.0	6.5
Prop In Lane	0.00		0.70	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	672	611	635	2743	0				271	0	241
V/C Ratio(X)	0.00	0.94	0.95	0.89	0.39	0.00				0.90	0.00	0.33
Avail Cap(c_a), veh/h	0	688	626	635	2743	0				332	0	296
HCM Platoon Ratio	1.00	1.67	1.67	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.68	0.68	0.56	0.56	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.0	25.2	18.3	0.0	0.0				60.4	0.0	54.8
Incr Delay (d2), s/veh	0.0	17.4	19.7	8.6	0.2	0.0				21.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	25.7	24.2	18.6	0.1	0.0				11.2	0.0	2.9
LnGrp Delay(d),s/veh	0.0	42.4	44.9	27.0	0.2	0.0				81.4	0.0	55.1
LnGrp LOS		D	D	C	A					F		E
Approach Vol, veh/h		1210			1641						324	
Approach Delay, s/veh		43.6			9.4						74.9	
Approach LOS		D			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	57.3	60.4		27.2		117.8		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	46.3	* 56		27.1		107.4		
Max Q Clear Time (g_c+I1), s	38.1	49.7		21.6		2.0		
Green Ext Time (p_c), s	6.3	5.3		0.5		23.6		

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

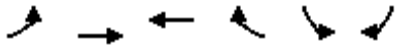
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	720	0	0	1160	380	370	0	430	0	0	0
Future Volume (veh/h)	230	720	0	0	1160	380	370	0	430	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	250	783	0	0	1261	342	402	0	87			
Adj No. of Lanes	1	2	0	0	2	1	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	271	2415	0	0	1750	783	435	0	378			
Arrive On Green	0.26	1.00	0.00	0.00	0.83	0.83	0.25	0.00	0.25			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	1774	0	1541			
Grp Volume(v), veh/h	250	783	0	0	1261	342	402	0	87			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1541			
Q Serve(g_s), s	19.9	0.0	0.0	0.0	22.2	8.5	32.1	0.0	6.5			
Cycle Q Clear(g_c), s	19.9	0.0	0.0	0.0	22.2	8.5	32.1	0.0	6.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	271	2415	0	0	1750	783	435	0	378			
V/C Ratio(X)	0.92	0.32	0.00	0.00	0.72	0.44	0.92	0.00	0.23			
Avail Cap(c_a), veh/h	329	2415	0	0	1750	783	513	0	445			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.25	0.25	0.00	0.00	0.83	0.83	1.00	0.00	1.00			
Uniform Delay (d), s/veh	53.2	0.0	0.0	0.0	8.3	7.1	53.4	0.0	43.8			
Incr Delay (d2), s/veh	9.3	0.1	0.0	0.0	2.2	1.5	20.2	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.4	0.0	0.0	0.0	11.0	3.9	18.2	0.0	2.8			
LnGrp Delay(d),s/veh	62.5	0.1	0.0	0.0	10.5	8.6	73.6	0.0	44.0			
LnGrp LOS	E	A			B	A	E		D			
Approach Vol, veh/h		1033			1603			489				
Approach Delay, s/veh		15.2			10.1			68.4				
Approach LOS		B			B			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		104.4			27.2	77.1		40.6
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		92.6			26.9	60.6		41.9
Max Q Clear Time (g_c+I1), s		2.0			21.9	24.2		34.1
Green Ext Time (p_c), s		16.3			0.2	14.1		1.5

Intersection Summary		
HCM 2010 Ctrl Delay		20.9
HCM 2010 LOS		C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	230	890	1080	250	405	480
Future Volume (veh/h)	230	890	1080	250	405	480
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	250	967	1174	239	440	207
Adj No. of Lanes	1	2	3	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	842	2740	1334	405	528	243
Arrive On Green	0.79	1.00	0.44	0.44	0.15	0.15
Sat Flow, veh/h	1774	3632	5253	1542	3442	1583
Grp Volume(v), veh/h	250	967	1174	239	440	207
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1542	1721	1583
Q Serve(g_s), s	5.6	0.0	30.6	17.0	18.0	18.5
Cycle Q Clear(g_c), s	5.6	0.0	30.6	17.0	18.0	18.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	842	2740	1334	405	528	243
V/C Ratio(X)	0.30	0.35	0.88	0.59	0.83	0.85
Avail Cap(c_a), veh/h	842	2740	1704	517	1089	501
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.63	0.63	1.00	1.00
Uniform Delay (d), s/veh	8.5	0.0	38.6	34.8	59.6	59.8
Incr Delay (d2), s/veh	0.1	0.3	5.6	4.0	2.6	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.1	14.8	7.6	8.7	15.8
LnGrp Delay(d),s/veh	8.6	0.3	44.3	38.8	62.2	66.0
LnGrp LOS	A	A	D	D	E	E
Approach Vol, veh/h		1217	1413		647	
Approach Delay, s/veh		2.0	43.3		63.4	
Approach LOS		A	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		117.6		27.4	74.2	43.5		
Change Period (Y+Rc), s		5.4		5.1	5.4	* 5.4		
Max Green Setting (Gmax), s		88.6		45.9	34.9	* 49		
Max Q Clear Time (g_c+I1), s		2.0		20.5	7.6	32.6		
Green Ext Time (p_c), s		5.5		1.8	5.2	5.4		

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	750	170	180	1160	80	120	100	150	180	280	180
Future Volume (veh/h)	110	750	170	180	1160	80	120	100	150	180	280	180
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	120	815	185	196	1261	73	130	109	136	196	304	158
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	1012	591	487	1748	781	157	203	167	284	345	288
Arrive On Green	0.08	0.29	0.29	0.46	0.82	0.82	0.09	0.11	0.11	0.16	0.19	0.19
Sat Flow, veh/h	1774	3539	1575	1774	3539	1580	1774	1863	1537	1774	1863	1552
Grp Volume(v), veh/h	120	815	185	196	1261	73	130	109	136	196	304	158
Grp Sat Flow(s),veh/h/ln	1774	1770	1575	1774	1770	1580	1774	1863	1537	1774	1863	1552
Q Serve(g_s), s	7.3	23.5	3.3	8.1	16.9	0.5	7.9	6.1	9.5	11.5	17.5	10.2
Cycle Q Clear(g_c), s	7.3	23.5	3.3	8.1	16.9	0.5	7.9	6.1	9.5	11.5	17.5	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	1012	591	487	1748	781	157	203	167	284	345	288
V/C Ratio(X)	0.82	0.81	0.31	0.40	0.72	0.09	0.83	0.54	0.81	0.69	0.88	0.55
Avail Cap(c_a), veh/h	169	1277	709	487	1748	781	185	286	236	284	388	323
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	36.4	9.6	23.8	6.4	1.3	49.3	46.4	47.9	43.6	43.6	40.6
Incr Delay (d2), s/veh	18.2	6.0	1.2	0.2	2.6	0.2	19.5	2.2	13.5	5.9	18.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	12.3	2.2	3.9	8.5	0.3	4.8	3.3	4.7	6.1	10.8	4.5
LnGrp Delay(d),s/veh	67.9	42.4	10.8	24.0	9.0	1.6	68.8	48.6	61.4	49.5	62.4	42.3
LnGrp LOS	E	D	B	C	A	A	E	D	E	D	E	D
Approach Vol, veh/h		1120			1530			375			658	
Approach Delay, s/veh		39.9			10.5			60.2			53.7	
Approach LOS		D			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.5	36.8	13.3	24.5	12.6	59.6	21.7	16.1
Change Period (Y+Rc), s	5.3	* 5.3	3.5	4.1	3.5	5.3	4.1	* 4.1
Max Green Setting (Gmax), s	19.5	* 40	11.5	22.9	10.5	48.7	17.5	* 17
Max Q Clear Time (g_c+I1), s	10.1	25.5	9.9	19.5	9.3	18.9	13.5	11.5
Green Ext Time (p_c), s	6.3	6.0	0.0	0.9	0.0	12.9	1.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

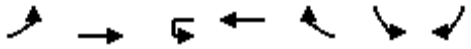
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	840	180	580	1110	210	450
Future Volume (veh/h)	840	180	580	1110	210	450
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	913	161	630	1207	228	489
Adj No. of Lanes	2	0	2	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1305	230	765	2466	365	677
Arrive On Green	0.73	0.73	0.44	1.00	0.21	0.21
Sat Flow, veh/h	3090	528	3442	3632	1774	1583
Grp Volume(v), veh/h	539	535	630	1207	228	489
Grp Sat Flow(s),veh/h/ln	1770	1756	1721	1770	1774	1583
Q Serve(g_s), s	15.2	15.2	14.4	0.0	10.5	18.5
Cycle Q Clear(g_c), s	15.2	15.2	14.4	0.0	10.5	18.5
Prop In Lane		0.30	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	771	765	765	2466	365	677
V/C Ratio(X)	0.70	0.70	0.82	0.49	0.63	0.72
Avail Cap(c_a), veh/h	771	765	822	2466	365	677
HCM Platoon Ratio	1.67	1.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.64	0.64	1.00	1.00
Uniform Delay (d), s/veh	9.0	9.0	23.5	0.0	32.6	21.3
Incr Delay (d2), s/veh	5.2	5.3	5.0	0.4	2.5	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	8.0	7.2	0.2	5.4	10.6
LnGrp Delay(d),s/veh	14.2	14.3	28.4	0.4	35.1	24.6
LnGrp LOS	B	B	C	A	D	C
Approach Vol, veh/h	1074			1837	717	
Approach Delay, s/veh	14.3			10.0	27.9	
Approach LOS	B			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		68.0			23.5	44.5		22.0
Change Period (Y+Rc), s		5.3			3.5	5.3		3.5
Max Green Setting (Gmax), s		62.7			21.5	37.7		18.5
Max Q Clear Time (g_c+I1), s		2.0			16.4	17.2		20.5
Green Ext Time (p_c), s		49.1			2.1	18.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	460	830	5	1000	120	120	700
Future Volume (veh/h)	460	830	5	1000	120	120	700
Number	1	6		2	12	7	14
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1863	1900	1863	1863
Adj Flow Rate, veh/h	500	902		1087	120	130	761
Adj No. of Lanes	2	2		2	0	1	2
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	1157	2817		1284	142	189	1233
Arrive On Green	0.11	0.26		0.67	0.67	0.11	0.11
Sat Flow, veh/h	3442	3632		3298	353	1774	2787
Grp Volume(v), veh/h	500	902		600	607	130	761
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1788	1774	1393
Q Serve(g_s), s	12.2	18.5		23.2	23.3	6.4	0.0
Cycle Q Clear(g_c), s	12.2	18.5		23.2	23.3	6.4	0.0
Prop In Lane	1.00				0.20	1.00	1.00
Lane Grp Cap(c), veh/h	1157	2817		709	717	189	1233
V/C Ratio(X)	0.43	0.32		0.85	0.85	0.69	0.62
Avail Cap(c_a), veh/h	1157	2817		808	817	266	1355
HCM Platoon Ratio	0.33	0.33		1.67	1.67	1.00	1.00
Upstream Filter(I)	0.66	0.66		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	13.6		12.8	12.8	38.8	19.2
Incr Delay (d2), s/veh	0.1	0.2		11.9	11.9	1.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	9.1		13.1	13.6	3.2	9.5
LnGrp Delay(d),s/veh	32.0	13.8		24.6	24.7	40.5	19.7
LnGrp LOS	C	B		C	C	D	B
Approach Vol, veh/h		1402		1207		891	
Approach Delay, s/veh		20.3		24.6		22.7	
Approach LOS		C		C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	15.6	41.4		13.1		76.9		
Change Period (Y+Rc), s	5.3	* 5.3		3.5		5.3		
Max Green Setting (Gmax), s	23.1	* 41		13.5		58.7		
Max Q Clear Time (g_c+I1), s	14.2	25.3		8.4		20.5		
Green Ext Time (p_c), s	4.1	10.7		1.2		14.3		

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	570	170	320	570	320	190	670	190	690	1600	480
Future Volume (veh/h)	280	570	170	320	570	320	190	670	190	690	1600	480
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	304	620	185	348	620	264	207	728	207	750	1739	522
Adj No. of Lanes	2	2	0	2	2	0	1	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	665	198	379	655	279	262	1126	316	793	1835	563
Arrive On Green	0.16	0.41	0.41	0.11	0.27	0.27	0.25	0.48	0.48	0.38	0.60	0.60
Sat Flow, veh/h	3442	2677	798	3442	2408	1025	1774	3935	1105	3442	5085	1561
Grp Volume(v), veh/h	304	409	396	348	455	429	207	626	309	750	1739	522
Grp Sat Flow(s),veh/h/ln	1721	1770	1705	1721	1770	1664	1774	1695	1650	1721	1695	1561
Q Serve(g_s), s	12.2	30.9	31.0	14.0	35.3	35.4	15.3	19.5	19.9	29.5	44.4	32.9
Cycle Q Clear(g_c), s	12.2	30.9	31.0	14.0	35.3	35.4	15.3	19.5	19.9	29.5	44.4	32.9
Prop In Lane	1.00		0.47	1.00		0.62	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	334	439	423	379	481	452	262	970	472	793	1835	563
V/C Ratio(X)	0.91	0.93	0.93	0.92	0.95	0.95	0.79	0.65	0.66	0.95	0.95	0.93
Avail Cap(c_a), veh/h	334	461	445	379	484	455	262	970	472	870	1849	567
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.57	0.57	0.57	0.96	0.96	0.96	0.53	0.53	0.53
Uniform Delay (d), s/veh	58.0	39.9	39.9	61.7	50.0	50.0	50.7	31.2	31.3	42.2	26.6	15.9
Incr Delay (d2), s/veh	27.0	25.5	26.7	17.8	19.3	20.3	13.3	3.2	6.7	10.8	7.2	14.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	18.1	17.6	7.6	19.9	18.9	8.4	9.5	9.9	15.1	21.6	16.1
LnGrp Delay(d),s/veh	85.1	65.4	66.6	79.4	69.3	70.3	63.9	34.4	38.0	53.1	33.8	30.7
LnGrp LOS	F	E	E	E	E	E	E	C	D	D	C	C
Approach Vol, veh/h		1109			1232			1142			3011	
Approach Delay, s/veh		71.2			72.5			40.7			38.1	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	45.4	21.1	40.4	26.0	55.8	17.8	43.7
Change Period (Y+Rc), s	* 4.2	5.3	5.7	* 5.7	5.3	* 5.3	* 4.2	5.7
Max Green Setting (Gmax), s	* 35	33.3	15.4	* 37	17.8	* 51	* 14	38.3
Max Q Clear Time (g_c+I1), s	31.5	21.9	16.0	33.0	17.3	46.4	14.2	37.4
Green Ext Time (p_c), s	0.8	5.3	0.0	1.7	0.1	4.2	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	50.7
HCM 2010 LOS	D

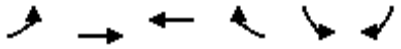
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	980	10	90	1100	120	10	10	10	110	5	120
Future Volume (veh/h)	130	980	10	90	1100	120	10	10	10	110	5	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	141	1065	11	98	1196	120	11	11	11	120	5	130
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	1985	20	125	1680	168	21	21	21	213	7	181
Arrive On Green	0.10	0.55	0.55	0.07	0.52	0.52	0.04	0.04	0.04	0.12	0.12	0.12
Sat Flow, veh/h	1774	3588	37	1774	3242	325	576	576	576	1774	58	1506
Grp Volume(v), veh/h	141	525	551	98	651	665	33	0	0	120	0	135
Grp Sat Flow(s),veh/h/ln	1774	1770	1855	1774	1770	1797	1729	0	0	1774	0	1564
Q Serve(g_s), s	5.8	14.0	14.0	4.0	20.8	21.0	1.4	0.0	0.0	4.7	0.0	6.2
Cycle Q Clear(g_c), s	5.8	14.0	14.0	4.0	20.8	21.0	1.4	0.0	0.0	4.7	0.0	6.2
Prop In Lane	1.00		0.02	1.00		0.18	0.33		0.33	1.00		0.96
Lane Grp Cap(c), veh/h	176	979	1026	125	917	931	63	0	0	213	0	187
V/C Ratio(X)	0.80	0.54	0.54	0.78	0.71	0.71	0.52	0.00	0.00	0.56	0.00	0.72
Avail Cap(c_a), veh/h	203	995	1043	191	971	986	583	0	0	574	0	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.7	10.5	10.5	33.9	13.6	13.7	35.1	0.0	0.0	30.8	0.0	31.4
Incr Delay (d2), s/veh	15.4	0.7	0.7	5.0	2.6	2.6	2.5	0.0	0.0	0.9	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	6.9	7.2	2.1	10.8	11.0	0.7	0.0	0.0	2.4	0.0	2.8
LnGrp Delay(d),s/veh	48.1	11.3	11.2	38.9	16.2	16.3	37.6	0.0	0.0	31.7	0.0	33.4
LnGrp LOS	D	B	B	D	B	B	D			C		C
Approach Vol, veh/h		1217			1414			33			255	
Approach Delay, s/veh		15.5			17.8			37.6			32.6	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	46.3		12.9	10.9	43.7		6.7
Change Period (Y+Rc), s	3.0	5.3		4.0	3.5	5.3		4.0
Max Green Setting (Gmax), s	8.0	41.7		24.0	8.5	40.7		25.0
Max Q Clear Time (g_c+I1), s	5.0	16.0		8.2	7.8	23.0		3.4
Green Ext Time (p_c), s	0.0	21.4		0.6	0.0	15.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	240	870	560	100	390	420
Future Volume (veh/h)	240	870	560	100	390	420
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	261	946	609	83	424	457
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	294	1946	1055	143	564	503
Arrive On Green	0.17	0.55	0.34	0.34	0.32	0.32
Sat Flow, veh/h	1774	3632	3215	424	1774	1583
Grp Volume(v), veh/h	261	946	345	347	424	457
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1776	1774	1583
Q Serve(g_s), s	10.9	12.4	12.1	12.2	16.2	20.9
Cycle Q Clear(g_c), s	10.9	12.4	12.1	12.2	16.2	20.9
Prop In Lane	1.00			0.24	1.00	1.00
Lane Grp Cap(c), veh/h	294	1946	598	600	564	503
V/C Ratio(X)	0.89	0.49	0.58	0.58	0.75	0.91
Avail Cap(c_a), veh/h	294	2062	656	659	611	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	10.4	20.5	20.6	23.1	24.7
Incr Delay (d2), s/veh	26.5	0.4	2.0	2.0	4.8	18.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	6.2	6.2	6.2	8.6	18.6
LnGrp Delay(d),s/veh	57.3	10.8	22.5	22.6	27.9	43.1
LnGrp LOS	E	B	C	C	C	D
Approach Vol, veh/h		1207	692		881	
Approach Delay, s/veh		20.9	22.6		35.8	
Approach LOS		C	C		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		48.0		27.5	16.0	32.0		
Change Period (Y+Rc), s		6.5		3.5	3.5	6.5		
Max Green Setting (Gmax), s		44.0		26.0	12.5	28.0		
Max Q Clear Time (g_c+I1), s		14.4		22.9	12.9	14.2		
Green Ext Time (p_c), s		21.0		1.1	0.0	11.3		

Intersection Summary	
HCM 2010 Ctrl Delay	26.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1040	150	130	520	90	230	280	120	320	270	230
Future Volume (veh/h)	140	1040	150	130	520	90	230	280	120	320	270	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	152	1130	151	141	565	81	250	304	108	348	293	202
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	981	131	171	960	137	278	425	343	373	525	445
Arrive On Green	0.10	0.31	0.31	0.10	0.31	0.31	0.16	0.23	0.23	0.21	0.28	0.28
Sat Flow, veh/h	1774	3134	418	1774	3103	444	1774	1863	1503	1774	1863	1578
Grp Volume(v), veh/h	152	637	644	141	321	325	250	304	108	348	293	202
Grp Sat Flow(s),veh/h/ln	1774	1770	1783	1774	1770	1777	1774	1863	1503	1774	1863	1578
Q Serve(g_s), s	10.0	37.3	37.3	9.3	18.3	18.4	16.5	17.9	7.1	23.0	16.0	12.6
Cycle Q Clear(g_c), s	10.0	37.3	37.3	9.3	18.3	18.4	16.5	17.9	7.1	23.0	16.0	12.6
Prop In Lane	1.00		0.23	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	554	558	171	547	550	278	425	343	373	525	445
V/C Ratio(X)	0.82	1.15	1.15	0.83	0.59	0.59	0.90	0.71	0.31	0.93	0.56	0.45
Avail Cap(c_a), veh/h	410	554	558	402	554	556	365	486	392	395	525	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	40.9	40.9	52.9	34.7	34.8	49.3	42.4	38.2	46.2	36.4	35.2
Incr Delay (d2), s/veh	12.0	86.6	88.4	9.6	2.5	2.6	17.6	6.0	1.1	27.4	2.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	31.5	32.0	5.0	9.3	9.4	9.4	9.9	3.1	14.1	8.5	5.7
LnGrp Delay(d),s/veh	64.2	127.5	129.3	62.5	37.3	37.3	66.9	48.4	39.3	73.6	38.7	36.8
LnGrp LOS	E	F	F	E	D	D	E	D	D	E	D	D
Approach Vol, veh/h		1433			787			662			843	
Approach Delay, s/veh		121.6			41.8			53.9			52.6	
Approach LOS		F			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	43.0	22.2	38.5	15.9	42.5	28.6	32.1
Change Period (Y+Rc), s	4.0	5.7	3.5	4.9	3.5	5.7	3.5	4.9
Max Green Setting (Gmax), s	27.0	37.3	24.5	33.1	27.5	37.3	26.5	31.1
Max Q Clear Time (g_c+I1), s	11.3	39.3	18.5	18.0	12.0	20.4	25.0	19.9
Green Ext Time (p_c), s	0.3	0.0	0.2	7.2	0.5	14.6	0.1	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	77.1
HCM 2010 LOS	E

Intersection	
Intersection Delay, s/veh	54.6
Intersection LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	200	180	150	20	220	600
Future Vol, veh/h	200	180	150	20	220	600
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	217	196	163	22	239	652
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	21.9	12.7	78.4
HCM LOS	C	B	F

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	53%	100%	0%
Vol Thru, %	88%	0%	0%	100%
Vol Right, %	12%	47%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	380	220	600
LT Vol	0	200	220	0
Through Vol	150	0	0	600
RT Vol	20	180	0	0
Lane Flow Rate	185	413	239	652
Geometry Grp	5	2	7	7
Degree of Util (X)	0.327	0.69	0.448	1.13
Departure Headway (Hd)	6.545	6.228	6.746	6.237
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	553	582	536	587
Service Time	4.545	4.228	4.452	3.944
HCM Lane V/C Ratio	0.335	0.71	0.446	1.111
HCM Control Delay	12.7	21.9	14.8	101.7
HCM Lane LOS	B	C	B	F
HCM 95th-tile Q	1.4	5.4	2.3	21

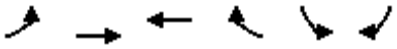
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	490	170	440	650	0	0	0	0	80	10	210
Future Volume (veh/h)	0	490	170	440	650	0	0	0	0	80	10	210
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	533	185	478	707	0				87	11	228
Adj No. of Lanes	0	1	1	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	637	529	520	2466	0				268	34	268
Arrive On Green	0.00	0.34	0.34	0.29	0.70	0.00				0.17	0.17	0.17
Sat Flow, veh/h	0	1863	1548	1774	3632	0				1583	200	1583
Grp Volume(v), veh/h	0	533	185	478	707	0				98	0	228
Grp Sat Flow(s),veh/h/ln	0	1863	1548	1774	1770	0				1784	0	1583
Q Serve(g_s), s	0.0	20.1	6.8	19.9	5.8	0.0				3.7	0.0	10.7
Cycle Q Clear(g_c), s	0.0	20.1	6.8	19.9	5.8	0.0				3.7	0.0	10.7
Prop In Lane	0.00		1.00	1.00		0.00				0.89		1.00
Lane Grp Cap(c), veh/h	0	637	529	520	2466	0				302	0	268
V/C Ratio(X)	0.00	0.84	0.35	0.92	0.29	0.00				0.32	0.00	0.85
Avail Cap(c_a), veh/h	0	753	626	659	2962	0				374	0	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.1	18.7	26.1	4.4	0.0				27.8	0.0	30.7
Incr Delay (d2), s/veh	0.0	6.2	0.1	14.0	0.0	0.0				0.2	0.0	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.3	2.9	11.7	2.8	0.0				1.8	0.0	5.6
LnGrp Delay(d),s/veh	0.0	29.3	18.9	40.1	4.4	0.0				28.1	0.0	44.1
LnGrp LOS		C	B	D	A					C		D
Approach Vol, veh/h		718			1185						326	
Approach Delay, s/veh		26.6			18.8						39.3	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	27.1	31.2		18.0		58.2		
Change Period (Y+Rc), s	4.7	5.1		5.1		5.1		
Max Green Setting (Gmax), s	23	30.8		16.0		63.8		
Max Q Clear Time (g_c+I1), s	21.9	22.1		12.7		7.8		
Green Ext Time (p_c), s	0.5	4.0		0.3		6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	390	1090	360	0	0
Future Volume (veh/h)	170	390	1090	360	0	0
Number	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	185	424	1185	391		
Adj No. of Lanes	1	1	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	314	1546	1787	774		
Arrive On Green	0.18	0.83	0.50	0.50		
Sat Flow, veh/h	1774	1863	3632	1532		
Grp Volume(v), veh/h	185	424	1185	391		
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1532		
Q Serve(g_s), s	3.0	1.6	7.9	5.4		
Cycle Q Clear(g_c), s	3.0	1.6	7.9	5.4		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	314	1546	1787	774		
V/C Ratio(X)	0.59	0.27	0.66	0.51		
Avail Cap(c_a), veh/h	541	2028	2250	974		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.0	0.6	5.9	5.2		
Incr Delay (d2), s/veh	0.7	0.0	0.3	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.5	0.7	3.8	2.2		
LnGrp Delay(d),s/veh	12.7	0.6	6.1	5.4		
LnGrp LOS	B	A	A	A		
Approach Vol, veh/h		609	1576			
Approach Delay, s/veh		4.3	5.9			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		31.8			10.3	21.4		
Change Period (Y+Rc), s		5.4			* 4.7	5.4		
Max Green Setting (Gmax), s		34.6			* 9.7	20.2		
Max Q Clear Time (g_c+I1), s		3.6			5.0	9.9		
Green Ext Time (p_c), s		10.3			0.1	6.0		

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	330	0	0	890	70	290	100	160	60	0	300
Future Volume (veh/h)	70	330	0	0	890	70	290	100	160	60	0	300
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	76	359	0	0	967	76	223	258	152	65	0	326
Adj No. of Lanes	1	1	0	0	3	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	126	684	0	0	1140	89	309	324	272	70	0	351
Arrive On Green	0.07	0.37	0.00	0.00	0.24	0.24	0.17	0.17	0.17	0.26	0.00	0.26
Sat Flow, veh/h	1774	1863	0	0	4964	376	1774	1863	1562	265	0	1329
Grp Volume(v), veh/h	76	359	0	0	683	360	223	258	152	391	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	0	1695	1782	1774	1863	1562	1595	0	0
Q Serve(g_s), s	3.3	12.1	0.0	0.0	15.4	15.5	9.5	10.7	7.1	19.2	0.0	0.0
Cycle Q Clear(g_c), s	3.3	12.1	0.0	0.0	15.4	15.5	9.5	10.7	7.1	19.2	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.21	1.00		1.00	0.17		0.83
Lane Grp Cap(c), veh/h	126	684	0	0	806	424	309	324	272	422	0	0
V/C Ratio(X)	0.60	0.52	0.00	0.00	0.85	0.85	0.72	0.80	0.56	0.93	0.00	0.00
Avail Cap(c_a), veh/h	157	740	0	0	849	446	356	373	313	425	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.2	19.9	0.0	0.0	29.2	29.2	31.3	31.8	30.4	28.8	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.2	0.0	0.0	7.2	13.1	7.0	11.1	2.6	25.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.2	0.0	0.0	8.0	9.1	5.2	6.4	3.3	11.4	0.0	0.0
LnGrp Delay(d),s/veh	37.9	20.1	0.0	0.0	36.4	42.3	38.3	42.9	32.9	54.7	0.0	0.0
LnGrp LOS	D	C			D	D	D	D	C	D		
Approach Vol, veh/h		435			1043			633			391	
Approach Delay, s/veh		23.2			38.4			38.9			54.7	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		34.9		26.3	10.4	24.5		19.1
Change Period (Y+Rc), s		5.4		5.1	* 4.7	5.4		5.1
Max Green Setting (Gmax), s		31.9		21.4	* 7.1	20.1		16.1
Max Q Clear Time (g_c+I1), s		14.1		21.2	5.3	17.5		12.7
Green Ext Time (p_c), s		5.9		0.0	0.0	1.6		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	385	85	210	730	120	100	70	120	40	90	50
Future Volume (veh/h)	65	385	85	210	730	120	100	70	120	40	90	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	0.98		0.95	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	71	418	92	228	793	130	109	76	89	43	98	54
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	692	152	268	886	145	182	115	113	109	222	106
Arrive On Green	0.05	0.47	0.47	0.15	0.57	0.57	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1774	1472	324	1774	1554	255	518	492	486	238	950	455
Grp Volume(v), veh/h	71	0	510	228	0	923	274	0	0	195	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1796	1774	0	1808	1496	0	0	1643	0	0
Q Serve(g_s), s	3.3	0.0	17.3	10.3	0.0	37.0	5.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.3	0.0	17.3	10.3	0.0	37.0	13.9	0.0	0.0	8.1	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.14	0.40		0.32	0.22		0.28
Lane Grp Cap(c), veh/h	91	0	845	268	0	1031	410	0	0	436	0	0
V/C Ratio(X)	0.78	0.00	0.60	0.85	0.00	0.90	0.67	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	97	0	859	333	0	1106	475	0	0	507	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.7	0.0	16.2	34.2	0.0	15.6	29.4	0.0	0.0	27.3	0.0	0.0
Incr Delay (d2), s/veh	31.2	0.0	1.3	15.8	0.0	9.4	3.2	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	8.8	6.2	0.0	20.9	6.2	0.0	0.0	4.0	0.0	0.0
LnGrp Delay(d),s/veh	70.0	0.0	17.5	49.9	0.0	25.0	32.7	0.0	0.0	28.2	0.0	0.0
LnGrp LOS	E		B	D		C	C			C		
Approach Vol, veh/h		581			1151			274			195	
Approach Delay, s/veh		23.9			29.9			32.7			28.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	43.4		23.3	7.7	51.6		23.3
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.5	39.5		23.0	4.5	50.5		23.0
Max Q Clear Time (g_c+I1), s	12.3	19.3		10.1	5.3	39.0		15.9
Green Ext Time (p_c), s	0.2	12.2		2.9	0.0	8.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	13.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	190	470	770	160	35	225
Future Vol, veh/h	190	470	770	160	35	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	207	511	837	174	38	245

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1011	0	-	0	1848	924
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	924	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	686	-	-	-	82	327
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	387	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	686	-	-	-	57	327
Mov Cap-2 Maneuver	-	-	-	-	170	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	270	-

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	84.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	686	-	-	-	291
HCM Lane V/C Ratio	0.301	-	-	-	0.971
HCM Control Delay (s)	12.5	-	-	-	84.7
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.3	-	-	-	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	360	75	400	730	10	65	5	140	10	10	10
Future Volume (veh/h)	5	360	75	400	730	10	65	5	140	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	5	391	82	435	793	11	71	5	125	11	11	11
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	429	1021	214	654	1258	17	157	24	156	144	129	94
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	674	1487	312	917	1833	25	434	146	954	363	790	577
Grp Volume(v), veh/h	5	0	473	435	0	804	201	0	0	33	0	0
Grp Sat Flow(s),veh/h/ln	674	0	1799	917	0	1858	1534	0	0	1730	0	0
Q Serve(g_s), s	0.2	0.0	6.3	21.8	0.0	13.6	5.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.8	0.0	6.3	28.1	0.0	13.6	7.1	0.0	0.0	0.9	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.01	0.35		0.62	0.33		0.33
Lane Grp Cap(c), veh/h	429	0	1235	654	0	1276	337	0	0	368	0	0
V/C Ratio(X)	0.01	0.00	0.38	0.67	0.00	0.63	0.60	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	441	0	1268	670	0	1310	528	0	0	561	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.7	0.0	3.8	9.8	0.0	4.9	22.8	0.0	0.0	20.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	3.3	0.0	1.4	0.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.2	6.0	0.0	7.2	3.1	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	8.7	0.0	4.2	13.1	0.0	6.3	23.4	0.0	0.0	20.3	0.0	0.0
LnGrp LOS	A		A	B		A	C			C		
Approach Vol, veh/h		478			1239			201			33	
Approach Delay, s/veh		4.2			8.7			23.4			20.3	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		44.0		12.8		44.0		12.8
Change Period (Y+Rc), s		5.0		3.5		5.0		3.5
Max Green Setting (Gmax), s		40.0		16.5		40.0		16.5
Max Q Clear Time (g_c+I1), s		15.8		2.9		30.1		9.1
Green Ext Time (p_c), s		19.7		0.8		8.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	340	160	190	760	1230	850
Future Volume (veh/h)	340	160	190	760	1230	850
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	370	174	207	826	1337	924
Adj No. of Lanes	2	1	1	3	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	603	277	249	3383	1678	990
Arrive On Green	0.18	0.18	0.14	0.67	0.47	0.47
Sat Flow, veh/h	3442	1583	1774	5253	3632	1502
Grp Volume(v), veh/h	370	174	207	826	1337	924
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1695	1770	1502
Q Serve(g_s), s	6.9	7.0	7.8	4.5	22.0	32.7
Cycle Q Clear(g_c), s	6.9	7.0	7.8	4.5	22.0	32.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	603	277	249	3383	1678	990
V/C Ratio(X)	0.61	0.63	0.83	0.24	0.80	0.93
Avail Cap(c_a), veh/h	1647	758	270	3392	1678	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	26.4	28.8	4.6	15.3	10.0
Incr Delay (d2), s/veh	1.4	3.3	18.2	0.0	2.8	15.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.3	5.1	2.1	11.2	21.7
LnGrp Delay(d),s/veh	27.7	29.7	47.0	4.7	18.2	25.3
LnGrp LOS	C	C	D	A	B	C
Approach Vol, veh/h	544			1033	2261	
Approach Delay, s/veh	28.3			13.1	21.1	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		51.9		17.1	13.2	38.7		
Change Period (Y+Rc), s		6.0		5.0	3.5	* 6		
Max Green Setting (Gmax), s		46.0		33.0	10.5	* 33		
Max Q Clear Time (g_c+I1), s		6.5		9.0	9.8	34.7		
Green Ext Time (p_c), s		33.2		3.1	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	190	90	265	235	195	635
Future Volume (veh/h)	190	90	265	235	195	635
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	207	98	288	255	212	690
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	282	251	383	339	269	1222
Arrive On Green	0.16	0.16	0.43	0.43	0.15	0.66
Sat Flow, veh/h	1774	1583	893	791	1774	1863
Grp Volume(v), veh/h	207	98	0	543	212	690
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1684	1774	1863
Q Serve(g_s), s	5.1	2.5	0.0	12.5	5.3	9.3
Cycle Q Clear(g_c), s	5.1	2.5	0.0	12.5	5.3	9.3
Prop In Lane	1.00	1.00		0.47	1.00	
Lane Grp Cap(c), veh/h	282	251	0	721	269	1222
V/C Ratio(X)	0.74	0.39	0.00	0.75	0.79	0.56
Avail Cap(c_a), veh/h	619	553	0	827	368	1442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	17.3	0.0	11.1	18.7	4.3
Incr Delay (d2), s/veh	1.4	0.4	0.0	3.1	8.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.1	0.0	6.4	3.2	4.8
LnGrp Delay(d),s/veh	19.8	17.7	0.0	14.2	27.4	4.9
LnGrp LOS	B	B		B	C	A
Approach Vol, veh/h	305		543			902
Approach Delay, s/veh	19.1		14.2			10.2
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.4	24.1		11.3		34.6		
Change Period (Y+Rc), s	3.5	4.5		4.0		4.5		
Max Green Setting (Gmax), s	9.5	22.5		16.0		35.5		
Max Q Clear Time (g_c+I1), s	7.3	14.5		7.1		11.3		
Green Ext Time (p_c), s	0.2	5.1		0.3		10.6		

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	35.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	410	530	530	320	0	0	0	0	50	0	130
Future Vol, veh/h	0	410	530	530	320	0	0	0	0	50	0	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	446	576	576	348	0	0	0	0	54	0	141

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	-	446	0	0	1946	-	348
Stage 1	-	-	-	-	-	-	1500	-	-
Stage 2	-	-	-	-	-	-	446	-	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	-	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	-	3.318
Pot Cap-1 Maneuver	0	-	0	1114	-	0	71	0	695
Stage 1	0	-	0	-	-	0	204	0	-
Stage 2	0	-	0	-	-	0	645	0	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	-	-	-	1114	-	-	~ 25	0	695
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 25	0	-
Stage 1	-	-	-	-	-	-	73	0	-
Stage 2	-	-	-	-	-	-	645	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	7.3	250.6
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	1114	-	25	695
HCM Lane V/C Ratio	-	0.517	-	2.174	0.203
HCM Control Delay (s)	-	11.6	0$	872.1	11.5
HCM Lane LOS	-	B	A	F	B
HCM 95th %tile Q(veh)	-	3.1	-	6.7	0.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	109.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	260	200	0	0	710	160	140	0	160	0	0	0
Future Vol, veh/h	260	200	0	0	710	160	140	0	160	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	283	217	0	0	772	174	152	0	174	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	52.1	172.9	14.8
HCM LOS	F	F	B

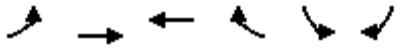
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2
Vol Left, %	100%	0%	57%	0%	0%
Vol Thru, %	0%	0%	43%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	160	460	710	160
LT Vol	140	0	260	0	0
Through Vol	0	0	200	710	0
RT Vol	0	160	0	0	160
Lane Flow Rate	152	174	500	772	174
Geometry Grp	7	7	6	7	7
Degree of Util (X)	0.343	0.333	0.934	1.399	0.281
Departure Headway (Hd)	8.693	7.45	7.158	6.527	5.812
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	417	485	510	563	619
Service Time	6.393	5.15	5.158	4.262	3.547
HCM Lane V/C Ratio	0.365	0.359	0.98	1.371	0.281
HCM Control Delay	15.9	13.8	52.1	209.4	10.8
HCM Lane LOS	C	B	F	F	B
HCM 95th-tile Q	1.5	1.4	11.4	35.5	1.1

Intersection	
Intersection Delay, s/veh	352.6
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	530	260	680	1500	40	10
Future Vol, veh/h	530	260	680	1500	40	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	576	283	739	1630	43	11
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	77	460.2	13.7
HCM LOS	F	F	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	530	260	680	1500	40	10
LT Vol	530	0	0	0	40	0
Through Vol	0	260	680	0	0	0
RT Vol	0	0	0	1500	0	10
Lane Flow Rate	576	283	739	1630	43	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	1.106	0.504	1.196	2.322	0.107	0.023
Departure Headway (Hd)	8.735	8.231	6.039	5.331	10.229	8.999
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	421	441	606	701	353	400
Service Time	6.435	5.931	3.739	3.031	7.929	6.699
HCM Lane V/C Ratio	1.368	0.642	1.219	2.325	0.122	0.028
HCM Control Delay	105.4	19	124.9	612.2	14.2	11.9
HCM Lane LOS	F	C	F	F	B	B
HCM 95th-tile Q	16.1	2.8	25.2	116.6	0.4	0.1



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	250	1940	340	880	230
Future Volume (veh/h)	50	250	1940	340	880	230
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	272	2109	370	957	250
Adj No. of Lanes	1	1	2	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	69	1217	2064	904	941	433
Arrive On Green	0.04	0.65	0.58	0.58	0.27	0.27
Sat Flow, veh/h	1774	1863	3632	1550	3442	1583
Grp Volume(v), veh/h	54	272	2109	370	957	250
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1550	1721	1583
Q Serve(g_s), s	4.5	8.9	87.2	19.5	40.9	20.4
Cycle Q Clear(g_c), s	4.5	8.9	87.2	19.5	40.9	20.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	69	1217	2064	904	941	433
V/C Ratio(X)	0.78	0.22	1.02	0.41	1.02	0.58
Avail Cap(c_a), veh/h	75	1223	2064	904	941	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	10.5	31.2	17.1	54.3	46.9
Incr Delay (d2), s/veh	34.0	0.0	25.5	0.1	33.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	4.5	49.7	8.4	23.7	0.2
LnGrp Delay(d),s/veh	105.2	10.5	56.7	17.2	87.8	48.1
LnGrp LOS	F	B	F	B	F	D
Approach Vol, veh/h		326	2479		1207	
Approach Delay, s/veh		26.2	50.8		79.6	
Approach LOS		C	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		103.5		46.0	10.5	93.0		
Change Period (Y+Rc), s		5.8		5.1	* 4.7	5.8		
Max Green Setting (Gmax), s		98.2		40.9	* 6.3	87.2		
Max Q Clear Time (g_c+I1), s		10.9		42.9	6.5	89.2		
Green Ext Time (p_c), s		25.9		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	57.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	10	470	10	270	30	730	390	240	1090	40
Future Volume (veh/h)	30	10	10	470	10	270	30	730	390	240	1090	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	33	11	11	408	156	293	33	793	0	261	1185	43
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	16	56	518	168	316	43	1097	491	294	1563	684
Arrive On Green	0.04	0.04	0.04	0.29	0.29	0.29	0.02	0.31	0.00	0.17	0.44	0.44
Sat Flow, veh/h	1347	449	1583	1774	575	1080	1774	3539	1583	1774	3539	1549
Grp Volume(v), veh/h	44	0	11	408	0	449	33	793	0	261	1185	43
Grp Sat Flow(s),veh/h/ln	1795	0	1583	1774	0	1656	1774	1770	1583	1774	1770	1549
Q Serve(g_s), s	2.4	0.0	0.7	21.0	0.0	26.1	1.8	19.8	0.0	14.3	27.9	1.6
Cycle Q Clear(g_c), s	2.4	0.0	0.7	21.0	0.0	26.1	1.8	19.8	0.0	14.3	27.9	1.6
Prop In Lane	0.75		1.00	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	0	56	518	0	484	43	1097	491	294	1563	684
V/C Ratio(X)	0.70	0.00	0.20	0.79	0.00	0.93	0.77	0.72	0.00	0.89	0.76	0.06
Avail Cap(c_a), veh/h	290	0	255	554	0	517	286	1277	571	411	1563	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	46.5	32.3	0.0	34.1	48.1	30.4	0.0	40.5	23.2	15.9
Incr Delay (d2), s/veh	5.0	0.0	0.6	6.2	0.0	21.7	10.4	1.9	0.0	12.6	3.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.3	11.1	0.0	14.8	1.0	9.9	0.0	8.0	14.2	0.7
LnGrp Delay(d),s/veh	52.3	0.0	47.1	38.5	0.0	55.8	58.5	32.3	0.0	53.0	26.4	16.0
LnGrp LOS	D		D	D		E	E	C		D	C	B
Approach Vol, veh/h		55			857			826			1489	
Approach Delay, s/veh		51.3			47.5			33.3			30.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.5	37.2		8.0	7.4	50.3		33.5
Change Period (Y+Rc), s	4.0	* 6.5		4.5	5.0	6.5		4.5
Max Green Setting (Gmax), s	23.0	* 36		16.0	16.0	41.5		31.0
Max Q Clear Time (g_c+I1), s	16.3	21.8		4.4	3.8	29.9		28.1
Green Ext Time (p_c), s	0.2	9.0		0.1	0.0	10.6		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.2
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	5253	0	3442	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	1721	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3092	9165	0	6009	6175	2760	3092	3247	2760	3092	3247	2760
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	9165	0	6009	6175	2760	3092	3247	2760	3092	3247	2760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	0	9999	9999	0	9999	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3539	1583	1774	3632	0	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	0	1774	1863	0	1774	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	3092	3764	5212	8146	9436	0	4530	4292	0	6453	6124	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	3764	5212	8146	9436	0	4530	4292	0	6453	6124	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	4.534	2.8	4.534	4.534	4.534	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	2.234	0.5	2.234	2.234	2.234	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	7.2	5.5	7.2	7.2	7.2	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	2	0	0	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	2.8	4.534	2.8	4.534	2.8	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	0.5	2.234	0.5	2.234	0.5	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	5.5	7.2	5.5	7.2	5.5	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3092	6453	0	3092	6453	0	3092	6453	2960	3092	6453	2960
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	6453	0	3092	6453	0	3092	6453	2960	3092	6453	2960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		0.0
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1863	0	1774	1863	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	1863	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	3092376	453124	292608	3092376	453124	292608	0	800046	292608	0	800046	292608	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	1833141	268610	173386	1833141	268610	173386	0	1280068	173386	0	1280068	173386	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS													
Approach Vol, veh/h		0			0			0			0		
Approach Delay, s/veh		0.0			0.0			0.0			0.0		
Approach LOS													

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		0.0
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	3092	3764	5210	3092	3764	5210	2814	6944	0	8000	4292	608	0	8000	4292	608	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	1823	2218	3069	1823	2218	3069	1658	3904	12	8000	6865	55136	12	8000	6865	55136	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	240	0	210	5	970	370	200	670	55
Future Volume (veh/h)	10	20	10	240	0	210	5	970	370	200	670	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	22	11	261	0	228	5	1054	402	217	728	60
Adj No. of Lanes	1	1	1	2	0	1	1	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	2	2	2	2	2	2	2
Cap, veh/h	202	212	169	0	0	0	9	1705	741	330	2024	862
Arrive On Green	0.11	0.11	0.11	0.00	0.00	0.00	0.01	0.48	0.48	0.10	0.57	0.57
Sat Flow, veh/h	1774	1863	1486		0		1774	3539	1539	3442	3539	1507
Grp Volume(v), veh/h	11	22	11		0.0		5	1054	402	217	728	60
Grp Sat Flow(s),veh/h/ln	1774	1863	1486				1774	1770	1539	1721	1770	1507
Q Serve(g_s), s	0.3	0.6	0.4				0.2	11.8	9.8	3.3	5.9	0.9
Cycle Q Clear(g_c), s	0.3	0.6	0.4				0.2	11.8	9.8	3.3	5.9	0.9
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	212	169				9	1705	741	330	2024	862
V/C Ratio(X)	0.05	0.10	0.06				0.53	0.62	0.54	0.66	0.36	0.07
Avail Cap(c_a), veh/h	1128	1185	945				133	2032	883	470	2251	959
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	21.2	21.1				26.5	10.2	9.7	23.3	6.2	5.1
Incr Delay (d2), s/veh	0.2	0.4	0.3				15.7	0.4	0.6	0.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.2				0.1	5.8	4.3	1.6	2.9	0.4
LnGrp Delay(d),s/veh	21.3	21.6	21.4				42.3	10.6	10.3	24.2	6.3	5.1
LnGrp LOS	C	C	C				D	B	B	C	A	A
Approach Vol, veh/h		44						1461			1005	
Approach Delay, s/veh		21.5						10.7			10.1	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	9.6	32.2		11.6	4.8	37.1		
Change Period (Y+Rc), s	4.5	6.5		5.5	4.5	6.5		
Max Green Setting (Gmax), s	7.3	30.7		34.0	4.0	34.0		
Max Q Clear Time (g_c+I1), s	5.3	13.8		2.6	2.2	7.9		
Green Ext Time (p_c), s	0.1	11.6		0.2	0.0	15.5		

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	850	230	770	900	0	0	0	0	340	5	220
Future Volume (veh/h)	0	850	230	770	900	0	0	0	0	340	5	220
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	924	250	837	978	0				374	0	239
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1153	498	942	2365	0				649	0	290
Arrive On Green	0.00	0.33	0.33	0.27	0.67	0.00				0.18	0.00	0.18
Sat Flow, veh/h	0	3632	1530	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	924	250	837	978	0				374	0	239
Grp Sat Flow(s),veh/h/ln	0	1770	1530	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	16.3	9.0	16.0	8.7	0.0				6.6	0.0	10.0
Cycle Q Clear(g_c), s	0.0	16.3	9.0	16.0	8.7	0.0				6.6	0.0	10.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1153	498	942	2365	0				649	0	290
V/C Ratio(X)	0.00	0.80	0.50	0.89	0.41	0.00				0.58	0.00	0.82
Avail Cap(c_a), veh/h	0	1178	509	1070	2520	0				828	0	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.1	18.6	23.9	5.2	0.0				25.6	0.0	26.9
Incr Delay (d2), s/veh	0.0	3.7	0.3	7.9	0.2	0.0				0.3	0.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.5	3.9	8.6	4.3	0.0				3.2	0.0	5.1
LnGrp Delay(d),s/veh	0.0	24.7	18.9	31.8	5.5	0.0				25.9	0.0	36.1
LnGrp LOS		C	B	C	A					C		D
Approach Vol, veh/h		1174			1815						613	
Approach Delay, s/veh		23.5			17.6						29.9	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	23.5	27.4		17.6		50.9		
Change Period (Y+Rc), s	4.7	5.1		5.1		5.1		
Max Green Setting (Gmax), s	21.1	22.8		16.0		48.8		
Max Q Clear Time (g_c+I1), s	18.0	18.3		12.0		10.7		
Green Ext Time (p_c), s	0.8	4.0		0.6		23.7		

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1000	0	0	1240	290	430	10	860	0	0	0
Future Volume (veh/h)	190	1000	0	0	1240	290	430	10	860	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	207	1087	0	0	1348	315	467	11	935			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	247	1855	0	0	1634	490	586	14	940			
Arrive On Green	0.14	0.52	0.00	0.00	0.32	0.32	0.34	0.34	0.34			
Sat Flow, veh/h	1774	3632	0	0	5253	1526	1735	41	2787			
Grp Volume(v), veh/h	207	1087	0	0	1348	315	478	0	935			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1526	1776	0	1393			
Q Serve(g_s), s	8.4	15.6	0.0	0.0	18.1	13.0	18.0	0.0	24.7			
Cycle Q Clear(g_c), s	8.4	15.6	0.0	0.0	18.1	13.0	18.0	0.0	24.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	247	1855	0	0	1634	490	599	0	940			
V/C Ratio(X)	0.84	0.59	0.00	0.00	0.82	0.64	0.80	0.00	0.99			
Avail Cap(c_a), veh/h	272	1914	0	0	1647	494	599	0	940			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.9	12.1	0.0	0.0	23.1	21.4	22.2	0.0	24.4			
Incr Delay (d2), s/veh	17.2	0.7	0.0	0.0	3.3	2.2	6.9	0.0	27.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.3	7.7	0.0	0.0	8.9	5.7	9.9	0.0	13.0			
LnGrp Delay(d),s/veh	48.1	12.8	0.0	0.0	26.4	23.6	29.1	0.0	52.2			
LnGrp LOS	D	B			C	C	C		D			
Approach Vol, veh/h		1294			1663			1413				
Approach Delay, s/veh		18.4			25.9			44.4				
Approach LOS		B			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.8			15.0	28.8		30.0
Change Period (Y+Rc), s		5.1			* 4.7	5.1		5.1
Max Green Setting (Gmax), s		39.9			* 11	23.9		24.9
Max Q Clear Time (g_c+I1), s		17.6			10.4	20.1		26.7
Green Ext Time (p_c), s		18.9			0.0	3.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	480	270	30	380	110	300	230	30	130	350	440
Future Volume (veh/h)	270	480	270	30	380	110	300	230	30	130	350	440
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	293	522	293	33	413	120	326	250	25	141	380	128
Adj No. of Lanes	2	1	2	1	2	0	2	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	373	632	1255	46	714	205	407	800	79	176	592	197
Arrive On Green	0.11	0.34	0.34	0.03	0.26	0.26	0.12	0.25	0.25	0.10	0.23	0.23
Sat Flow, veh/h	3442	1863	2728	1774	2714	781	3442	3253	323	1774	2611	868
Grp Volume(v), veh/h	293	522	293	33	268	265	326	135	140	141	256	252
Grp Sat Flow(s),veh/h/ln	1721	1863	1364	1774	1770	1725	1721	1770	1806	1774	1770	1710
Q Serve(g_s), s	6.7	20.9	2.9	1.5	10.7	10.9	7.5	5.1	5.1	6.3	10.6	10.8
Cycle Q Clear(g_c), s	6.7	20.9	2.9	1.5	10.7	10.9	7.5	5.1	5.1	6.3	10.6	10.8
Prop In Lane	1.00		1.00	1.00		0.45	1.00		0.18	1.00		0.51
Lane Grp Cap(c), veh/h	373	632	1255	46	465	454	407	435	444	176	401	388
V/C Ratio(X)	0.78	0.83	0.23	0.72	0.58	0.58	0.80	0.31	0.32	0.80	0.64	0.65
Avail Cap(c_a), veh/h	403	811	1516	92	655	638	446	670	683	258	698	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	24.6	4.6	39.2	26.0	26.0	34.8	25.0	25.0	35.8	28.3	28.4
Incr Delay (d2), s/veh	9.2	6.3	0.1	14.4	1.6	1.7	8.9	0.5	0.5	9.0	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	11.8	1.4	0.9	5.4	5.4	4.0	2.5	2.6	3.5	5.4	5.3
LnGrp Delay(d),s/veh	44.4	30.9	4.7	53.7	27.6	27.7	43.8	25.5	25.5	44.7	30.4	30.7
LnGrp LOS	D	C	A	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1108			566			601			649	
Approach Delay, s/veh		27.5			29.2			35.4			33.6	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	25.9	8.1	33.5	15.1	24.4	14.3	27.3
Change Period (Y+Rc), s	5.5	6.0	6.0	* 6	5.5	6.0	5.5	6.0
Max Green Setting (Gmax), s	14.8	30.7	4.2	* 35	10.5	32.0	9.5	30.0
Max Q Clear Time (g_c+I1), s	8.7	7.1	3.5	22.9	9.5	12.8	8.7	12.9
Green Ext Time (p_c), s	0.1	6.0	0.3	4.7	0.1	5.6	0.1	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	330	270	640	330	245	515
Future Volume (veh/h)	330	270	640	330	245	515
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	359	0	696	0	266	560
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	434	387	1097	491	319	1997
Arrive On Green	0.24	0.00	0.31	0.00	0.18	0.56
Sat Flow, veh/h	1774	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	359	0	696	0	266	560
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1774	1770
Q Serve(g_s), s	10.3	0.0	9.1	0.0	7.8	4.4
Cycle Q Clear(g_c), s	10.3	0.0	9.1	0.0	7.8	4.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	434	387	1097	491	319	1997
V/C Ratio(X)	0.83	0.00	0.63	0.00	0.83	0.28
Avail Cap(c_a), veh/h	888	793	1424	637	395	2474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	16.0	0.0	21.3	6.1
Incr Delay (d2), s/veh	4.1	0.0	0.6	0.0	9.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	4.5	0.0	4.6	2.1
LnGrp Delay(d),s/veh	23.3	0.0	16.6	0.0	31.3	6.2
LnGrp LOS	C		B		C	A
Approach Vol, veh/h	359		696			826
Approach Delay, s/veh	23.3		16.6			14.2
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	13.7	22.0		18.2		35.7		
Change Period (Y+Rc), s	4.0	5.3		5.0		5.3		
Max Green Setting (Gmax), s	12.0	21.7		27.0		37.7		
Max Q Clear Time (g_c+I1), s	9.8	11.1		12.3		6.4		
Green Ext Time (p_c), s	0.1	5.6		0.9		9.6		

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	16.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	520	60	230	540	70	180
Future Vol, veh/h	520	60	230	540	70	180
Conflicting Peds, #/hr	0	9	9	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	565	65	250	587	76	196

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	639	0	1694	607
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	1087	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	945	-	102	496
Stage 1	-	-	-	-	544	-
Stage 2	-	-	-	-	323	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	945	-	~ 61	492
Mov Cap-2 Maneuver	-	-	-	-	~ 61	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	196	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	99.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	61	492	-	-	945	-
HCM Lane V/C Ratio	1.247	0.398	-	-	0.265	-
HCM Control Delay (s)	$ 310	17.1	-	-	10.2	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	6.4	1.9	-	-	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	650	220	790	560	0	0	0	0	550	5	190
Future Volume (veh/h)	0	650	220	790	560	0	0	0	0	550	5	190
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	707	239	859	609	0				602	0	207
Adj No. of Lanes	0	2	0	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	773	261	1100	2410	0				694	0	310
Arrive On Green	0.00	0.30	0.30	0.32	0.68	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	2692	878	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	481	465	859	609	0				602	0	207
Grp Sat Flow(s),veh/h/ln	0	1770	1708	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	22.3	22.3	19.2	5.6	0.0				14.0	0.0	10.3
Cycle Q Clear(g_c), s	0.0	22.3	22.3	19.2	5.6	0.0				14.0	0.0	10.3
Prop In Lane	0.00		0.51	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	527	508	1100	2410	0				694	0	310
V/C Ratio(X)	0.00	0.91	0.91	0.78	0.25	0.00				0.87	0.00	0.67
Avail Cap(c_a), veh/h	0	554	534	1100	2410	0				789	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.8	28.8	26.2	5.2	0.0				33.1	0.0	31.6
Incr Delay (d2), s/veh	0.0	22.9	23.5	3.4	0.3	0.0				8.4	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	14.2	13.8	9.6	2.8	0.0				7.7	0.0	4.7
LnGrp Delay(d),s/veh	0.0	51.7	52.3	29.6	5.5	0.0				41.5	0.0	34.4
LnGrp LOS		D	D	C	A					D		C
Approach Vol, veh/h		946			1468						809	
Approach Delay, s/veh		52.0			19.6						39.7	
Approach LOS		D			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	32.6	30.7		21.7		63.3		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	24.3	* 27		18.9		55.6		
Max Q Clear Time (g_c+I1), s	21.2	24.3		16.0		7.6		
Green Ext Time (p_c), s	1.6	1.0		0.7		5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1000	0	0	1200	470	150	5	900	0	0	0
Future Volume (veh/h)	200	1000	0	0	1200	470	150	5	900	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	217	1087	0	0	1304	511	163	5	707			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	254	2057	0	0	1945	590	493	15	797			
Arrive On Green	0.14	0.58	0.00	0.00	0.13	0.13	0.29	0.29	0.29			
Sat Flow, veh/h	1774	3632	0	0	5253	1542	1724	53	2787			
Grp Volume(v), veh/h	217	1087	0	0	1304	511	168	0	707			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1542	1777	0	1393			
Q Serve(g_s), s	10.1	15.8	0.0	0.0	20.8	27.6	6.3	0.0	20.6			
Cycle Q Clear(g_c), s	10.1	15.8	0.0	0.0	20.8	27.6	6.3	0.0	20.6			
Prop In Lane	1.00		0.00	0.00		1.00	0.97		1.00			
Lane Grp Cap(c), veh/h	254	2057	0	0	1945	590	508	0	797			
V/C Ratio(X)	0.85	0.53	0.00	0.00	0.67	0.87	0.33	0.00	0.89			
Avail Cap(c_a), veh/h	278	2057	0	0	1945	590	625	0	980			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.95	0.95	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.5	10.8	0.0	0.0	32.0	35.0	23.9	0.0	29.0			
Incr Delay (d2), s/veh	21.6	1.0	0.0	0.0	1.8	15.0	0.1	0.0	7.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.5	7.8	0.0	0.0	10.1	14.3	3.1	0.0	8.8			
LnGrp Delay(d),s/veh	57.2	11.7	0.0	0.0	33.8	50.0	24.1	0.0	36.6			
LnGrp LOS	E	B			C	D	C		D			
Approach Vol, veh/h		1304			1815			875				
Approach Delay, s/veh		19.3			38.3			34.2				
Approach LOS		B			D			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		55.6			16.9	38.7		29.4
Change Period (Y+Rc), s		* 6.2			* 4.7	6.2		5.1
Max Green Setting (Gmax), s		* 44			* 13	25.8		29.9
Max Q Clear Time (g_c+I1), s		17.8			12.1	29.6		22.6
Green Ext Time (p_c), s		16.2			0.1	0.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1800	100	70	1550	90	70
Future Volume (veh/h)	1800	100	70	1550	90	70
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1957	100	76	1685	98	76
Adj No. of Lanes	2	0	1	4	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1885	95	144	4591	246	220
Arrive On Green	0.37	0.37	0.08	0.72	0.14	0.14
Sat Flow, veh/h	3516	173	1774	6669	1774	1583
Grp Volume(v), veh/h	1002	1055	76	1685	98	76
Grp Sat Flow(s),veh/h/ln	1770	1826	1774	1602	1774	1583
Q Serve(g_s), s	46.8	46.8	3.5	8.6	4.3	3.7
Cycle Q Clear(g_c), s	46.8	46.8	3.5	8.6	4.3	3.7
Prop In Lane		0.09	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	974	1006	144	4591	246	220
V/C Ratio(X)	1.03	1.05	0.53	0.37	0.40	0.35
Avail Cap(c_a), veh/h	974	1006	190	4591	253	225
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	26.8	37.5	4.6	33.4	33.1
Incr Delay (d2), s/veh	29.5	35.6	1.1	0.2	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.8	33.5	1.8	3.8	2.1	1.6
LnGrp Delay(d),s/veh	56.3	62.4	38.6	4.9	33.7	33.5
LnGrp LOS	F	F	D	A	C	C
Approach Vol, veh/h	2057			1761	174	
Approach Delay, s/veh	59.4			6.3	33.6	
Approach LOS	E			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.1	54.0				68.1		16.9
Change Period (Y+Rc), s	7.2	* 7.2				7.2		5.1
Max Green Setting (Gmax), s	9.1	* 47				60.6		12.1
Max Q Clear Time (g_c+I1), s	5.5	48.8				10.6		6.3
Green Ext Time (p_c), s	2.6	0.0				42.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1740	130	195	1490	90	160
Future Volume (veh/h)	1740	130	195	1490	90	160
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1891	141	212	1620	98	174
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2023	149	227	2746	231	206
Arrive On Green	0.61	0.61	0.13	0.78	0.13	0.13
Sat Flow, veh/h	3436	246	1774	3632	1774	1583
Grp Volume(v), veh/h	990	1042	212	1620	98	174
Grp Sat Flow(s),veh/h/ln	1770	1819	1774	1770	1774	1583
Q Serve(g_s), s	58.8	62.1	13.9	22.2	6.0	12.6
Cycle Q Clear(g_c), s	58.8	62.1	13.9	22.2	6.0	12.6
Prop In Lane		0.14	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1071	1101	227	2746	231	206
V/C Ratio(X)	0.92	0.95	0.93	0.59	0.42	0.84
Avail Cap(c_a), veh/h	1071	1101	227	2746	424	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	21.4	50.6	5.4	46.9	49.8
Incr Delay (d2), s/veh	13.5	16.2	41.3	0.5	1.2	9.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.3	35.9	9.4	10.8	3.0	6.0
LnGrp Delay(d),s/veh	34.2	37.6	92.0	6.0	48.2	58.8
LnGrp LOS	C	D	F	A	D	E
Approach Vol, veh/h	2032			1832	272	
Approach Delay, s/veh	35.9			15.9	55.0	
Approach LOS	D			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.3	20.0	77.0				97.0
Change Period (Y+Rc), s		5.0	5.0	6.0				6.0
Max Green Setting (Gmax), s		28.0	15.0	71.0				91.0
Max Q Clear Time (g_c+I1), s		14.6	15.9	64.1				24.2
Green Ext Time (p_c), s		0.7	0.0	6.9				66.2

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	840	800	360	205	515	195	380	1250	95	290	1110	840
Future Volume (veh/h)	840	800	360	205	515	195	380	1250	95	290	1110	840
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	913	870	295	223	560	169	413	1359	89	315	1207	754
Adj No. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	988	1094	481	245	566	250	436	1429	94	385	1476	907
Arrive On Green	0.29	0.31	0.31	0.14	0.16	0.16	0.21	0.49	0.49	0.19	0.48	0.48
Sat Flow, veh/h	3442	3539	1555	1774	3539	1560	3442	4877	319	3442	5085	1559
Grp Volume(v), veh/h	913	870	295	223	560	169	413	945	503	315	1207	754
Grp Sat Flow(s),veh/h/ln	1721	1770	1555	1774	1770	1560	1721	1695	1806	1721	1695	1559
Q Serve(g_s), s	38.6	33.8	24.3	18.6	23.7	11.8	17.7	39.9	39.9	13.2	30.4	43.5
Cycle Q Clear(g_c), s	38.6	33.8	24.3	18.6	23.7	11.8	17.7	39.9	39.9	13.2	30.4	43.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	988	1094	481	245	566	250	436	993	529	385	1476	907
V/C Ratio(X)	0.92	0.79	0.61	0.91	0.99	0.68	0.95	0.95	0.95	0.82	0.82	0.83
Avail Cap(c_a), veh/h	1055	1102	484	278	566	250	436	1003	535	385	1476	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	47.5	44.2	63.8	62.9	35.3	58.6	37.3	37.3	59.5	35.3	22.6
Incr Delay (d2), s/veh	13.0	4.0	2.0	28.2	34.9	7.1	29.8	18.9	28.7	12.2	5.2	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.2	17.2	10.7	11.0	14.3	5.6	10.2	21.2	24.0	6.9	14.9	30.0
LnGrp Delay(d),s/veh	64.9	51.4	46.2	92.0	97.7	42.4	88.4	56.2	66.0	71.7	40.4	31.3
LnGrp LOS	E	D	D	F	F	D	F	E	E	E	D	C
Approach Vol, veh/h		2078			952			1861			2276	
Approach Delay, s/veh		56.6			86.6			66.0			41.7	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.8	49.9	24.9	52.4	23.2	49.5	47.3	30.0
Change Period (Y+Rc), s	6.0	* 6	* 4.2	* 6	* 4.2	6.0	* 4.2	6.0
Max Green Setting (Gmax), s	15.2	* 44	* 24	* 47	* 19	40.6	* 46	24.0
Max Q Clear Time (g_c+I1), s	15.2	41.9	20.6	35.8	19.7	45.5	40.6	25.7
Green Ext Time (p_c), s	0.0	2.0	0.1	6.7	0.0	0.0	2.5	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	70	30	230	50	230	40	830	250	300	700	30
Future Volume (veh/h)	30	70	30	230	50	230	40	830	250	300	700	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	33	76	33	250	54	250	43	902	272	326	761	33
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	94	41	382	62	288	54	1009	780	358	1483	64
Arrive On Green	0.10	0.10	0.10	0.22	0.22	0.22	0.03	0.28	0.28	0.20	0.43	0.43
Sat Flow, veh/h	404	930	404	1774	289	1338	1774	3539	1541	1774	3456	150
Grp Volume(v), veh/h	142	0	0	250	0	304	43	902	272	326	390	404
Grp Sat Flow(s),veh/h/ln	1738	0	0	1774	0	1627	1774	1770	1541	1774	1770	1836
Q Serve(g_s), s	7.5	0.0	0.0	12.0	0.0	16.8	2.2	22.8	10.0	16.7	15.0	15.0
Cycle Q Clear(g_c), s	7.5	0.0	0.0	12.0	0.0	16.8	2.2	22.8	10.0	16.7	15.0	15.0
Prop In Lane	0.23		0.23	1.00		0.82	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	175	0	0	382	0	350	54	1009	780	358	760	788
V/C Ratio(X)	0.81	0.00	0.00	0.66	0.00	0.87	0.79	0.89	0.35	0.91	0.51	0.51
Avail Cap(c_a), veh/h	298	0	0	533	0	489	114	1067	805	371	760	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	0.0	33.4	0.0	35.3	44.9	32.0	14.1	36.4	19.5	19.5
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.7	0.0	9.0	9.2	9.1	0.1	24.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	0.0	6.0	0.0	8.4	1.2	12.4	6.1	10.6	7.3	7.6
LnGrp Delay(d),s/veh	44.4	0.0	0.0	34.1	0.0	44.3	54.1	41.0	14.2	61.1	19.7	19.7
LnGrp LOS	D			C		D	D	D	B	E	B	B
Approach Vol, veh/h		142			554			1217			1120	
Approach Delay, s/veh		44.4			39.7			35.5			31.8	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.3	31.9		13.9	8.9	45.3		25.1
Change Period (Y+Rc), s	3.5	5.3		4.5	6.0	5.3		5.1
Max Green Setting (Gmax), s	10.5	28.1		16.0	6.0	39.1		28.0
Max Q Clear Time (g_c+I1), s	18.7	24.8		9.5	4.2	17.0		18.8
Green Ext Time (p_c), s	0.1	1.8		0.2	0.0	8.8		1.2

Intersection Summary		
HCM 2010 Ctrl Delay	35.3	
HCM 2010 LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	470	80	80	410	40	80	190	140	40	180	60
Future Volume (veh/h)	70	470	80	80	410	40	80	190	140	40	180	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	76	511	87	87	446	43	87	207	77	43	196	65
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	542	817	139	393	1216	117	325	362	135	308	374	124
Arrive On Green	0.08	0.53	0.53	0.37	0.37	0.37	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	1550	264	814	3263	313	1107	1295	482	1090	1336	443
Grp Volume(v), veh/h	76	0	598	87	241	248	87	0	284	43	0	261
Grp Sat Flow(s),veh/h/ln	1774	0	1814	814	1770	1807	1107	0	1777	1090	0	1779
Q Serve(g_s), s	1.1	0.0	11.0	4.0	4.7	4.7	3.4	0.0	6.5	1.7	0.0	5.8
Cycle Q Clear(g_c), s	1.1	0.0	11.0	7.6	4.7	4.7	9.2	0.0	6.5	8.1	0.0	5.8
Prop In Lane	1.00		0.15	1.00		0.17	1.00		0.27	1.00		0.25
Lane Grp Cap(c), veh/h	542	0	956	393	660	673	325	0	497	308	0	498
V/C Ratio(X)	0.14	0.00	0.63	0.22	0.37	0.37	0.27	0.00	0.57	0.14	0.00	0.52
Avail Cap(c_a), veh/h	644	0	1263	483	856	874	559	0	871	538	0	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	7.9	13.1	10.7	10.7	18.2	0.0	14.6	18.0	0.0	14.3
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.4	0.5	0.5	0.2	0.0	0.4	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	5.6	0.9	2.4	2.4	1.1	0.0	3.2	0.5	0.0	2.9
LnGrp Delay(d),s/veh	6.8	0.0	8.8	13.5	11.2	11.2	18.4	0.0	14.9	18.1	0.0	14.6
LnGrp LOS	A		A	B	B	B	B		B	B		B
Approach Vol, veh/h		674			576			371			304	
Approach Delay, s/veh		8.6			11.6			15.7			15.1	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		28.8		18.3	7.3	21.6		18.3
Change Period (Y+Rc), s		4.0		5.1	3.5	4.0		5.1
Max Green Setting (Gmax), s		32.8		23.1	6.5	22.8		23.1
Max Q Clear Time (g_c+I1), s		13.0		10.1	3.1	9.6		11.2
Green Ext Time (p_c), s		10.4		2.1	0.0	7.9		2.0

Intersection Summary		
HCM 2010 Ctrl Delay		11.9
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	570	80	200	720	170	30	30	200	140	30	30
Future Volume (veh/h)	20	570	80	200	720	170	30	30	200	140	30	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	620	87	217	783	185	33	33	174	152	33	33
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	899	126	487	1337	577	478	75	394	349	247	247
Arrive On Green	0.05	0.29	0.29	0.14	0.38	0.38	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	3118	437	3442	3539	1528	1325	259	1364	1170	854	854
Grp Volume(v), veh/h	22	351	356	217	783	185	33	0	207	152	0	66
Grp Sat Flow(s),veh/h/ln	1774	1770	1786	1721	1770	1528	1325	0	1622	1170	0	1708
Q Serve(g_s), s	0.6	9.6	9.6	3.1	9.6	4.7	1.0	0.0	5.7	6.6	0.0	1.6
Cycle Q Clear(g_c), s	0.6	9.6	9.6	3.1	9.6	4.7	2.6	0.0	5.7	12.3	0.0	1.6
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.84	1.00		0.50
Lane Grp Cap(c), veh/h	92	510	515	487	1337	577	478	0	469	349	0	494
V/C Ratio(X)	0.24	0.69	0.69	0.45	0.59	0.32	0.07	0.00	0.44	0.44	0.00	0.13
Avail Cap(c_a), veh/h	326	705	712	506	1337	577	946	0	1043	763	0	1098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	17.2	17.2	21.4	13.5	12.0	15.3	0.0	15.8	20.8	0.0	14.3
Incr Delay (d2), s/veh	0.5	0.6	0.6	0.2	0.5	0.1	0.0	0.0	0.2	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.8	4.8	1.5	4.8	2.0	0.4	0.0	2.6	2.1	0.0	0.7
LnGrp Delay(d),s/veh	25.3	17.8	17.8	21.7	14.0	12.1	15.3	0.0	16.0	21.1	0.0	14.3
LnGrp LOS	C	B	B	C	B	B	B		B	C		B
Approach Vol, veh/h		729			1185			240			218	
Approach Delay, s/veh		18.1			15.1			15.9			19.0	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	20.8		20.8	7.9	25.7		20.8
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	8.0	21.7		35.0	10.0	19.7		35.0
Max Q Clear Time (g_c+I1), s	5.1	11.6		14.3	2.6	11.6		7.7
Green Ext Time (p_c), s	0.1	4.1		1.4	0.0	4.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	760	280	500	700	0	0	0	0	370	0	220
Future Volume (veh/h)	0	760	280	500	700	0	0	0	0	370	0	220
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	826	304	543	761	0				402	0	239
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1205	535	675	2212	0				703	0	314
Arrive On Green	0.00	0.34	0.34	0.20	0.63	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3632	1572	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	826	304	543	761	0				402	0	239
Grp Sat Flow(s),veh/h/ln	0	1770	1572	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	11.6	9.1	8.7	5.9	0.0				5.9	0.0	8.2
Cycle Q Clear(g_c), s	0.0	11.6	9.1	8.7	5.9	0.0				5.9	0.0	8.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1205	535	675	2212	0				703	0	314
V/C Ratio(X)	0.00	0.69	0.57	0.80	0.34	0.00				0.57	0.00	0.76
Avail Cap(c_a), veh/h	0	1461	649	949	2749	0				2153	0	961
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.4	15.5	22.1	5.2	0.0				20.9	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.6	0.4	2.3	0.0	0.0				0.3	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	3.9	4.3	2.9	0.0				2.9	0.0	3.7
LnGrp Delay(d),s/veh	0.0	17.0	15.9	24.4	5.2	0.0				21.2	0.0	23.3
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		1130			1304						641	
Approach Delay, s/veh		16.7			13.2						22.0	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.4	24.7		16.5		41.1		
Change Period (Y+Rc), s	5.1	5.1		5.1		5.1		
Max Green Setting (Gmax), s	15.3	23.8		35.0		44.8		
Max Q Clear Time (g_c+I1), s	10.7	13.6		10.2		7.9		
Green Ext Time (p_c), s	0.6	6.0		1.2		10.8		

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	880	0	0	1000	590	200	75	715	0	0	0
Future Volume (veh/h)	250	880	0	0	1000	590	200	75	715	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	272	957	0	0	1087	641	150	176	777			
Adj No. of Lanes	1	2	0	0	3	0	1	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	307	2265	0	0	1390	649	432	453	754			
Arrive On Green	0.17	0.64	0.00	0.00	0.41	0.41	0.24	0.24	0.24			
Sat Flow, veh/h	1774	3632	0	0	3558	1583	1774	1863	3099			
Grp Volume(v), veh/h	272	957	0	0	1087	641	150	176	777			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1774	1863	1549			
Q Serve(g_s), s	13.5	12.0	0.0	0.0	25.1	36.1	6.3	7.1	21.9			
Cycle Q Clear(g_c), s	13.5	12.0	0.0	0.0	25.1	36.1	6.3	7.1	21.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	307	2265	0	0	1390	649	432	453	754			
V/C Ratio(X)	0.88	0.42	0.00	0.00	0.78	0.99	0.35	0.39	1.03			
Avail Cap(c_a), veh/h	365	2265	0	0	1390	649	432	453	754			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.66	0.66	0.00	0.00	0.51	0.51	1.00	1.00	1.00			
Uniform Delay (d), s/veh	36.3	8.0	0.0	0.0	23.1	26.3	28.1	28.5	34.0			
Incr Delay (d2), s/veh	12.8	0.4	0.0	0.0	2.3	22.3	0.2	0.2	40.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.7	6.0	0.0	0.0	12.1	19.7	3.1	3.7	13.6			
LnGrp Delay(d),s/veh	49.1	8.4	0.0	0.0	25.4	48.6	28.3	28.7	74.9			
LnGrp LOS	D	A			C	D	C	C	F			
Approach Vol, veh/h		1229			1728			1103				
Approach Delay, s/veh		17.4			34.0			61.2				
Approach LOS		B			C			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.0			20.7	42.3		27.0
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		57.6			18.5	34.0		21.9
Max Q Clear Time (g_c+I1), s		14.0			15.5	38.1		23.9
Green Ext Time (p_c), s		23.1			0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1410	260	200	1180	70	210	160	260	60	150	50
Future Volume (veh/h)	90	1410	260	200	1180	70	210	160	260	60	150	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	98	1533	268	217	1283	71	228	174	283	65	163	54
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	1461	250	195	1795	99	207	163	266	65	235	78
Arrive On Green	0.07	0.48	0.48	0.11	0.53	0.53	0.12	0.26	0.26	0.04	0.18	0.18
Sat Flow, veh/h	1774	3023	518	1774	3411	188	1774	639	1040	1774	1340	444
Grp Volume(v), veh/h	98	884	917	217	665	689	228	0	457	65	0	217
Grp Sat Flow(s),veh/h/ln	1774	1770	1771	1774	1770	1829	1774	0	1679	1774	0	1784
Q Serve(g_s), s	8.2	72.5	72.5	16.5	42.7	42.9	17.5	0.0	38.3	5.5	0.0	17.1
Cycle Q Clear(g_c), s	8.2	72.5	72.5	16.5	42.7	42.9	17.5	0.0	38.3	5.5	0.0	17.1
Prop In Lane	1.00		0.29	1.00		0.10	1.00		0.62	1.00		0.25
Lane Grp Cap(c), veh/h	119	855	856	195	932	963	207	0	429	65	0	313
V/C Ratio(X)	0.83	1.03	1.07	1.11	0.71	0.72	1.10	0.00	1.07	1.00	0.00	0.69
Avail Cap(c_a), veh/h	148	855	856	195	932	963	207	0	429	65	0	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.1	38.8	38.8	66.8	26.9	27.0	66.3	0.0	55.9	72.2	0.0	58.1
Incr Delay (d2), s/veh	21.4	39.6	51.7	97.7	2.5	2.4	92.4	0.0	62.1	111.3	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	44.8	47.7	13.4	21.5	22.3	13.9	0.0	25.1	4.7	0.0	8.9
LnGrp Delay(d),s/veh	90.6	78.4	90.4	164.4	29.4	29.4	158.6	0.0	117.9	183.6	0.0	63.1
LnGrp LOS	F	F	F	F	C	C	F		F	F		E
Approach Vol, veh/h		1899			1571			685			282	
Approach Delay, s/veh		84.8			48.0			131.5			90.9	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	77.8	21.0	31.2	13.5	84.3	9.0	43.2
Change Period (Y+Rc), s	3.5	5.3	3.5	* 4.9	3.5	5.3	3.5	4.9
Max Green Setting (Gmax), s	16.5	72.5	17.5	* 27	12.5	76.5	5.5	38.3
Max Q Clear Time (g_c+I1), s	18.5	74.5	19.5	19.1	10.2	44.9	7.5	40.3
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	25.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1730	120	230	1100	110	130	80	330	80	70	60
Future Volume (veh/h)	90	1730	120	230	1100	110	130	80	330	80	70	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	98	1880	123	250	1196	109	141	87	158	87	76	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	1936	125	256	2132	194	221	318	265	200	318	269
Arrive On Green	0.07	0.57	0.57	0.14	0.65	0.65	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1774	3375	218	1774	3281	299	1238	1863	1552	1127	1863	1575
Grp Volume(v), veh/h	98	976	1027	250	644	661	141	87	158	87	76	65
Grp Sat Flow(s),veh/h/ln	1774	1770	1824	1774	1770	1810	1238	1863	1552	1127	1863	1575
Q Serve(g_s), s	7.4	70.9	74.3	19.0	27.1	27.2	15.0	5.5	12.7	9.8	4.8	4.8
Cycle Q Clear(g_c), s	7.4	70.9	74.3	19.0	27.1	27.2	19.8	5.5	12.7	15.3	4.8	4.8
Prop In Lane	1.00		0.12	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	1015	1046	256	1150	1176	221	318	265	200	318	269
V/C Ratio(X)	0.81	0.96	0.98	0.98	0.56	0.56	0.64	0.27	0.60	0.44	0.24	0.24
Avail Cap(c_a), veh/h	190	1024	1056	256	1150	1176	258	373	311	233	373	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	27.4	28.1	57.7	13.0	13.1	57.1	48.8	51.8	55.5	48.5	48.5
Incr Delay (d2), s/veh	6.6	19.5	23.3	49.6	0.7	0.7	2.4	0.2	1.0	0.6	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	39.9	43.9	12.8	13.3	13.8	5.3	2.8	5.5	3.1	2.5	2.1
LnGrp Delay(d),s/veh	68.8	47.0	51.4	107.3	13.7	13.7	59.4	49.0	52.7	56.0	48.6	48.7
LnGrp LOS	E	D	D	F	B	B	E	D	D	E	D	D
Approach Vol, veh/h		2101			1555			386			228	
Approach Delay, s/veh		50.2			28.8			54.3			51.5	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.0	84.3		28.0	12.7	94.6		28.0
Change Period (Y+Rc), s	3.5	6.7		4.9	3.5	6.7		4.9
Max Green Setting (Gmax), s	19.5	78.3		27.1	14.5	83.3		27.1
Max Q Clear Time (g_c+I1), s	21.0	76.3		17.3	9.4	29.2		21.8
Green Ext Time (p_c), s	0.0	1.3		1.1	0.0	52.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	1390	370	150	1110	220	310	140	80	110	120	340
Future Volume (veh/h)	410	1390	370	150	1110	220	310	140	80	110	120	340
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	446	1511	337	163	1207	223	337	152	74	120	130	305
Adj No. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	514	1622	351	275	1515	278	370	203	94	447	193	172
Arrive On Green	0.25	0.94	0.94	0.16	1.00	1.00	0.11	0.09	0.09	0.13	0.11	0.11
Sat Flow, veh/h	3442	2895	627	3442	2987	548	3442	2349	1091	3442	1770	1583
Grp Volume(v), veh/h	446	906	942	163	712	718	337	113	113	120	130	305
Grp Sat Flow(s),veh/h/ln	1721	1770	1752	1721	1770	1766	1721	1770	1670	1721	1770	1583
Q Serve(g_s), s	16.8	30.7	45.9	5.9	0.0	0.0	13.1	8.4	9.0	4.2	9.5	14.7
Cycle Q Clear(g_c), s	16.8	30.7	45.9	5.9	0.0	0.0	13.1	8.4	9.0	4.2	9.5	14.7
Prop In Lane	1.00		0.36	1.00		0.31	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	514	991	982	275	897	895	370	153	144	447	193	172
V/C Ratio(X)	0.87	0.91	0.96	0.59	0.79	0.80	0.91	0.74	0.78	0.27	0.67	1.77
Avail Cap(c_a), veh/h	854	1039	1029	275	897	895	370	258	244	447	193	172
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	2.9	3.4	54.7	0.0	0.0	59.6	60.2	60.4	53.0	57.9	60.2
Incr Delay (d2), s/veh	5.3	14.1	20.5	2.3	4.9	5.2	26.1	6.7	9.0	0.3	8.9	368.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	16.4	23.9	2.9	1.2	1.3	7.6	4.4	4.5	2.0	5.1	24.1
LnGrp Delay(d),s/veh	54.6	17.0	23.9	56.9	4.9	5.2	85.7	66.9	69.4	53.3	66.8	428.8
LnGrp LOS	D	B	C	E	A	A	F	E	E	D	E	F
Approach Vol, veh/h		2294			1593			563			555	
Approach Delay, s/veh		27.2			10.3			78.7			262.8	
Approach LOS		C			B			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	77.3	18.0	20.0	23.7	73.3	21.0	17.0
Change Period (Y+Rc), s	5.7	* 5.7	3.5	5.3	3.5	5.7	3.5	5.3
Max Green Setting (Gmax), s	8.5	* 79	14.5	14.7	33.5	54.3	9.5	19.7
Max Q Clear Time (g_c+I1), s	17.9	47.9	15.1	16.7	18.8	2.0	6.2	11.0
Green Ext Time (p_c), s	0.0	19.7	0.0	0.0	1.4	16.9	0.6	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	53.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1200	330	340	810	280	380	100	400	200	70	150
Future Volume (veh/h)	160	1200	330	340	810	280	380	100	400	200	70	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	174	1304	158	370	880	261	261	322	359	146	175	141
Adj No. of Lanes	2	2	1	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	763	1583	697	415	1177	697	355	373	310	191	201	167
Arrive On Green	0.44	0.89	0.89	0.20	0.56	0.56	0.20	0.20	0.20	0.11	0.11	0.11
Sat Flow, veh/h	3442	3539	1559	3442	3539	1583	1774	1863	1549	1774	1863	1550
Grp Volume(v), veh/h	174	1304	158	370	880	261	261	322	359	146	175	141
Grp Sat Flow(s),veh/h/ln	1721	1770	1559	1721	1770	1583	1774	1863	1549	1774	1863	1550
Q Serve(g_s), s	4.2	20.0	1.8	14.1	25.5	11.4	18.6	22.6	27.0	10.8	12.5	12.0
Cycle Q Clear(g_c), s	4.2	20.0	1.8	14.1	25.5	11.4	18.6	22.6	27.0	10.8	12.5	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	763	1583	697	415	1177	697	355	373	310	191	201	167
V/C Ratio(X)	0.23	0.82	0.23	0.89	0.75	0.37	0.74	0.86	1.16	0.76	0.87	0.84
Avail Cap(c_a), veh/h	763	1583	697	446	1696	930	355	373	310	197	207	172
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.31	0.31	0.31	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	5.0	4.0	53.1	25.7	16.2	50.7	52.2	54.0	58.5	59.3	59.1
Incr Delay (d2), s/veh	0.0	1.6	0.2	12.4	2.8	1.0	6.9	17.9	101.3	14.0	28.8	27.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	8.8	0.8	7.4	12.9	6.1	9.8	13.5	20.3	6.1	8.0	6.4
LnGrp Delay(d),s/veh	30.4	6.6	4.3	65.5	28.5	17.2	57.5	70.1	155.3	72.5	88.1	86.7
LnGrp LOS	C	A	A	E	C	B	E	E	F	E	F	F
Approach Vol, veh/h		1636			1511			942			462	
Approach Delay, s/veh		8.9			35.6			99.1			82.8	
Approach LOS		A			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.8	65.7		18.6	35.2	50.2		31.0
Change Period (Y+Rc), s	3.5	5.3		4.0	5.3	* 5.3		4.0
Max Green Setting (Gmax), s	17.5	58.7		15.0	11.5	* 65		27.0
Max Q Clear Time (g_c+I1), s	16.1	22.0		14.5	6.2	27.5		29.0
Green Ext Time (p_c), s	0.1	24.7		0.1	4.7	17.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1190	240	920	810	200	400	1590	830	250	740	200
Future Volume (veh/h)	340	1190	240	920	810	200	400	1590	830	250	740	200
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	370	1293	261	1000	880	217	435	1728	790	272	804	162
Adj No. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	1074	328	801	1370	336	1104	2319	1074	265	1073	211
Arrive On Green	0.20	0.35	0.35	0.23	0.34	0.34	0.54	0.76	0.76	0.13	0.33	0.33
Sat Flow, veh/h	3442	5085	1552	3442	4076	1000	3442	5085	1549	3442	5414	1066
Grp Volume(v), veh/h	370	1293	261	1000	731	366	435	1728	790	272	712	254
Grp Sat Flow(s),veh/h/ln	1721	1695	1552	1721	1695	1686	1721	1695	1549	1721	1602	1675
Q Serve(g_s), s	14.1	28.5	20.4	31.4	24.6	24.8	10.0	25.3	22.7	10.4	17.8	18.4
Cycle Q Clear(g_c), s	14.1	28.5	20.4	31.4	24.6	24.8	10.0	25.3	22.7	10.4	17.8	18.4
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	418	1074	328	801	1140	567	1104	2319	1074	265	952	332
V/C Ratio(X)	0.88	1.20	0.80	1.25	0.64	0.65	0.39	0.75	0.74	1.03	0.75	0.77
Avail Cap(c_a), veh/h	510	1074	328	801	1140	567	1104	2319	1074	265	1371	478
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	0.46	0.46	0.46	1.00	1.00	1.00	0.63	0.63	0.63	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	43.7	41.1	51.8	37.9	38.0	23.6	11.8	3.5	58.8	42.2	42.4
Incr Delay (d2), s/veh	6.7	96.4	6.5	122.5	1.3	2.7	0.1	1.4	2.9	62.1	5.3	15.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	22.8	9.4	28.5	11.8	12.0	4.7	11.7	8.2	7.2	8.3	9.9
LnGrp Delay(d),s/veh	59.6	140.1	47.6	174.3	39.2	40.7	23.7	13.2	6.3	121.0	47.5	57.9
LnGrp LOS	E	F	D	F	D	D	C	B	A	F	D	E
Approach Vol, veh/h		1924			2097			2953			1238	
Approach Delay, s/veh		112.0			103.9			12.9			65.8	
Approach LOS		F			F			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.9	35.0	49.8	33.3	21.0	51.9	15.0	68.1
Change Period (Y+Rc), s	6.5	* 6.5	6.5	* 6.5	4.6	6.5	4.6	6.5
Max Green Setting (Gmax), s	31.4	* 29	14.4	* 39	20.0	39.9	10.4	42.5
Max Q Clear Time (g_c+I1), s	33.4	30.5	12.0	20.4	16.1	26.8	12.4	27.3
Green Ext Time (p_c), s	0.0	0.0	2.3	6.4	0.3	8.5	0.0	13.3

Intersection Summary	
HCM 2010 Ctrl Delay	67.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	70	200	140	70	140	295	2005	55	175	1475	250
Future Volume (veh/h)	410	70	200	140	70	140	295	2005	55	175	1475	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	500	0	217	114	129	152	321	2179	60	190	1603	232
Adj No. of Lanes	2	0	1	1	1	1	2	4	0	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	591	0	258	198	207	174	368	2579	71	565	2674	387
Arrive On Green	0.17	0.00	0.17	0.11	0.11	0.11	0.21	0.80	0.80	0.33	0.94	0.94
Sat Flow, veh/h	3548	0	1548	1774	1863	1558	3442	6459	178	3442	5699	825
Grp Volume(v), veh/h	500	0	217	114	129	152	321	1621	618	190	1352	483
Grp Sat Flow(s),veh/h/ln	1774	0	1548	1774	1863	1558	1721	1602	1831	1721	1602	1717
Q Serve(g_s), s	18.5	0.0	18.3	8.2	8.9	13.0	12.2	28.2	28.2	5.6	5.4	5.4
Cycle Q Clear(g_c), s	18.5	0.0	18.3	8.2	8.9	13.0	12.2	28.2	28.2	5.6	5.4	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.48
Lane Grp Cap(c), veh/h	591	0	258	198	207	174	368	1919	731	565	2255	806
V/C Ratio(X)	0.85	0.00	0.84	0.58	0.62	0.88	0.87	0.84	0.85	0.34	0.60	0.60
Avail Cap(c_a), veh/h	802	0	350	204	214	179	472	2058	784	565	2255	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.31	0.31	0.31	0.24	0.24	0.24
Uniform Delay (d), s/veh	54.6	0.0	54.5	57.0	57.3	59.1	52.2	11.0	11.0	39.8	2.4	2.4
Incr Delay (d2), s/veh	6.3	0.0	12.7	2.3	3.8	33.2	4.0	1.5	3.9	0.0	0.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	0.0	8.8	4.2	4.8	7.2	6.0	12.1	14.3	2.7	1.9	2.2
LnGrp Delay(d),s/veh	60.8	0.0	67.2	59.3	61.0	92.3	56.2	12.6	15.0	39.8	2.7	3.2
LnGrp LOS	E		E	E	E	F	E	B	B	D	A	A
Approach Vol, veh/h		717			395			2560			2025	
Approach Delay, s/veh		62.8			72.6			18.6			6.3	
Approach LOS		E			E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	28.4	60.1		27.0	18.9	69.5		19.5
Change Period (Y+Rc), s	6.2	* 6.2		4.5	4.5	6.2		4.5
Max Green Setting (Gmax), s	14.5	* 58		30.5	18.5	50.8		15.5
Max Q Clear Time (g_c+I1), s	7.6	30.2		20.5	14.2	7.4		15.0
Green Ext Time (p_c), s	2.2	23.7		2.0	0.3	29.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	210	270	190	260	320	245	1815	155	315	1425	135
Future Volume (veh/h)	130	210	270	190	260	320	245	1815	155	315	1425	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	141	228	58	207	283	348	266	1973	168	342	1549	147
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	335	83	217	277	247	461	2178	668	360	1820	567
Arrive On Green	0.09	0.12	0.12	0.12	0.16	0.16	0.52	0.86	0.86	0.34	0.60	0.60
Sat Flow, veh/h	1774	2809	700	1774	1770	1583	1774	5085	1560	1774	5085	1583
Grp Volume(v), veh/h	141	142	144	207	283	348	266	1973	168	342	1549	147
Grp Sat Flow(s),veh/h/ln	1774	1770	1739	1774	1770	1583	1774	1695	1560	1774	1695	1583
Q Serve(g_s), s	10.7	10.4	10.7	15.7	21.1	21.1	13.9	33.6	2.7	25.4	33.7	4.6
Cycle Q Clear(g_c), s	10.7	10.4	10.7	15.7	21.1	21.1	13.9	33.6	2.7	25.4	33.7	4.6
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	211	207	217	277	247	461	2178	668	360	1820	567
V/C Ratio(X)	0.93	0.67	0.70	0.95	1.02	1.41	0.58	0.91	0.25	0.95	0.85	0.26
Avail Cap(c_a), veh/h	151	211	207	217	277	247	461	2178	668	361	2098	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55	0.72	0.72	0.72
Uniform Delay (d), s/veh	61.4	56.9	57.1	58.9	57.0	57.0	27.3	8.0	5.7	44.0	24.2	10.9
Incr Delay (d2), s/veh	52.8	7.5	9.1	47.9	60.2	205.2	1.0	4.0	0.5	27.9	3.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	5.5	5.7	10.6	14.9	23.3	6.8	15.2	1.2	15.1	16.2	2.1
LnGrp Delay(d),s/veh	114.2	64.4	66.1	106.8	117.2	262.2	28.3	12.0	6.2	71.9	28.1	11.7
LnGrp LOS	F	E	E	F	F	F	C	B	A	E	C	B
Approach Vol, veh/h		427			838			2407			2038	
Approach Delay, s/veh		81.4			174.8			13.4			34.2	
Approach LOS		F			F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.9	63.1	20.0	21.0	40.4	53.6	15.0	26.0
Change Period (Y+Rc), s	3.5	5.3	3.5	4.9	5.3	* 5.3	3.5	4.9
Max Green Setting (Gmax), s	27.5	57.7	16.5	16.1	29.5	* 56	11.5	21.1
Max Q Clear Time (g_c+I1), s	27.4	35.6	17.7	12.7	15.9	35.7	12.7	23.1
Green Ext Time (p_c), s	0.0	18.0	0.0	1.6	11.8	12.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	90	90	310	100	250	185	1475	295	390	1760	90
Future Volume (veh/h)	50	90	90	310	100	250	185	1475	295	390	1760	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	138	71	223	269	272	201	1603	321	424	1913	98
Adj No. of Lanes	0	2	1	1	1	1	1	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	187	106	315	331	275	223	1877	373	576	2464	126
Arrive On Green	0.07	0.07	0.07	0.18	0.18	0.18	0.21	0.74	0.74	0.28	0.83	0.83
Sat Flow, veh/h	980	2696	1526	1774	1863	1549	1774	4257	847	3442	4955	253
Grp Volume(v), veh/h	100	92	71	223	269	272	201	1275	649	424	1307	704
Grp Sat Flow(s),veh/h/ln	1814	1863	1526	1774	1863	1549	1774	1695	1713	1721	1695	1818
Q Serve(g_s), s	7.3	6.5	6.1	16.0	18.7	23.7	14.9	35.9	36.7	15.1	24.8	25.0
Cycle Q Clear(g_c), s	7.3	6.5	6.1	16.0	18.7	23.7	14.9	35.9	36.7	15.1	24.8	25.0
Prop In Lane	0.54		1.00	1.00		1.00	1.00		0.49	1.00		0.14
Lane Grp Cap(c), veh/h	126	129	106	315	331	275	223	1495	756	576	1686	904
V/C Ratio(X)	0.79	0.71	0.67	0.71	0.81	0.99	0.90	0.85	0.86	0.74	0.78	0.78
Avail Cap(c_a), veh/h	128	131	107	315	331	275	283	1570	793	576	1686	904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.49	0.49	0.49	0.51	0.51	0.51
Uniform Delay (d), s/veh	61.9	61.5	61.3	52.2	53.3	55.4	52.5	14.7	14.8	45.9	7.8	7.9
Incr Delay (d2), s/veh	29.4	17.9	16.6	6.1	13.3	50.7	12.9	3.2	6.5	2.2	1.8	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.0	3.1	8.3	10.9	14.0	8.1	16.9	18.2	7.3	11.3	12.9
LnGrp Delay(d),s/veh	91.3	79.4	77.9	58.3	66.6	106.0	65.4	17.9	21.3	48.2	9.7	11.3
LnGrp LOS	F	E	E	E	E	F	E	B	C	D	A	B
Approach Vol, veh/h		263			764			2125			2435	
Approach Delay, s/veh		83.5			78.2			23.4			16.9	
Approach LOS		F			E			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		12.9	20.5	72.6		29.0	28.1	65.0
Change Period (Y+Rc), s		3.5	3.5	5.5		5.0	5.5	* 5.5
Max Green Setting (Gmax), s		9.5	21.5	62.5		24.0	21.5	* 63
Max Q Clear Time (g_c+I1), s		9.3	16.9	27.0		25.7	17.1	38.7
Green Ext Time (p_c), s		0.0	0.1	30.9		0.0	1.4	20.8

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	68.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	20	180	20	130	10	560	140	160	420	10
Future Vol, veh/h	10	10	20	180	20	130	10	560	140	160	420	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	22	196	22	141	11	609	152	174	457	11
Number of Lanes	0	1	1	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	12.6	16.8	118.7	40.6
HCM LOS	B	C	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	50%	0%	100%	0%	100%	0%
Vol Thru, %	98%	0%	50%	0%	0%	13%	0%	98%
Vol Right, %	0%	100%	0%	100%	0%	87%	0%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	570	140	20	20	180	150	160	430
LT Vol	10	0	10	0	180	0	160	0
Through Vol	560	0	10	0	0	20	0	420
RT Vol	0	140	0	20	0	130	0	10
Lane Flow Rate	620	152	22	22	196	163	174	467
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.234	0.273	0.055	0.05	0.459	0.331	0.366	0.918
Departure Headway (Hd)	7.173	6.447	9.801	8.803	8.878	7.731	7.961	7.43
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	508	555	368	409	409	468	456	491
Service Time	4.929	4.203	7.501	6.503	6.578	5.431	5.661	5.13
HCM Lane V/C Ratio	1.22	0.274	0.06	0.054	0.479	0.348	0.382	0.951
HCM Control Delay	145	11.6	13.1	12	18.9	14.2	15.2	50.1
HCM Lane LOS	F	B	B	B	C	B	C	F
HCM 95th-tile Q	24.1	1.1	0.2	0.2	2.3	1.4	1.7	10.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	20	150	70	30	60	330	1700	100	165	1545	165
Future Volume (veh/h)	240	20	150	70	30	60	330	1700	100	165	1545	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	261	22	103	76	33	65	359	1848	109	179	1679	179
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	23	255	66	29	56	370	2414	142	202	1811	193
Arrive On Green	0.16	0.16	0.16	0.09	0.09	0.09	0.35	0.82	0.82	0.19	0.65	0.65
Sat Flow, veh/h	1642	138	1566	742	322	634	1774	4912	289	1774	4657	495
Grp Volume(v), veh/h	283	0	103	174	0	0	359	1274	683	179	1221	637
Grp Sat Flow(s),veh/h/ln	1781	0	1566	1698	0	0	1774	1695	1811	1774	1695	1762
Q Serve(g_s), s	21.4	0.0	8.0	12.0	0.0	0.0	26.9	24.5	24.7	13.3	42.7	43.2
Cycle Q Clear(g_c), s	21.4	0.0	8.0	12.0	0.0	0.0	26.9	24.5	24.7	13.3	42.7	43.2
Prop In Lane	0.92		1.00	0.44		0.37	1.00		0.16	1.00		0.28
Lane Grp Cap(c), veh/h	290	0	255	151	0	0	370	1666	890	202	1319	685
V/C Ratio(X)	0.98	0.00	0.40	1.15	0.00	0.00	0.97	0.76	0.77	0.89	0.93	0.93
Avail Cap(c_a), veh/h	290	0	255	151	0	0	370	1666	890	237	1356	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	0.54	0.54	0.54
Uniform Delay (d), s/veh	56.2	0.0	50.6	61.5	0.0	0.0	43.5	8.4	8.4	53.8	21.9	22.0
Incr Delay (d2), s/veh	45.7	0.0	0.4	120.2	0.0	0.0	8.2	0.3	0.6	17.3	7.5	13.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	0.0	3.5	10.7	0.0	0.0	14.0	11.0	11.8	7.4	20.9	23.1
LnGrp Delay(d),s/veh	101.9	0.0	51.0	181.7	0.0	0.0	51.8	8.7	9.0	71.1	29.4	35.2
LnGrp LOS	F		D	F			D	A	A	E	C	D
Approach Vol, veh/h		386			174			2316			2037	
Approach Delay, s/veh		88.3			181.7			15.4			34.9	
Approach LOS		F			F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.4	71.6		27.0	33.5	57.5		17.0
Change Period (Y+Rc), s	4.0	5.3		5.0	5.3	* 5		5.0
Max Green Setting (Gmax), s	18.0	63.7		22.0	28.0	* 54		12.0
Max Q Clear Time (g_c+I1), s	15.3	26.7		23.4	28.9	45.2		14.0
Green Ext Time (p_c), s	0.1	25.4		0.0	0.0	7.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	41.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	10	110	20	300	10	415	85	160	420	5
Future Vol, veh/h	10	10	10	110	20	300	10	415	85	160	420	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	120	22	326	11	451	92	174	457	5
Number of Lanes	0	1	0	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	13.6	23.1	53.9	46.6
HCM LOS	B	C	F	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	33%	100%	0%	100%	0%
Vol Thru, %	98%	0%	33%	0%	6%	0%	99%
Vol Right, %	0%	100%	33%	0%	94%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	425	85	30	110	320	160	425
LT Vol	10	0	10	110	0	160	0
Through Vol	415	0	10	0	20	0	420
RT Vol	0	85	10	0	300	0	5
Lane Flow Rate	462	92	33	120	348	174	462
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.973	0.176	0.087	0.283	0.707	0.385	0.957
Departure Headway (Hd)	7.583	6.85	9.645	8.514	7.322	7.979	7.455
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	476	522	374	422	494	450	485
Service Time	5.344	4.611	7.645	6.27	5.077	5.741	5.217
HCM Lane V/C Ratio	0.971	0.176	0.088	0.284	0.704	0.387	0.953
HCM Control Delay	62.4	11.1	13.6	14.6	26	15.7	58.3
HCM Lane LOS	F	B	B	B	D	C	F
HCM 95th-tile Q	12.3	0.6	0.3	1.1	5.5	1.8	11.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	250	40	330	190	340	50	760	500	240	660	60
Future Volume (veh/h)	60	250	40	330	190	340	50	760	500	240	660	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	65	272	43	359	207	370	54	826	543	261	717	65
Adj No. of Lanes	0	2	0	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	335	55	427	448	627	70	1137	876	286	1454	132
Arrive On Green	0.13	0.13	0.13	0.08	0.08	0.08	0.07	0.54	0.54	0.27	0.74	0.74
Sat Flow, veh/h	594	2598	428	1774	1863	1545	1774	3539	1542	1774	3282	297
Grp Volume(v), veh/h	200	0	180	359	207	370	54	826	543	261	386	396
Grp Sat Flow(s),veh/h/ln	1833	0	1787	1774	1863	1545	1774	1770	1542	1774	1770	1810
Q Serve(g_s), s	12.8	0.0	11.7	24.0	12.7	22.6	3.6	21.3	30.7	17.1	10.7	10.7
Cycle Q Clear(g_c), s	12.8	0.0	11.7	24.0	12.7	22.6	3.6	21.3	30.7	17.1	10.7	10.7
Prop In Lane	0.32		0.24	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	236	0	230	427	448	627	70	1137	876	286	784	802
V/C Ratio(X)	0.85	0.00	0.78	0.84	0.46	0.59	0.78	0.73	0.62	0.91	0.49	0.49
Avail Cap(c_a), veh/h	307	0	299	548	576	733	386	1137	876	386	784	802
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	0.0	50.6	53.0	47.8	34.3	55.5	23.8	12.5	43.0	10.1	10.1
Incr Delay (d2), s/veh	12.9	0.0	6.8	7.9	0.6	0.8	6.7	4.1	3.3	18.3	2.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	6.2	12.7	6.7	9.8	1.9	11.0	18.6	9.8	5.6	5.8
LnGrp Delay(d),s/veh	64.0	0.0	57.4	60.9	48.5	35.0	62.3	27.9	15.8	61.3	12.3	12.3
LnGrp LOS	E		E	E	D	D	E	C	B	E	B	B
Approach Vol, veh/h		380			936			1423			1043	
Approach Delay, s/veh		60.9			47.9			24.6			24.6	
Approach LOS		E			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.3	43.4		19.5	8.7	58.1		33.7
Change Period (Y+Rc), s	4.0	4.9		4.0	4.0	4.9		4.9
Max Green Setting (Gmax), s	26.1	18.9		20.1	26.1	18.9		37.1
Max Q Clear Time (g_c+I1), s	19.1	32.7		14.8	5.6	12.7		26.0
Green Ext Time (p_c), s	0.2	0.0		0.6	0.0	5.1		2.9

Intersection Summary		
HCM 2010 Ctrl Delay		34.0
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	760	80	380	690	140	150	320	340	150	250	70
Future Volume (veh/h)	70	760	80	380	690	140	150	320	340	150	250	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	76	826	87	413	750	113	163	348	370	163	272	76
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	1029	108	434	1571	237	266	591	880	177	591	491
Arrive On Green	0.09	0.53	0.53	0.41	0.85	0.85	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	3232	340	1774	3086	465	1026	1863	1549	730	1863	1547
Grp Volume(v), veh/h	76	452	461	413	430	433	163	348	370	163	272	76
Grp Sat Flow(s),veh/h/ln	1774	1770	1803	1774	1770	1781	1026	1863	1549	730	1863	1547
Q Serve(g_s), s	5.0	25.0	25.0	27.0	7.3	7.4	18.1	18.8	16.5	19.3	14.0	4.2
Cycle Q Clear(g_c), s	5.0	25.0	25.0	27.0	7.3	7.4	32.1	18.8	16.5	38.1	14.0	4.2
Prop In Lane	1.00		0.19	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	564	574	434	901	907	266	591	880	177	591	491
V/C Ratio(X)	0.79	0.80	0.80	0.95	0.48	0.48	0.61	0.59	0.42	0.92	0.46	0.15
Avail Cap(c_a), veh/h	170	564	574	466	901	907	266	591	880	177	591	491
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	25.0	25.0	34.8	5.0	5.0	45.6	34.4	15.1	53.1	32.7	29.4
Incr Delay (d2), s/veh	3.5	7.7	7.6	25.5	1.5	1.5	4.1	1.5	0.3	45.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	13.3	13.6	16.3	3.7	3.7	5.4	9.9	7.1	7.6	7.3	1.8
LnGrp Delay(d),s/veh	57.5	32.7	32.6	60.2	6.5	6.5	49.7	35.9	15.4	98.1	33.3	29.5
LnGrp LOS	E	C	C	E	A	A	D	D	B	F	C	C
Approach Vol, veh/h		989			1276			881			511	
Approach Delay, s/veh		34.6			23.9			29.8			53.4	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.9	44.1		43.0	10.0	67.0		43.0
Change Period (Y+Rc), s	3.5	5.9		4.9	3.5	5.9		4.9
Max Green Setting (Gmax), s	9.5	36.1		38.1	11.5	56.1		38.1
Max Q Clear Time (g_c+I1), s	29.0	27.0		40.1	7.0	9.4		34.1
Green Ext Time (p_c), s	0.4	6.3		0.0	0.0	15.9		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1080	510	440	990	0	0	0	0	400	10	350
Future Volume (veh/h)	0	1080	510	440	990	0	0	0	0	400	10	350
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	1174	518	478	1076	0				435	11	193
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1113	472	611	2977	0				393	10	356
Arrive On Green	0.00	0.77	0.77	0.69	1.00	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	2516	1028	1774	3632	0				1732	44	1569
Grp Volume(v), veh/h	0	845	847	478	1076	0				446	0	193
Grp Sat Flow(s),veh/h/ln	0	1770	1681	1774	1770	0				1776	0	1569
Q Serve(g_s), s	0.0	66.6	66.6	26.3	0.0	0.0				32.9	0.0	15.7
Cycle Q Clear(g_c), s	0.0	66.6	66.6	26.3	0.0	0.0				32.9	0.0	15.7
Prop In Lane	0.00		0.61	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	813	772	611	2977	0				403	0	356
V/C Ratio(X)	0.00	1.04	1.10	0.78	0.36	0.00				1.11	0.00	0.54
Avail Cap(c_a), veh/h	0	813	772	611	2977	0				403	0	356
HCM Platoon Ratio	1.00	1.67	1.67	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.65	0.65	0.16	0.16	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.9	16.9	18.9	0.0	0.0				56.1	0.0	49.4
Incr Delay (d2), s/veh	0.0	36.1	56.9	1.0	0.1	0.0				76.9	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	39.4	41.9	12.8	0.0	0.0				24.7	0.0	6.9
LnGrp Delay(d),s/veh	0.0	53.0	73.8	19.9	0.1	0.0				133.0	0.0	50.4
LnGrp LOS		F	F	B	A					F		D
Approach Vol, veh/h		1692			1554						639	
Approach Delay, s/veh		63.4			6.2						108.0	
Approach LOS		E			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	5.5	72.0		38.0		127.5		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	30.3	* 67		32.9		101.6		
Max Q Clear Time (g_c+I1), s	28.3	68.6		34.9		2.0		
Green Ext Time (p_c), s	1.4	0.0		0.0		23.1		

Intersection Summary	
HCM 2010 Ctrl Delay	47.8
HCM 2010 LOS	D

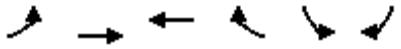
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	1180	0	0	1070	480	380	0	610	0	0	0
Future Volume (veh/h)	280	1180	0	0	1070	480	380	0	610	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	304	1283	0	0	1163	413	413	0	478			
Adj No. of Lanes	1	2	0	0	2	1	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	307	2118	0	0	1381	618	584	0	513			
Arrive On Green	0.29	1.00	0.00	0.00	0.65	0.65	0.33	0.00	0.33			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	1774	0	1560			
Grp Volume(v), veh/h	304	1283	0	0	1163	413	413	0	478			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1560			
Q Serve(g_s), s	24.7	0.1	0.0	0.0	36.8	23.4	29.5	0.0	43.0			
Cycle Q Clear(g_c), s	24.7	0.1	0.0	0.0	36.8	23.4	29.5	0.0	43.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	307	2118	0	0	1381	618	584	0	513			
V/C Ratio(X)	0.99	0.61	0.00	0.00	0.84	0.67	0.71	0.00	0.93			
Avail Cap(c_a), veh/h	307	2118	0	0	1381	618	674	0	593			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.79	0.79	1.00	0.00	1.00			
Uniform Delay (d), s/veh	51.4	0.0	0.0	0.0	21.8	19.5	42.5	0.0	47.0			
Incr Delay (d2), s/veh	13.1	0.1	0.0	0.0	5.1	4.5	2.6	0.0	19.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	13.2	0.1	0.0	0.0	18.7	10.9	14.9	0.0	21.2			
LnGrp Delay(d),s/veh	64.5	0.1	0.0	0.0	27.0	24.0	45.1	0.0	66.6			
LnGrp LOS	E	A			C	C	D		E			
Approach Vol, veh/h		1587			1576			891				
Approach Delay, s/veh		12.5			26.2			56.6				
Approach LOS		B			C			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		92.2			30.2	62.0		52.8
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		79.4			25.1	49.2		55.1
Max Q Clear Time (g_c+I1), s		2.1			26.7	38.8		45.0
Green Ext Time (p_c), s		23.8			0.0	8.1		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	360	1390	1170	280	430	400
Future Volume (veh/h)	360	1390	1170	280	430	400
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	391	1511	1272	250	467	144
Adj No. of Lanes	1	2	3	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	410	2731	2571	777	537	247
Arrive On Green	0.46	1.00	0.84	0.84	0.16	0.16
Sat Flow, veh/h	1774	3632	5253	1537	3442	1583
Grp Volume(v), veh/h	391	1511	1272	250	467	144
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1537	1721	1583
Q Serve(g_s), s	30.7	0.0	9.7	5.0	19.2	12.2
Cycle Q Clear(g_c), s	30.7	0.0	9.7	5.0	19.2	12.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	410	2731	2571	777	537	247
V/C Ratio(X)	0.95	0.55	0.49	0.32	0.87	0.58
Avail Cap(c_a), veh/h	586	2731	2571	777	757	348
HCM Platoon Ratio	2.00	2.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.18	0.18	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	6.3	6.0	59.8	56.8
Incr Delay (d2), s/veh	12.6	0.4	0.1	0.2	7.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.3	0.2	4.3	2.1	9.7	10.8
LnGrp Delay(d),s/veh	50.9	0.4	6.5	6.2	66.9	58.4
LnGrp LOS	D	A	A	A	E	E
Approach Vol, veh/h		1902	1522		611	
Approach Delay, s/veh		10.8	6.4		64.9	
Approach LOS		B	A		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		117.3		27.7	38.6	78.7		
Change Period (Y+Rc), s		5.4		5.1	5.1	5.4		
Max Green Setting (Gmax), s		102.6		31.9	47.9	49.6		
Max Q Clear Time (g_c+I1), s		2.0		21.2	32.7	11.7		
Green Ext Time (p_c), s		31.4		1.4	0.8	22.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1200	170	240	1560	100	250	320	340	110	180	130
Future Volume (veh/h)	230	1200	170	240	1560	100	250	320	340	110	180	130
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	250	1304	185	261	1696	109	272	348	370	120	196	141
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	649	2484	1319	283	1704	744	266	358	304	116	201	166
Arrive On Green	0.37	0.70	0.70	0.27	0.80	0.80	0.15	0.19	0.19	0.07	0.11	0.11
Sat Flow, veh/h	1774	3539	1541	1774	3539	1544	1774	1863	1581	1774	1863	1545
Grp Volume(v), veh/h	250	1304	185	261	1696	109	272	348	370	120	196	141
Grp Sat Flow(s),veh/h/ln	1774	1770	1541	1774	1770	1544	1774	1863	1581	1774	1863	1545
Q Serve(g_s), s	13.5	22.6	3.3	18.6	61.1	2.0	19.5	24.1	25.0	8.5	13.6	11.7
Cycle Q Clear(g_c), s	13.5	22.6	3.3	18.6	61.1	2.0	19.5	24.1	25.0	8.5	13.6	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	649	2484	1319	283	1704	744	266	358	304	116	201	166
V/C Ratio(X)	0.39	0.52	0.14	0.92	1.00	0.15	1.02	0.97	1.22	1.03	0.98	0.85
Avail Cap(c_a), veh/h	649	2484	1319	321	1704	744	266	358	304	116	201	166
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	9.1	4.0	46.9	12.6	6.8	55.3	52.1	59.9	60.8	57.8	57.0
Incr Delay (d2), s/veh	0.1	0.6	0.2	27.9	20.7	0.4	61.0	39.8	123.9	93.1	56.7	31.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	11.1	1.5	11.2	33.2	0.9	14.0	16.3	10.5	7.2	10.2	6.4
LnGrp Delay(d),s/veh	30.5	9.7	4.2	74.8	33.3	7.2	116.3	92.0	183.8	154.4	114.6	88.3
LnGrp LOS	C	A	A	E	C	A	F	F	F	F	F	F
Approach Vol, veh/h		1739			2066			990			457	
Approach Delay, s/veh		12.1			37.1			133.0			116.9	
Approach LOS		B			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	96.6	23.0	18.1	52.9	67.9	12.0	29.1
Change Period (Y+Rc), s	3.5	5.3	3.5	4.1	5.3	* 5.3	3.5	4.1
Max Green Setting (Gmax), s	23.5	56.6	19.5	14.0	17.5	* 63	8.5	25.0
Max Q Clear Time (g_c+I1), s	20.6	24.6	21.5	15.6	15.5	63.1	10.5	27.0
Green Ext Time (p_c), s	0.1	15.3	0.0	0.0	0.2	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

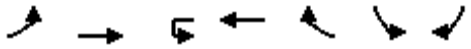
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1670	140	500	2020	180	400
Future Volume (veh/h)	1670	140	500	2020	180	400
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1815	140	543	2196	196	435
Adj No. of Lanes	2	0	2	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1849	141	729	2857	222	533
Arrive On Green	0.93	0.93	0.42	1.00	0.13	0.13
Sat Flow, veh/h	3427	254	3442	3632	1774	1583
Grp Volume(v), veh/h	952	1003	543	2196	196	435
Grp Sat Flow(s),veh/h/ln	1770	1818	1721	1770	1774	1583
Q Serve(g_s), s	51.0	66.9	17.3	0.0	14.1	5.1
Cycle Q Clear(g_c), s	51.0	66.9	17.3	0.0	14.1	5.1
Prop In Lane		0.14	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	981	1008	729	2857	222	533
V/C Ratio(X)	0.97	0.99	0.74	0.77	0.88	0.82
Avail Cap(c_a), veh/h	983	1010	729	2857	341	640
HCM Platoon Ratio	1.67	1.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.23	0.23	1.00	1.00
Uniform Delay (d), s/veh	4.0	4.6	34.5	0.0	55.9	39.4
Incr Delay (d2), s/veh	22.4	27.0	1.2	0.5	11.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.2	35.9	8.3	0.2	7.6	3.0
LnGrp Delay(d),s/veh	26.4	31.6	35.7	0.5	66.9	45.1
LnGrp LOS	C	C	D	A	E	D
Approach Vol, veh/h	1955			2739	631	
Approach Delay, s/veh	29.1			7.5	51.9	
Approach LOS	C			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		110.2			32.8	77.4		19.8
Change Period (Y+Rc), s		5.3			5.3	* 5.3		3.5
Max Green Setting (Gmax), s		96.2			20.5	* 72		25.0
Max Q Clear Time (g_c+I1), s		2.0			19.3	68.9		16.1
Green Ext Time (p_c), s		84.6			0.2	3.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	800	1260	5	1620	150	130	730
Future Volume (veh/h)	800	1260	5	1620	150	130	730
Number	1	6		2	12	7	14
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1863	1900	1863	1863
Adj Flow Rate, veh/h	870	1370		1761	147	141	793
Adj No. of Lanes	2	2		2	0	1	2
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	900	2976		1829	151	162	984
Arrive On Green	0.52	1.00		0.92	0.92	0.09	0.09
Sat Flow, veh/h	3442	3632		3404	273	1774	2787
Grp Volume(v), veh/h	870	1370		931	977	141	793
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1815	1774	1393
Q Serve(g_s), s	31.7	0.0		43.5	54.1	10.2	11.9
Cycle Q Clear(g_c), s	31.7	0.0		43.5	54.1	10.2	11.9
Prop In Lane	1.00				0.15	1.00	1.00
Lane Grp Cap(c), veh/h	900	2976		977	1002	162	984
V/C Ratio(X)	0.97	0.46		0.95	0.98	0.87	0.81
Avail Cap(c_a), veh/h	919	2976		977	1002	162	984
HCM Platoon Ratio	2.00	2.00		1.67	1.67	1.00	1.00
Upstream Filter(I)	0.28	0.28		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	0.0		3.9	4.4	58.3	38.0
Incr Delay (d2), s/veh	9.1	0.1		19.3	23.0	34.9	4.6
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.9	0.1		23.3	29.5	6.6	24.1
LnGrp Delay(d),s/veh	39.5	0.1		23.2	27.4	93.1	42.7
LnGrp LOS	D	A		C	C	F	D
Approach Vol, veh/h		2240		1908		934	
Approach Delay, s/veh		15.4		25.4		50.3	
Approach LOS		B		C		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	37.5	77.1		15.4		114.6		
Change Period (Y+Rc), s	3.5	5.3		3.5		5.3		
Max Green Setting (Gmax), s	34.7	71.1		11.9		100.3		
Max Q Clear Time (g_c+I1), s	33.7	56.1		13.9		2.0		
Green Ext Time (p_c), s	0.3	14.9		0.0		94.5		

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	555	170	340	640	340	210	1040	300	635	1145	455
Future Volume (veh/h)	410	555	170	340	640	340	210	1040	300	635	1145	455
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	446	603	185	370	696	296	228	1130	326	690	1245	495
Adj No. of Lanes	2	2	0	2	2	0	1	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	657	201	531	662	282	288	1068	308	664	1540	470
Arrive On Green	0.21	0.41	0.41	0.26	0.46	0.46	0.27	0.45	0.45	0.32	0.51	0.51
Sat Flow, veh/h	3442	2670	818	3442	2421	1030	1774	3922	1131	3442	5085	1551
Grp Volume(v), veh/h	446	399	389	370	509	483	228	977	479	690	1245	495
Grp Sat Flow(s),veh/h/ln	1721	1770	1718	1721	1770	1681	1774	1695	1663	1721	1695	1551
Q Serve(g_s), s	18.2	30.7	30.9	14.0	39.4	39.4	17.2	39.2	39.2	27.8	29.5	43.6
Cycle Q Clear(g_c), s	18.2	30.7	30.9	14.0	39.4	39.4	17.2	39.2	39.2	27.8	29.5	43.6
Prop In Lane	1.00		0.48	1.00		0.61	1.00		0.68	1.00		1.00
Lane Grp Cap(c), veh/h	435	435	422	531	484	460	288	923	453	664	1540	470
V/C Ratio(X)	1.03	0.92	0.92	0.70	1.05	1.05	0.79	1.06	1.06	1.04	0.81	1.05
Avail Cap(c_a), veh/h	435	474	461	531	484	460	288	923	453	664	1540	470
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.40	0.40	0.40	0.87	0.87	0.87	0.35	0.35	0.35
Uniform Delay (d), s/veh	56.8	41.1	41.1	50.4	39.1	39.1	50.2	39.3	39.3	48.8	32.1	35.6
Incr Delay (d2), s/veh	49.8	22.1	23.0	1.4	40.3	40.9	11.3	44.5	55.9	31.3	1.7	40.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	17.5	17.2	6.7	24.6	23.4	9.3	24.0	24.9	16.0	14.0	23.7
LnGrp Delay(d),s/veh	106.6	63.2	64.1	51.8	79.4	80.0	61.5	83.8	95.2	80.1	33.8	75.6
LnGrp LOS	F	E	E	D	F	F	E	F	F	F	C	F
Approach Vol, veh/h		1234			1362			1684			2430	
Approach Delay, s/veh		79.2			72.1			84.0			55.5	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	44.5	26.4	41.1	27.6	48.9	22.4	45.1
Change Period (Y+Rc), s	4.2	* 5.3	4.2	* 5.7	4.2	* 5.3	4.2	* 5.7
Max Green Setting (Gmax), s	27.8	* 39	19.0	* 39	23.4	* 44	18.2	* 39
Max Q Clear Time (g_c+I1), s	29.4	41.2	16.0	32.9	19.2	45.6	20.2	41.4
Green Ext Time (p_c), s	0.0	0.0	0.6	2.5	0.9	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	70.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

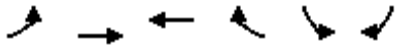
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	760	20	80	1090	180	40	10	30	240	10	310
Future Volume (veh/h)	220	760	20	80	1090	180	40	10	30	240	10	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	239	826	21	87	1185	170	43	11	33	261	11	337
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	1937	49	110	1303	186	44	11	34	296	8	257
Arrive On Green	0.28	0.92	0.92	0.10	0.70	0.70	0.05	0.05	0.05	0.17	0.17	0.17
Sat Flow, veh/h	1774	3527	90	1774	3109	444	843	216	647	1774	50	1541
Grp Volume(v), veh/h	239	414	433	87	672	683	87	0	0	261	0	348
Grp Sat Flow(s),veh/h/ln	1774	1770	1847	1774	1770	1784	1706	0	0	1774	0	1591
Q Serve(g_s), s	12.0	3.1	3.1	4.6	30.0	30.5	4.9	0.0	0.0	13.8	0.0	16.0
Cycle Q Clear(g_c), s	12.0	3.1	3.1	4.6	30.0	30.5	4.9	0.0	0.0	13.8	0.0	16.0
Prop In Lane	1.00		0.05	1.00		0.25	0.49		0.38	1.00		0.97
Lane Grp Cap(c), veh/h	299	972	1014	110	742	748	89	0	0	296	0	265
V/C Ratio(X)	0.80	0.43	0.43	0.79	0.91	0.91	0.98	0.00	0.00	0.88	0.00	1.31
Avail Cap(c_a), veh/h	299	972	1014	185	806	812	89	0	0	296	0	265
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	0.46	0.46	0.46	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	1.9	1.9	42.4	12.9	12.9	45.4	0.0	0.0	39.1	0.0	40.0
Incr Delay (d2), s/veh	2.8	0.3	0.3	2.2	8.9	9.3	88.0	0.0	0.0	24.5	0.0	164.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	1.3	1.4	2.3	16.0	16.3	4.5	0.0	0.0	8.8	0.0	19.1
LnGrp Delay(d),s/veh	35.8	2.2	2.2	44.6	21.7	22.2	133.4	0.0	0.0	63.6	0.0	204.9
LnGrp LOS	D	A	A	D	C	C	F			E		F
Approach Vol, veh/h		1086			1442			87			609	
Approach Delay, s/veh		9.6			23.3			133.4			144.4	
Approach LOS		A			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	58.0		20.0	21.5	45.5		9.0
Change Period (Y+Rc), s	3.0	5.3		4.0	5.3	* 5.3		4.0
Max Green Setting (Gmax), s	10.0	48.7		16.0	14.5	* 44		5.0
Max Q Clear Time (g_c+I1), s	5.6	5.1		18.0	14.0	32.5		6.9
Green Ext Time (p_c), s	0.0	8.5		0.0	0.1	7.7		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		44.5
HCM 2010 LOS		D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	350	680	910	220	140	370
Future Volume (veh/h)	350	680	910	220	140	370
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	380	739	989	214	152	402
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	392	2165	1017	220	488	435
Arrive On Green	0.22	0.61	0.35	0.35	0.27	0.27
Sat Flow, veh/h	1774	3632	2990	625	1774	1583
Grp Volume(v), veh/h	380	739	603	600	152	402
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1752	1774	1583
Q Serve(g_s), s	18.7	9.0	29.6	29.8	6.0	21.8
Cycle Q Clear(g_c), s	18.7	9.0	29.6	29.8	6.0	21.8
Prop In Lane	1.00			0.36	1.00	1.00
Lane Grp Cap(c), veh/h	392	2165	621	615	488	435
V/C Ratio(X)	0.97	0.34	0.97	0.97	0.31	0.92
Avail Cap(c_a), veh/h	392	2165	621	615	523	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	8.4	28.2	28.2	25.4	31.1
Incr Delay (d2), s/veh	37.4	0.2	29.1	30.0	0.4	23.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	4.5	19.4	19.4	3.0	19.8
LnGrp Delay(d),s/veh	71.5	8.6	57.3	58.2	25.7	54.4
LnGrp LOS	E	A	E	E	C	D
Approach Vol, veh/h		1119	1203		554	
Approach Delay, s/veh		30.0	57.8		46.5	
Approach LOS		C	E		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		60.5		27.8	23.0	37.5		
Change Period (Y+Rc), s		6.5		3.5	3.5	6.5		
Max Green Setting (Gmax), s		54.0		26.0	19.5	31.0		
Max Q Clear Time (g_c+I1), s		11.0		23.8	20.7	31.8		
Green Ext Time (p_c), s		32.3		0.5	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	44.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	530	100	110	745	165	230	280	80	180	270	230
Future Volume (veh/h)	190	530	100	110	745	165	230	280	80	180	270	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	207	576	89	120	810	145	250	304	87	196	293	200
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1066	164	134	910	163	258	483	404	220	442	371
Arrive On Green	0.12	0.35	0.35	0.08	0.30	0.30	0.15	0.26	0.26	0.12	0.24	0.24
Sat Flow, veh/h	1774	3075	474	1774	3000	537	1774	1863	1560	1774	1863	1561
Grp Volume(v), veh/h	207	331	334	120	478	477	250	304	87	196	293	200
Grp Sat Flow(s),veh/h/ln	1774	1770	1779	1774	1770	1768	1774	1863	1560	1774	1863	1561
Q Serve(g_s), s	10.7	13.9	14.0	6.2	23.9	23.9	13.0	13.4	4.1	10.1	13.2	10.4
Cycle Q Clear(g_c), s	10.7	13.9	14.0	6.2	23.9	23.9	13.0	13.4	4.1	10.1	13.2	10.4
Prop In Lane	1.00		0.27	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	613	617	134	537	536	258	483	404	220	442	371
V/C Ratio(X)	0.94	0.54	0.54	0.90	0.89	0.89	0.97	0.63	0.22	0.89	0.66	0.54
Avail Cap(c_a), veh/h	220	618	621	134	542	541	258	622	521	220	582	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	24.4	24.4	42.5	30.8	30.8	39.4	30.4	27.0	40.0	32.0	30.9
Incr Delay (d2), s/veh	44.8	1.7	1.7	48.1	17.5	17.5	46.9	2.9	0.6	32.4	3.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	7.1	7.2	4.8	14.3	14.3	9.7	7.3	1.8	6.9	7.2	4.8
LnGrp Delay(d),s/veh	85.1	26.1	26.1	90.6	48.3	48.3	86.4	33.3	27.5	72.4	35.6	33.5
LnGrp LOS	F	C	C	F	D	D	F	C	C	E	D	C
Approach Vol, veh/h		872			1075			641			689	
Approach Delay, s/veh		40.1			53.0			53.2			45.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	37.9	17.0	26.9	15.0	33.9	15.0	28.9
Change Period (Y+Rc), s	4.0	5.7	3.5	4.9	3.5	5.7	3.5	4.9
Max Green Setting (Gmax), s	7.0	32.4	13.5	29.0	11.5	28.4	11.5	31.0
Max Q Clear Time (g_c+I1), s	9.2	16.0	15.0	15.2	12.7	25.9	12.1	15.4
Green Ext Time (p_c), s	0.0	12.8	0.0	6.6	0.0	2.3	0.0	7.2

Intersection Summary	
HCM 2010 Ctrl Delay	48.0
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	160	210	320	30	250	270
Future Vol, veh/h	160	210	320	30	250	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	174	228	348	33	272	293
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	20.8	19.8	16.8
HCM LOS	C	C	C

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	43%	100%	0%
Vol Thru, %	91%	0%	0%	100%
Vol Right, %	9%	57%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	350	370	250	270
LT Vol	0	160	250	0
Through Vol	320	0	0	270
RT Vol	30	210	0	0
Lane Flow Rate	380	402	272	293
Geometry Grp	5	2	7	7
Degree of Util (X)	0.646	0.674	0.526	0.526
Departure Headway (Hd)	6.115	6.03	6.964	6.454
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	586	595	514	555
Service Time	4.192	4.1	4.747	4.237
HCM Lane V/C Ratio	0.648	0.676	0.529	0.528
HCM Control Delay	19.8	20.8	17.3	16.3
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	4.6	5.1	3	3

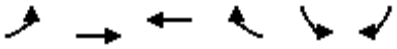
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	700	310	185	555	0	0	0	0	240	10	250
Future Volume (veh/h)	0	700	310	185	555	0	0	0	0	240	10	250
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	761	337	201	603	0				261	11	272
Adj No. of Lanes	0	1	1	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	760	621	367	2402	0				331	14	307
Arrive On Green	0.00	0.82	0.82	0.07	0.22	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1863	1520	1774	3632	0				1706	72	1583
Grp Volume(v), veh/h	0	761	337	201	603	0				272	0	272
Grp Sat Flow(s),veh/h/ln	0	1863	1520	1774	1770	0				1777	0	1583
Q Serve(g_s), s	0.0	32.7	5.8	8.8	11.2	0.0				11.7	0.0	13.4
Cycle Q Clear(g_c), s	0.0	32.7	5.8	8.8	11.2	0.0				11.7	0.0	13.4
Prop In Lane	0.00		1.00	1.00		0.00				0.96		1.00
Lane Grp Cap(c), veh/h	0	760	621	367	2402	0				345	0	307
V/C Ratio(X)	0.00	1.00	0.54	0.55	0.25	0.00				0.79	0.00	0.89
Avail Cap(c_a), veh/h	0	880	718	367	2402	0				355	0	317
HCM Platoon Ratio	1.00	2.00	2.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.3	4.9	33.7	14.3	0.0				30.7	0.0	31.4
Incr Delay (d2), s/veh	0.0	32.8	3.4	0.9	0.2	0.0				10.0	0.0	23.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	21.7	2.8	4.4	5.6	0.0				6.6	0.0	7.8
LnGrp Delay(d),s/veh	0.0	40.2	8.3	34.6	14.6	0.0				40.7	0.0	54.6
LnGrp LOS		F	A	C	B					D		D
Approach Vol, veh/h		1098			804						544	
Approach Delay, s/veh		30.4			19.6						47.7	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	9.9	39.5		20.6		59.4		
Change Period (Y+Rc), s	5.1	* 5.1		5.1		5.1		
Max Green Setting (Gmax), s	4.8	* 38		16.0		53.8		
Max Q Clear Time (g_c+I1), s	10.8	34.7		15.4		13.2		
Green Ext Time (p_c), s	0.2	1.4		0.1		3.0		

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	340	630	740	350	0	0
Future Volume (veh/h)	340	630	740	350	0	0
Number	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	370	685	804	380		
Adj No. of Lanes	1	1	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	402	1737	2290	990		
Arrive On Green	0.45	1.00	1.00	1.00		
Sat Flow, veh/h	1774	1863	3632	1529		
Grp Volume(v), veh/h	370	685	804	380		
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1529		
Q Serve(g_s), s	15.6	0.0	0.0	0.0		
Cycle Q Clear(g_c), s	15.6	0.0	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	402	1737	2290	990		
V/C Ratio(X)	0.92	0.39	0.35	0.38		
Avail Cap(c_a), veh/h	783	1737	2290	990		
HCM Platoon Ratio	2.00	2.00	2.00	2.00		
Upstream Filter(I)	0.45	0.45	0.77	0.77		
Uniform Delay (d), s/veh	21.2	0.0	0.0	0.0		
Incr Delay (d2), s/veh	1.8	0.3	0.3	0.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.6	0.1	0.1	0.2		
LnGrp Delay(d),s/veh	22.9	0.3	0.3	0.9		
LnGrp LOS	C	A	A	A		
Approach Vol, veh/h		1055	1184			
Approach Delay, s/veh		8.2	0.5			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		80.0			22.8	57.2		
Change Period (Y+Rc), s		5.4			* 4.7	5.4		
Max Green Setting (Gmax), s		74.6			* 35	34.6		
Max Q Clear Time (g_c+I1), s		2.0			17.6	2.0		
Green Ext Time (p_c), s		9.9			0.5	9.2		

Intersection Summary	
HCM 2010 Ctrl Delay	4.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	495	0	0	615	75	270	200	200	40	0	220
Future Volume (veh/h)	135	495	0	0	615	75	270	200	200	40	0	220
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	147	538	0	0	668	82	255	270	184	43	0	239
Adj No. of Lanes	1	1	0	0	3	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	380	874	0	0	862	105	332	348	292	37	0	203
Arrive On Green	0.43	0.94	0.00	0.00	0.19	0.19	0.19	0.19	0.19	0.15	0.00	0.15
Sat Flow, veh/h	1774	1863	0	0	4763	559	1774	1863	1562	245	0	1364
Grp Volume(v), veh/h	147	538	0	0	491	259	255	270	184	282	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	0	1695	1764	1774	1863	1562	1610	0	0
Q Serve(g_s), s	4.5	3.4	0.0	0.0	11.0	11.2	10.9	11.0	8.7	11.9	0.0	0.0
Cycle Q Clear(g_c), s	4.5	3.4	0.0	0.0	11.0	11.2	10.9	11.0	8.7	11.9	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.32	1.00		1.00	0.15		0.85
Lane Grp Cap(c), veh/h	380	874	0	0	636	331	332	348	292	239	0	0
V/C Ratio(X)	0.39	0.62	0.00	0.00	0.77	0.78	0.77	0.78	0.63	1.18	0.00	0.00
Avail Cap(c_a), veh/h	380	874	0	0	831	432	397	417	350	239	0	0
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.00	0.00	0.77	0.77	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.3	1.4	0.0	0.0	30.9	30.9	30.9	30.9	30.0	34.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	3.0	0.0	0.0	6.9	13.2	8.4	8.4	3.5	114.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.9	0.0	0.0	5.7	6.7	6.1	6.4	4.0	12.9	0.0	0.0
LnGrp Delay(d),s/veh	19.5	4.4	0.0	0.0	37.8	44.1	39.3	39.3	33.5	148.8	0.0	0.0
LnGrp LOS	B	A			D	D	D	D	C	F		
Approach Vol, veh/h		685			750			709			282	
Approach Delay, s/veh		7.7			40.0			37.8			148.8	
Approach LOS		A			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		42.9		17.0	22.5	20.4		20.1
Change Period (Y+Rc), s		5.4		5.1	5.4	* 5.4		5.1
Max Green Setting (Gmax), s		34.6		11.9	10.3	* 20		17.9
Max Q Clear Time (g_c+I1), s		5.4		13.9	6.5	13.2		13.0
Green Ext Time (p_c), s		2.4		0.0	1.0	1.8		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	42.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	545	125	145	505	65	90	80	100	40	80	20
Future Volume (veh/h)	50	545	125	145	505	65	90	80	100	40	80	20
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	54	592	136	158	549	71	98	87	64	43	87	22
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	719	165	197	910	118	191	139	86	139	241	52
Arrive On Green	0.04	0.49	0.49	0.11	0.56	0.56	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	1466	337	1774	1617	209	534	668	416	317	1162	250
Grp Volume(v), veh/h	54	0	728	158	0	620	249	0	0	152	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1803	1774	0	1826	1618	0	0	1729	0	0
Q Serve(g_s), s	1.9	0.0	21.7	5.5	0.0	14.1	4.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	21.7	5.5	0.0	14.1	8.7	0.0	0.0	4.6	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.11	0.39		0.26	0.28		0.14
Lane Grp Cap(c), veh/h	69	0	884	197	0	1027	416	0	0	433	0	0
V/C Ratio(X)	0.78	0.00	0.82	0.80	0.00	0.60	0.60	0.00	0.00	0.35	0.00	0.00
Avail Cap(c_a), veh/h	127	0	990	212	0	1089	607	0	0	633	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.0	0.0	13.7	27.3	0.0	9.1	23.0	0.0	0.0	21.5	0.0	0.0
Incr Delay (d2), s/veh	17.3	0.0	5.4	18.4	0.0	1.0	1.7	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	12.0	3.7	0.0	7.3	4.2	0.0	0.0	2.4	0.0	0.0
LnGrp Delay(d),s/veh	47.3	0.0	19.1	45.6	0.0	10.1	24.7	0.0	0.0	22.1	0.0	0.0
LnGrp LOS	D		B	D		B	C			C		
Approach Vol, veh/h		782			778			249			152	
Approach Delay, s/veh		21.1			17.3			24.7			22.1	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	35.3		17.1	5.9	39.9		17.1
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	7.5	34.5		21.0	4.5	37.5		21.0
Max Q Clear Time (g_c+I1), s	7.5	23.7		6.6	3.9	16.1		10.7
Green Ext Time (p_c), s	0.0	7.1		2.5	0.0	11.4		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	250	500	515	125	70	160
Future Vol, veh/h	250	500	515	125	70	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	272	543	560	136	76	174

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	696	0	-	0	1715	628
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	1087	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	900	-	-	-	99	483
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	323	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	900	-	-	-	~ 69	483
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	225	-

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	51.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	900	-	-	-	309
HCM Lane V/C Ratio	0.302	-	-	-	0.809
HCM Control Delay (s)	10.7	-	-	-	51.7
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.3	-	-	-	6.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	445	100	225	475	5	70	10	180	10	10	10
Future Volume (veh/h)	15	445	100	225	475	5	70	10	180	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	16	484	109	245	516	5	76	11	158	11	11	11
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	576	937	211	518	1172	11	166	35	196	166	152	112
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	877	1472	332	821	1842	18	373	176	998	366	773	570
Grp Volume(v), veh/h	16	0	593	245	0	521	245	0	0	33	0	0
Grp Sat Flow(s),veh/h/ln	877	0	1804	821	0	1860	1547	0	0	1709	0	0
Q Serve(g_s), s	0.5	0.0	9.1	11.7	0.0	7.2	5.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	9.1	20.8	0.0	7.2	7.6	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.01	0.31		0.64	0.33		0.33
Lane Grp Cap(c), veh/h	576	0	1148	518	0	1184	396	0	0	430	0	0
V/C Ratio(X)	0.03	0.00	0.52	0.47	0.00	0.44	0.62	0.00	0.00	0.08	0.00	0.00
Avail Cap(c_a), veh/h	621	0	1241	560	0	1280	591	0	0	622	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.6	0.0	5.0	10.6	0.0	4.7	19.4	0.0	0.0	16.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	1.4	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	4.7	2.8	0.0	3.8	3.3	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	6.6	0.0	5.8	12.1	0.0	5.2	20.0	0.0	0.0	16.8	0.0	0.0
LnGrp LOS	A		A	B		A	C			B		
Approach Vol, veh/h		609			766			245			33	
Approach Delay, s/veh		5.8			7.4			20.0			16.8	
Approach LOS		A			A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		37.4		13.5		37.4		13.5
Change Period (Y+Rc), s		5.0		3.5		5.0		3.5
Max Green Setting (Gmax), s		35.0		16.5		35.0		16.5
Max Q Clear Time (g_c+I1), s		11.1		2.8		22.8		9.6
Green Ext Time (p_c), s		16.5		0.9		9.6		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	570	170	160	1030	930	680
Future Volume (veh/h)	570	170	160	1030	930	680
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	620	185	174	1120	1011	739
Adj No. of Lanes	2	1	1	3	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	913	420	125	2859	1546	1112
Arrive On Green	0.27	0.27	0.07	0.56	0.44	0.44
Sat Flow, veh/h	3442	1583	1774	5253	3632	1583
Grp Volume(v), veh/h	620	185	174	1120	1011	739
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1695	1770	1583
Q Serve(g_s), s	10.3	6.2	4.5	7.9	14.4	16.6
Cycle Q Clear(g_c), s	10.3	6.2	4.5	7.9	14.4	16.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	913	420	125	2859	1546	1112
V/C Ratio(X)	0.68	0.44	1.39	0.39	0.65	0.66
Avail Cap(c_a), veh/h	1780	819	125	2869	1592	1132
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	19.5	29.7	7.8	14.2	5.3
Incr Delay (d2), s/veh	1.3	1.0	217.4	0.1	1.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	5.8	9.7	3.7	7.1	13.2
LnGrp Delay(d),s/veh	22.3	20.5	247.0	7.9	15.2	6.8
LnGrp LOS	C	C	F	A	B	A
Approach Vol, veh/h	805			1294	1750	
Approach Delay, s/veh	21.9			40.1	11.7	
Approach LOS	C			D	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		41.9		21.9	8.0	33.9		
Change Period (Y+Rc), s		6.0		5.0	3.5	* 6		
Max Green Setting (Gmax), s		36.0		33.0	4.5	* 29		
Max Q Clear Time (g_c+I1), s		9.9		12.3	6.5	18.6		
Green Ext Time (p_c), s		21.8		4.6	0.0	9.3		

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	200	100	545	345	110	250
Future Volume (veh/h)	200	100	545	345	110	250
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	217	109	592	375	120	272
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	262	234	653	414	150	1382
Arrive On Green	0.15	0.15	0.61	0.61	0.08	0.74
Sat Flow, veh/h	1774	1583	1067	676	1774	1863
Grp Volume(v), veh/h	217	109	0	967	120	272
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1743	1774	1863
Q Serve(g_s), s	9.2	4.9	0.0	37.2	5.1	3.4
Cycle Q Clear(g_c), s	9.2	4.9	0.0	37.2	5.1	3.4
Prop In Lane	1.00	1.00		0.39	1.00	
Lane Grp Cap(c), veh/h	262	234	0	1067	150	1382
V/C Ratio(X)	0.83	0.47	0.00	0.91	0.80	0.20
Avail Cap(c_a), veh/h	368	329	0	1256	150	1583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	30.0	0.0	13.0	34.6	3.0
Incr Delay (d2), s/veh	7.3	0.5	0.0	8.4	26.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	2.2	0.0	19.9	3.6	1.8
LnGrp Delay(d),s/veh	39.2	30.6	0.0	21.4	61.2	3.1
LnGrp LOS	D	C		C	E	A
Approach Vol, veh/h	326		967			392
Approach Delay, s/veh	36.3		21.4			20.9
Approach LOS	D		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.0	51.7		15.4		61.7		
Change Period (Y+Rc), s	3.5	4.5		4.0		4.5		
Max Green Setting (Gmax), s	6.5	55.5		16.0		65.5		
Max Q Clear Time (g_c+I1), s	11.2	39.2		11.2		5.4		
Green Ext Time (p_c), s	0.0	7.9		0.3		12.3		

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	13.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	560	200	140	370	0	0	0	0	120	5	280
Future Vol, veh/h	0	560	200	140	370	0	0	0	0	120	5	280
Conflicting Peds, #/hr	0	0	4	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	609	217	152	402	0	0	0	0	130	5	304

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	-	609	0	0	1316	1316	402
Stage 1	-	-	-	-	-	-	707	707	-
Stage 2	-	-	-	-	-	-	609	609	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	0	970	-	0	174	158	648
Stage 1	0	-	0	-	-	0	489	438	-
Stage 2	0	-	0	-	-	0	543	485	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	-	-	-	970	-	-	139	0	648
Mov Cap-2 Maneuver	-	-	-	-	-	-	139	0	-
Stage 1	-	-	-	-	-	-	390	0	-
Stage 2	-	-	-	-	-	-	543	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.6	47.5
HCM LOS			E

Minor Lane/Major Mvmt	EBT	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	970	-	139	648
HCM Lane V/C Ratio	-	0.157	-	0.938	0.47
HCM Control Delay (s)	-	9.4	0	122.5	15.4
HCM Lane LOS	-	A	A	F	C
HCM 95th %tile Q(veh)	-	0.6	-	6.5	2.5

Intersection	
Intersection Delay, s/veh	115.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	440	0	0	300	110	210	5	390	0	0	0
Future Vol, veh/h	240	440	0	0	300	110	210	5	390	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	261	478	0	0	326	120	228	5	424	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	250.7	22.1	27.6
HCM LOS	F	C	D

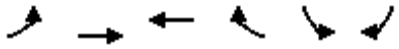
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2
Vol Left, %	98%	0%	35%	0%	0%
Vol Thru, %	2%	0%	65%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	390	680	300	110
LT Vol	210	0	240	0	0
Through Vol	5	0	440	300	0
RT Vol	0	390	0	0	110
Lane Flow Rate	234	424	739	326	120
Geometry Grp	7	7	6	7	7
Degree of Util (X)	0.507	0.781	1.489	0.671	0.223
Departure Headway (Hd)	8.655	7.425	7.253	8.055	7.327
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	418	492	503	453	493
Service Time	6.355	5.125	5.292	5.755	5.027
HCM Lane V/C Ratio	0.56	0.862	1.469	0.72	0.243
HCM Control Delay	19.9	31.8	250.7	25.7	12.1
HCM Lane LOS	C	D	F	D	B
HCM 95th-tile Q	2.8	7	37.5	4.8	0.8

Intersection	
Intersection Delay, s/veh	82.3
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	150	190	475	915	40	40
Future Vol, veh/h	150	190	475	915	40	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	207	516	995	43	43
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	12.8	103.4	11.2
HCM LOS	B	F	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	190	475	915	40	40
LT Vol	150	0	0	0	40	0
Through Vol	0	190	475	0	0	0
RT Vol	0	0	0	915	0	40
Lane Flow Rate	163	207	516	995	43	43
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.302	0.354	0.757	1.264	0.096	0.082
Departure Headway (Hd)	7.065	6.559	5.281	4.576	8.352	7.127
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	512	551	682	796	432	506
Service Time	4.765	4.259	3.043	2.338	6.052	4.827
HCM Lane V/C Ratio	0.318	0.376	0.757	1.25	0.1	0.085
HCM Control Delay	12.8	12.8	22.7	145.3	11.9	10.5
HCM Lane LOS	B	B	C	F	B	B
HCM 95th-tile Q	1.3	1.6	7	35.9	0.3	0.3



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	210	1040	220	1540	450
Future Volume (veh/h)	50	210	1040	220	1540	450
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	228	1130	239	1674	489
Adj No. of Lanes	1	1	2	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	69	774	1180	516	1668	767
Arrive On Green	0.04	0.42	0.33	0.33	0.48	0.48
Sat Flow, veh/h	1774	1863	3632	1548	3442	1583
Grp Volume(v), veh/h	54	228	1130	239	1674	489
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1548	1721	1583
Q Serve(g_s), s	3.3	8.9	34.1	13.3	52.9	25.1
Cycle Q Clear(g_c), s	3.3	8.9	34.1	13.3	52.9	25.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	69	774	1180	516	1668	767
V/C Ratio(X)	0.78	0.29	0.96	0.46	1.00	0.64
Avail Cap(c_a), veh/h	81	788	1183	518	1668	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	21.2	35.6	28.7	28.1	21.0
Incr Delay (d2), s/veh	27.5	0.1	16.8	0.2	22.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	4.6	19.4	5.7	30.3	22.7
LnGrp Delay(d),s/veh	79.5	21.3	52.4	28.9	51.0	22.3
LnGrp LOS	E	C	D	C	F	C
Approach Vol, veh/h		282	1369		2163	
Approach Delay, s/veh		32.5	48.3		44.6	
Approach LOS		C	D		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		51.2		58.0	9.0	42.2		
Change Period (Y+Rc), s		5.8		5.1	* 4.7	5.8		
Max Green Setting (Gmax), s		46.2		52.9	* 5	36.5		
Max Q Clear Time (g_c+I1), s		10.9		54.9	5.3	36.1		
Green Ext Time (p_c), s		7.4		0.0	0.0	0.3		

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	10	380	5	220	5	1440	430	140	740	5
Future Volume (veh/h)	10	5	10	380	5	220	5	1440	430	140	740	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	5	11	328	123	239	5	1565	0	152	804	5
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	11	32	410	131	255	9	1706	763	179	2014	877
Arrive On Green	0.02	0.02	0.02	0.23	0.23	0.23	0.01	0.48	0.00	0.10	0.57	0.57
Sat Flow, veh/h	1238	563	1583	1774	567	1101	1774	3539	1583	1774	3539	1542
Grp Volume(v), veh/h	16	0	11	328	0	362	5	1565	0	152	804	5
Grp Sat Flow(s),veh/h/ln	1801	0	1583	1774	0	1668	1774	1770	1583	1774	1770	1542
Q Serve(g_s), s	1.0	0.0	0.8	20.5	0.0	25.0	0.3	48.2	0.0	9.9	14.9	0.2
Cycle Q Clear(g_c), s	1.0	0.0	0.8	20.5	0.0	25.0	0.3	48.2	0.0	9.9	14.9	0.2
Prop In Lane	0.69		1.00	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	0	32	410	0	386	9	1706	763	179	2014	877
V/C Ratio(X)	0.45	0.00	0.35	0.80	0.00	0.94	0.55	0.92	0.00	0.85	0.40	0.01
Avail Cap(c_a), veh/h	245	0	216	416	0	391	242	1818	813	181	2014	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	0.0	56.8	42.6	0.0	44.3	58.3	28.2	0.0	51.9	14.1	10.9
Incr Delay (d2), s/veh	3.2	0.0	2.4	9.7	0.0	29.7	17.8	7.7	0.0	28.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.4	11.1	0.0	14.7	0.2	25.3	0.0	6.3	7.4	0.1
LnGrp Delay(d),s/veh	60.1	0.0	59.2	52.2	0.0	74.0	76.1	35.9	0.0	80.4	14.6	10.9
LnGrp LOS	E		E	D		E	E	D		F	B	B
Approach Vol, veh/h		27			690			1570			961	
Approach Delay, s/veh		59.7			63.7			36.0			25.0	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	63.1		6.8	5.6	73.3		31.6
Change Period (Y+Rc), s	4.0	* 6.5		4.5	5.0	6.5		4.5
Max Green Setting (Gmax), s	12.0	* 60		16.0	16.0	55.0		27.5
Max Q Clear Time (g_c+I1), s	11.9	50.2		3.0	2.3	16.9		27.0
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	31.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	5253	0	3442	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	1721	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3092	3765	3421	0728	896	1847	5	2	2	8	1	1	6	4	7	4	8	8
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3	3	4	5	7	1	3	6	7	4	8	2	4	8	2	4	8	2	4	8	2	4	8	2	4	8	2	4	8	7	4	8
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	0	9999	9999	0	9999	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3539	1583	1774	3632	0	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	0	1774	1863	0	1774	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h												0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h												0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	4.534	2.8	4.534	4.534	4.534	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	2.234	0.5	2.234	2.234	2.234	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	7.2	5.5	7.2	7.2	7.2	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	2	0	0	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	2.8	4.534	2.8	4.534	2.8	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	0.5	2.234	0.5	2.234	0.5	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	5.5	7.2	5.5	7.2	5.5	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h												
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h												
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1863	0	1774	1863	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	1863	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	3092376	453124	292608	3092376	453124	292608	0	800046	292608	0	800046	292608	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	183314	2880686	555136	183314	2880686	555136	12	2800686	555136	12	2800686	555136	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS													
Approach Vol, veh/h		0			0			0			0		
Approach Delay, s/veh		0.0			0.0			0.0			0.0		
Approach LOS													

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	80923	76452	0	80923	76452	0	0	80004	292608	0	80004	292608	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	80923	76452	0	80923	76452	0	0	80004	292608	0	80004	292608	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	370	0	90	10	295	130	160	1050	30
Future Volume (veh/h)	10	20	10	370	0	90	10	295	130	160	1050	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	22	11	402	0	98	11	321	141	174	1141	33
Adj No. of Lanes	1	1	1	2	0	1	1	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	2	2	2	2	2	2	2
Cap, veh/h	318	334	271	0	0	0	20	1459	636	282	1708	740
Arrive On Green	0.18	0.18	0.18	0.00	0.00	0.00	0.01	0.41	0.41	0.08	0.48	0.48
Sat Flow, veh/h	1774	1863	1509		0		1774	3539	1543	3442	3539	1533
Grp Volume(v), veh/h	11	22	11		0.0		11	321	141	174	1141	33
Grp Sat Flow(s),veh/h/ln	1774	1863	1509				1774	1770	1543	1721	1770	1533
Q Serve(g_s), s	0.3	0.5	0.3				0.3	3.0	3.0	2.5	12.4	0.6
Cycle Q Clear(g_c), s	0.3	0.5	0.3				0.3	3.0	3.0	2.5	12.4	0.6
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	334	271				20	1459	636	282	1708	740
V/C Ratio(X)	0.03	0.07	0.04				0.55	0.22	0.22	0.62	0.67	0.04
Avail Cap(c_a), veh/h	1194	1253	1015				140	2199	959	449	2381	1031
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	17.2	17.1				24.9	9.6	9.6	22.4	10.0	6.9
Incr Delay (d2), s/veh	0.1	0.1	0.1				8.4	0.1	0.2	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.1				0.2	1.4	1.3	1.2	6.1	0.2
LnGrp Delay(d),s/veh	17.2	17.4	17.2				33.2	9.7	9.8	23.3	10.4	6.9
LnGrp LOS	B	B	B				C	A	A	C	B	A
Approach Vol, veh/h		44						473			1348	
Approach Delay, s/veh		17.3						10.3			12.0	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	8.6	27.3		14.6	5.1	30.9		
Change Period (Y+Rc), s	4.5	6.5		5.5	4.5	6.5		
Max Green Setting (Gmax), s	6.6	31.4		34.0	4.0	34.0		
Max Q Clear Time (g_c+I1), s	4.5	5.0		2.5	2.3	14.4		
Green Ext Time (p_c), s	0.1	11.5		0.2	0.0	9.9		

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	530	120	460	780	0	0	0	0	230	5	245
Future Volume (veh/h)	0	530	120	460	780	0	0	0	0	230	5	245
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	576	130	500	848	0				254	0	266
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1144	494	617	2100	0				744	0	332
Arrive On Green	0.00	0.32	0.32	0.18	0.59	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	3632	1528	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	576	130	500	848	0				254	0	266
Grp Sat Flow(s),veh/h/ln	0	1770	1528	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	6.8	3.3	7.2	6.6	0.0				3.2	0.0	8.3
Cycle Q Clear(g_c), s	0.0	6.8	3.3	7.2	6.6	0.0				3.2	0.0	8.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1144	494	617	2100	0				744	0	332
V/C Ratio(X)	0.00	0.50	0.26	0.81	0.40	0.00				0.34	0.00	0.80
Avail Cap(c_a), veh/h	0	1326	573	645	2311	0				1097	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.2	13.0	20.4	5.6	0.0				17.4	0.0	19.4
Incr Delay (d2), s/veh	0.0	0.1	0.1	6.8	0.3	0.0				0.1	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	1.4	4.0	3.3	0.0				1.6	0.0	3.9
LnGrp Delay(d),s/veh	0.0	14.3	13.1	27.2	5.9	0.0				17.5	0.0	22.8
LnGrp LOS		B	B	C	A					B		C
Approach Vol, veh/h		706			1348						520	
Approach Delay, s/veh		14.1			13.8						20.2	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.0	21.8		16.0		35.8		
Change Period (Y+Rc), s	4.7	5.1		5.1		5.1		
Max Green Setting (Gmax), s	9.3	19.4		16.0		33.8		
Max Q Clear Time (g_c+I1), s	10.2	8.8		10.3		8.6		
Green Ext Time (p_c), s	0.1	7.6		0.6		14.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	610	0	0	1010	460	320	5	780	0	0	0
Future Volume (veh/h)	150	610	0	0	1010	460	320	5	780	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	163	663	0	0	1098	500	348	5	848			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	205	1886	0	0	1710	513	510	7	812			
Arrive On Green	0.12	0.53	0.00	0.00	0.34	0.34	0.29	0.29	0.29			
Sat Flow, veh/h	1774	3632	0	0	5253	1526	1750	25	2787			
Grp Volume(v), veh/h	163	663	0	0	1098	500	353	0	848			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1526	1775	0	1393			
Q Serve(g_s), s	5.2	6.2	0.0	0.0	10.6	18.8	10.2	0.0	16.9			
Cycle Q Clear(g_c), s	5.2	6.2	0.0	0.0	10.6	18.8	10.2	0.0	16.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	205	1886	0	0	1710	513	517	0	812			
V/C Ratio(X)	0.80	0.35	0.00	0.00	0.64	0.97	0.68	0.00	1.04			
Avail Cap(c_a), veh/h	266	2008	0	0	1710	513	517	0	812			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.0	7.8	0.0	0.0	16.3	19.0	18.2	0.0	20.6			
Incr Delay (d2), s/veh	8.9	0.2	0.0	0.0	0.6	33.1	3.0	0.0	43.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.0	3.1	0.0	0.0	5.0	12.5	5.4	0.0	11.4			
LnGrp Delay(d),s/veh	33.9	8.0	0.0	0.0	16.9	52.1	21.2	0.0	64.3			
LnGrp LOS	C	A			B	D	C		F			
Approach Vol, veh/h		826			1598			1201				
Approach Delay, s/veh		13.1			27.9			51.7				
Approach LOS		B			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		36.0			11.4	24.6		22.0
Change Period (Y+Rc), s		5.1			* 4.7	5.1		5.1
Max Green Setting (Gmax), s		32.9			* 8.7	19.5		16.9
Max Q Clear Time (g_c+I1), s		8.2			7.2	20.8		18.9
Green Ext Time (p_c), s		15.6			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	360	230	20	400	190	250	270	30	110	230	120
Future Volume (veh/h)	390	360	230	20	400	190	250	270	30	110	230	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	424	391	250	22	435	207	272	293	26	120	250	34
Adj No. of Lanes	2	1	2	1	2	0	2	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	514	524	1051	225	617	291	357	594	52	153	512	69
Arrive On Green	0.15	0.28	0.28	0.13	0.27	0.27	0.10	0.18	0.18	0.09	0.16	0.16
Sat Flow, veh/h	3442	1863	2709	1774	2322	1093	3442	3284	289	1774	3130	420
Grp Volume(v), veh/h	424	391	250	22	331	311	272	157	162	120	140	144
Grp Sat Flow(s),veh/h/ln	1721	1863	1354	1774	1770	1645	1721	1770	1804	1774	1770	1781
Q Serve(g_s), s	8.7	13.8	1.8	0.8	12.2	12.4	5.6	5.8	5.9	4.8	5.2	5.3
Cycle Q Clear(g_c), s	8.7	13.8	1.8	0.8	12.2	12.4	5.6	5.8	5.9	4.8	5.2	5.3
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.16	1.00		0.24
Lane Grp Cap(c), veh/h	514	524	1051	225	471	437	357	320	326	153	289	291
V/C Ratio(X)	0.83	0.75	0.24	0.10	0.70	0.71	0.76	0.49	0.50	0.79	0.48	0.49
Avail Cap(c_a), veh/h	547	965	1692	225	734	682	357	758	773	233	807	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	23.7	4.2	27.9	24.0	24.1	31.6	26.6	26.7	32.4	27.5	27.6
Incr Delay (d2), s/veh	9.6	3.0	0.2	0.1	2.7	3.1	9.0	1.4	1.4	7.4	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	7.5	1.0	0.4	6.3	6.0	3.1	2.9	3.1	2.6	2.6	2.7
LnGrp Delay(d),s/veh	39.4	26.7	4.3	28.1	26.7	27.1	40.6	28.0	28.1	39.9	29.0	29.1
LnGrp LOS	D	C	A	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1065			664			591			404	
Approach Delay, s/veh		26.5			26.9			33.8			32.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	19.1	15.2	26.4	13.0	17.8	16.3	25.2
Change Period (Y+Rc), s	5.5	6.0	6.0	* 6	5.5	6.0	5.5	6.0
Max Green Setting (Gmax), s	9.5	31.0	4.0	* 38	7.5	33.0	11.5	30.0
Max Q Clear Time (g_c+I1), s	6.2	7.9	2.8	15.8	7.6	7.3	10.7	14.4
Green Ext Time (p_c), s	0.0	4.4	0.6	4.5	0.0	4.5	0.2	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	395	142	233	233	360	1250
Future Volume (veh/h)	395	142	233	233	360	1250
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	429	0	253	0	391	1359
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	494	441	862	386	438	1965
Arrive On Green	0.28	0.00	0.24	0.00	0.25	0.56
Sat Flow, veh/h	1774	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	429	0	253	0	391	1359
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1774	1770
Q Serve(g_s), s	14.3	0.0	3.6	0.0	13.2	17.2
Cycle Q Clear(g_c), s	14.3	0.0	3.6	0.0	13.2	17.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	494	441	862	386	438	1965
V/C Ratio(X)	0.87	0.00	0.29	0.00	0.89	0.69
Avail Cap(c_a), veh/h	773	690	1239	554	486	2438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	19.1	0.0	22.5	10.0
Incr Delay (d2), s/veh	6.5	0.0	0.2	0.0	16.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.0	1.8	0.0	8.4	8.5
LnGrp Delay(d),s/veh	27.8	0.0	19.3	0.0	38.8	10.6
LnGrp LOS	C		B		D	B
Approach Vol, veh/h	429		253			1750
Approach Delay, s/veh	27.8		19.3			16.9
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	19.3	20.4		22.3		39.7		
Change Period (Y+Rc), s	4.0	5.3		5.0		5.3		
Max Green Setting (Gmax), s	17.0	21.7		27.0		42.7		
Max Q Clear Time (g_c+I1), s	15.2	5.6		16.3		19.2		
Green Ext Time (p_c), s	0.1	9.5		1.0		11.9		

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	12.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	463	110	234	479	68	244
Future Vol, veh/h	463	110	234	479	68	244
Conflicting Peds, #/hr	0	3	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	503	120	254	521	74	265

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	626	0	1595	566
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	1029	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	956	-	118	524
Stage 1	-	-	-	-	568	-
Stage 2	-	-	-	-	345	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	956	-	74	523
Mov Cap-2 Maneuver	-	-	-	-	74	-
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	216	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	58.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	74	523	-	-	956	-
HCM Lane V/C Ratio	0.999	0.507	-	-	0.266	-
HCM Control Delay (s)	201.3	18.8	-	-	10.1	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	5.3	2.8	-	-	1.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	773	244	658	501	0	0	0	0	701	15	342
Future Volume (veh/h)	0	773	244	658	501	0	0	0	0	701	15	342
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	840	265	715	545	0				773	0	209
Adj No. of Lanes	0	2	0	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	889	280	983	2364	0				854	0	381
Arrive On Green	0.00	0.34	0.34	0.29	0.67	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	2743	835	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	561	544	715	545	0				773	0	209
Grp Sat Flow(s),veh/h/ln	0	1770	1715	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	35.4	35.5	21.5	7.0	0.0				24.3	0.0	13.3
Cycle Q Clear(g_c), s	0.0	35.4	35.5	21.5	7.0	0.0				24.3	0.0	13.3
Prop In Lane	0.00		0.49	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	594	575	983	2364	0				854	0	381
V/C Ratio(X)	0.00	0.94	0.95	0.73	0.23	0.00				0.90	0.00	0.55
Avail Cap(c_a), veh/h	0	609	591	983	2364	0				1006	0	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.2	37.2	37.1	7.5	0.0				42.4	0.0	38.2
Incr Delay (d2), s/veh	0.0	25.5	26.3	2.4	0.2	0.0				9.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	21.5	21.0	10.6	3.4	0.0				13.0	0.0	5.9
LnGrp Delay(d),s/veh	0.0	62.7	63.5	39.4	7.7	0.0				51.8	0.0	38.6
LnGrp LOS		E	E	D	A					D		D
Approach Vol, veh/h		1105			1260						982	
Approach Delay, s/veh		63.1			25.7						49.0	
Approach LOS		E			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	38.2	44.0		32.8		82.2		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	27.6	* 40		32.6		71.9		
Max Q Clear Time (g_c+I1), s	23.5	37.5		26.3		9.0		
Green Ext Time (p_c), s	1.7	1.1		1.4		3.9		

Intersection Summary	
HCM 2010 Ctrl Delay	44.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	1179	0	0	1067	613	92	5	602	0	0	0
Future Volume (veh/h)	285	1179	0	0	1067	613	92	5	602	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	310	1282	0	0	1160	92	100	5	392			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	346	2612	0	0	2554	795	277	14	456			
Arrive On Green	0.19	0.74	0.00	0.00	0.17	0.17	0.16	0.16	0.16			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1693	85	2787			
Grp Volume(v), veh/h	310	1282	0	0	1160	92	105	0	392			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1778	0	1393			
Q Serve(g_s), s	19.6	17.1	0.0	0.0	23.7	5.7	6.0	0.0	15.7			
Cycle Q Clear(g_c), s	19.6	17.1	0.0	0.0	23.7	5.7	6.0	0.0	15.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	346	2612	0	0	2554	795	291	0	456			
V/C Ratio(X)	0.90	0.49	0.00	0.00	0.45	0.12	0.36	0.00	0.86			
Avail Cap(c_a), veh/h	437	2612	0	0	2554	795	462	0	725			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.94	0.94	1.00	0.00	1.00			
Uniform Delay (d), s/veh	45.2	6.2	0.0	0.0	33.8	26.2	42.7	0.0	46.8			
Incr Delay (d2), s/veh	19.2	0.7	0.0	0.0	0.5	0.3	0.3	0.0	3.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.4	8.4	0.0	0.0	11.2	2.6	3.0	0.0	6.3			
LnGrp Delay(d),s/veh	64.4	6.9	0.0	0.0	34.3	26.5	43.0	0.0	50.3			
LnGrp LOS	E	A			C	C	D		D			
Approach Vol, veh/h		1592			1252			497				
Approach Delay, s/veh		18.1			33.7			48.8				
Approach LOS		B			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		91.1			27.1	64.0		23.9
Change Period (Y+Rc), s		* 6.2			* 4.7	6.2		5.1
Max Green Setting (Gmax), s		* 74			* 28	40.8		29.9
Max Q Clear Time (g_c+I1), s		19.1			21.6	25.7		17.7
Green Ext Time (p_c), s		18.1			0.8	9.9		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1567	224	85	1480	155	99
Future Volume (veh/h)	1567	224	85	1480	155	99
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1703	216	92	1609	168	108
Adj No. of Lanes	2	0	1	4	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1854	230	236	5012	197	176
Arrive On Green	0.59	0.59	0.13	0.78	0.11	0.11
Sat Flow, veh/h	3253	392	1774	6669	1774	1583
Grp Volume(v), veh/h	936	983	92	1609	168	108
Grp Sat Flow(s),veh/h/ln	1770	1782	1774	1602	1774	1583
Q Serve(g_s), s	53.4	58.5	5.5	8.4	10.7	7.5
Cycle Q Clear(g_c), s	53.4	58.5	5.5	8.4	10.7	7.5
Prop In Lane		0.22	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1038	1045	236	5012	197	176
V/C Ratio(X)	0.90	0.94	0.39	0.32	0.85	0.61
Avail Cap(c_a), veh/h	1136	1143	236	5012	214	191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	21.9	45.6	3.6	50.2	48.8
Incr Delay (d2), s/veh	9.3	13.0	0.4	0.2	23.6	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.4	32.2	2.7	3.7	6.5	3.4
LnGrp Delay(d),s/veh	30.2	34.9	46.0	3.8	73.8	52.0
LnGrp LOS	C	C	D	A	E	D
Approach Vol, veh/h	1919			1701	276	
Approach Delay, s/veh	32.6			6.1	65.3	
Approach LOS	C			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.5	74.7				97.1		17.9
Change Period (Y+Rc), s	7.2	* 7.2				7.2		5.1
Max Green Setting (Gmax), s	10.3	* 74				88.8		13.9
Max Q Clear Time (g_c+I1), s	7.5	60.5				10.4		12.7
Green Ext Time (p_c), s	2.8	7.0				58.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1478	188	175	1494	71	120
Future Volume (veh/h)	1478	188	175	1494	71	120
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1607	204	190	1624	77	130
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1794	224	219	2668	196	175
Arrive On Green	0.57	0.57	0.12	0.75	0.11	0.11
Sat Flow, veh/h	3250	393	1774	3632	1774	1583
Grp Volume(v), veh/h	888	923	190	1624	77	130
Grp Sat Flow(s),veh/h/ln	1770	1781	1774	1770	1774	1583
Q Serve(g_s), s	35.1	37.6	8.5	16.9	3.3	6.4
Cycle Q Clear(g_c), s	35.1	37.6	8.5	16.9	3.3	6.4
Prop In Lane		0.22	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1006	1012	219	2668	196	175
V/C Ratio(X)	0.88	0.91	0.87	0.61	0.39	0.74
Avail Cap(c_a), veh/h	1006	1013	219	2668	614	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	15.7	34.8	4.5	33.5	34.9
Incr Delay (d2), s/veh	9.9	12.7	27.6	0.6	1.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.8	21.8	5.8	8.3	1.7	3.1
LnGrp Delay(d),s/veh	25.0	28.3	62.4	5.1	34.8	41.0
LnGrp LOS	C	C	E	A	C	D
Approach Vol, veh/h	1811			1814	207	
Approach Delay, s/veh	26.7			11.1	38.7	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.9	15.0	52.0				67.0
Change Period (Y+Rc), s		5.0	5.0	6.0				6.0
Max Green Setting (Gmax), s		28.0	10.0	46.0				61.0
Max Q Clear Time (g_c+I1), s		8.4	10.5	39.6				18.9
Green Ext Time (p_c), s		0.6	0.0	6.4				41.4

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	721	326	391	220	800	270	259	945	95	100	1220	590
Future Volume (veh/h)	721	326	391	220	800	270	259	945	95	100	1220	590
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	784	354	316	239	870	239	282	1027	92	109	1326	641
Adj No. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	820	1260	555	262	897	395	317	1224	109	531	1690	896
Arrive On Green	0.24	0.36	0.36	0.15	0.25	0.25	0.15	0.43	0.43	0.26	0.56	0.56
Sat Flow, veh/h	3442	3539	1558	1774	3539	1561	3442	4742	424	3442	5085	1559
Grp Volume(v), veh/h	784	354	316	239	870	239	282	734	385	109	1326	641
Grp Sat Flow(s),veh/h/ln	1721	1770	1558	1774	1770	1561	1721	1695	1775	1721	1695	1559
Q Serve(g_s), s	33.7	10.7	24.6	19.9	36.5	20.2	12.1	28.9	29.0	3.7	30.8	15.7
Cycle Q Clear(g_c), s	33.7	10.7	24.6	19.9	36.5	20.2	12.1	28.9	29.0	3.7	30.8	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	820	1260	555	262	897	395	317	875	458	531	1690	896
V/C Ratio(X)	0.96	0.28	0.57	0.91	0.97	0.60	0.89	0.84	0.84	0.21	0.78	0.72
Avail Cap(c_a), veh/h	821	1260	555	375	897	395	317	1049	549	531	1690	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	34.6	39.0	63.0	55.4	49.4	62.7	39.9	39.9	48.5	29.1	7.2
Incr Delay (d2), s/veh	21.4	0.1	1.2	16.8	23.0	2.6	24.6	9.4	16.8	0.1	3.7	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	5.3	10.8	11.0	20.7	9.0	6.8	14.6	16.2	1.8	14.9	8.2
LnGrp Delay(d),s/veh	77.8	34.7	40.2	79.7	78.4	52.0	87.4	49.3	56.6	48.6	32.9	12.1
LnGrp LOS	E	C	D	E	E	D	F	D	E	D	C	B
Approach Vol, veh/h		1454			1348			1401			2076	
Approach Delay, s/veh		59.1			74.0			59.0			27.3	
Approach LOS		E			E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.1	44.7	26.3	59.2	18.0	55.9	41.5	44.0
Change Period (Y+Rc), s	6.0	* 6	* 4.2	5.8	* 4.2	6.0	5.8	* 6
Max Green Setting (Gmax), s	9.4	* 46	* 32	42.3	* 14	42.0	35.8	* 38
Max Q Clear Time (g_c+I1), s	5.7	31.0	21.9	26.6	14.1	32.8	35.7	38.5
Green Ext Time (p_c), s	3.3	7.7	0.2	6.4	0.0	7.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	70	20	212	60	138	10	203	92	339	1243	40
Future Volume (veh/h)	30	70	20	212	60	138	10	203	92	339	1243	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.94	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	33	76	22	222	75	150	11	221	100	368	1351	43
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	96	28	363	109	218	19	883	699	408	1535	49
Arrive On Green	0.09	0.09	0.09	0.20	0.20	0.20	0.01	0.25	0.25	0.23	0.44	0.44
Sat Flow, veh/h	443	1020	295	1774	533	1066	1774	3539	1500	1774	3497	111
Grp Volume(v), veh/h	131	0	0	222	0	225	11	221	100	368	683	711
Grp Sat Flow(s),veh/h/ln	1758	0	0	1774	0	1599	1774	1770	1500	1774	1770	1838
Q Serve(g_s), s	6.1	0.0	0.0	9.5	0.0	10.8	0.5	4.2	3.2	16.8	29.3	29.5
Cycle Q Clear(g_c), s	6.1	0.0	0.0	9.5	0.0	10.8	0.5	4.2	3.2	16.8	29.3	29.5
Prop In Lane	0.25		0.17	1.00		0.67	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	166	0	0	363	0	327	19	883	699	408	777	807
V/C Ratio(X)	0.79	0.00	0.00	0.61	0.00	0.69	0.57	0.25	0.14	0.90	0.88	0.88
Avail Cap(c_a), veh/h	338	0	0	597	0	538	85	883	699	586	874	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	0.0	0.0	30.1	0.0	30.6	41.0	25.0	13.3	31.1	21.3	21.4
Incr Delay (d2), s/veh	3.1	0.0	0.0	0.6	0.0	1.0	9.7	0.1	0.0	10.3	8.7	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	4.7	0.0	4.8	0.3	2.0	1.8	9.3	16.1	16.7
LnGrp Delay(d),s/veh	40.0	0.0	0.0	30.7	0.0	31.6	50.7	25.0	13.3	41.4	30.0	29.9
LnGrp LOS	D			C		C	D	C	B	D	C	C
Approach Vol, veh/h		131			447			332			1762	
Approach Delay, s/veh		40.0			31.2			22.4			32.3	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.7	26.1		12.4	6.9	41.8		22.1
Change Period (Y+Rc), s	3.5	5.3		4.5	6.0	5.3		5.1
Max Green Setting (Gmax), s	7.5	20.1		16.0	4.0	41.1		28.0
Max Q Clear Time (g_c+I1), s	10.8	6.2		8.1	2.5	31.5		12.8
Green Ext Time (p_c), s	0.4	6.5		0.2	0.0	5.1		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	279	190	120	333	42	45	66	100	51	356	52
Future Volume (veh/h)	42	279	190	120	333	42	45	66	100	51	356	52
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	46	303	207	130	362	46	49	72	87	55	387	57
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	515	500	342	385	1145	144	249	253	305	460	522	77
Arrive On Green	0.06	0.49	0.49	0.36	0.36	0.36	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1774	1021	698	881	3151	397	940	767	927	1218	1583	233
Grp Volume(v), veh/h	46	0	510	130	202	206	49	0	159	55	0	444
Grp Sat Flow(s),veh/h/ln	1774	0	1719	881	1770	1778	940	0	1693	1218	0	1816
Q Serve(g_s), s	0.7	0.0	10.8	6.3	4.1	4.2	2.5	0.0	3.5	1.8	0.0	10.9
Cycle Q Clear(g_c), s	0.7	0.0	10.8	10.8	4.1	4.2	13.4	0.0	3.5	5.3	0.0	10.9
Prop In Lane	1.00		0.41	1.00		0.22	1.00		0.55	1.00		0.13
Lane Grp Cap(c), veh/h	515	0	842	385	643	646	249	0	558	460	0	598
V/C Ratio(X)	0.09	0.00	0.61	0.34	0.31	0.32	0.20	0.00	0.28	0.12	0.00	0.74
Avail Cap(c_a), veh/h	996	0	1434	450	774	777	385	0	804	637	0	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	9.3	15.5	11.5	11.5	20.9	0.0	12.5	14.4	0.0	15.0
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.7	0.4	0.4	0.1	0.0	0.1	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.3	1.6	2.1	2.1	0.6	0.0	1.7	0.6	0.0	5.6
LnGrp Delay(d),s/veh	8.0	0.0	10.3	16.3	11.9	11.9	21.0	0.0	12.6	14.5	0.0	15.9
LnGrp LOS	A		B	B	B	B	C		B	B		B
Approach Vol, veh/h		556			538			208			499	
Approach Delay, s/veh		10.1			13.0			14.6			15.7	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		28.6		21.7	6.3	22.3		21.7
Change Period (Y+Rc), s		4.0		5.1	3.5	4.0		5.1
Max Green Setting (Gmax), s		42.0		23.9	16.5	22.0		23.9
Max Q Clear Time (g_c+I1), s		12.8		12.9	2.7	12.8		15.4
Green Ext Time (p_c), s		11.1		2.1	0.0	5.5		1.9

Intersection Summary		
HCM 2010 Ctrl Delay		13.0
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	550	30	210	545	210	20	20	170	195	60	40
Future Volume (veh/h)	30	550	30	210	545	210	20	20	170	195	60	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	598	33	228	592	228	22	22	151	212	65	43
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	939	52	479	1214	527	468	64	438	404	324	214
Arrive On Green	0.07	0.28	0.28	0.14	0.34	0.34	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	3408	188	3442	3539	1537	1279	205	1408	1206	1041	689
Grp Volume(v), veh/h	33	310	321	228	592	228	22	0	173	212	0	108
Grp Sat Flow(s),veh/h/ln	1774	1770	1826	1721	1770	1537	1279	0	1613	1206	0	1730
Q Serve(g_s), s	1.0	8.6	8.6	3.4	7.4	6.4	0.7	0.0	4.6	9.2	0.0	2.6
Cycle Q Clear(g_c), s	1.0	8.6	8.6	3.4	7.4	6.4	3.3	0.0	4.6	13.8	0.0	2.6
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.87	1.00		0.40
Lane Grp Cap(c), veh/h	127	488	503	479	1214	527	468	0	502	404	0	538
V/C Ratio(X)	0.26	0.64	0.64	0.48	0.49	0.43	0.05	0.00	0.34	0.52	0.00	0.20
Avail Cap(c_a), veh/h	318	688	710	493	1250	543	873	0	1012	786	0	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.5	17.8	17.8	22.1	14.5	14.1	15.3	0.0	14.8	20.2	0.0	14.1
Incr Delay (d2), s/veh	0.4	0.5	0.5	0.3	0.1	0.2	0.0	0.0	0.2	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.2	4.3	1.6	3.6	2.7	0.3	0.0	2.1	3.1	0.0	1.2
LnGrp Delay(d),s/veh	24.9	18.3	18.3	22.4	14.6	14.3	15.3	0.0	15.0	20.6	0.0	14.2
LnGrp LOS	C	B	B	C	B	B	B		B	C		B
Approach Vol, veh/h		664			1048			195			320	
Approach Delay, s/veh		18.6			16.2			15.0			18.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.9	20.5		22.5	9.1	24.2		22.5
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	8.0	21.7		35.0	10.0	19.7		35.0
Max Q Clear Time (g_c+I1), s	5.4	10.6		15.8	3.0	9.4		6.6
Green Ext Time (p_c), s	0.1	4.6		1.5	0.0	4.5		1.6

Intersection Summary		
HCM 2010 Ctrl Delay		17.1
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	736	274	614	675	0	0	0	0	224	5	140
Future Volume (veh/h)	0	736	274	614	675	0	0	0	0	224	5	140
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	800	298	667	734	0				247	0	152
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1183	521	818	2362	0				503	0	224
Arrive On Green	0.00	0.33	0.33	0.24	0.67	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	3632	1558	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	800	298	667	734	0				247	0	152
Grp Sat Flow(s),veh/h/ln	0	1770	1558	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	10.4	8.4	9.8	4.6	0.0				3.4	0.0	4.9
Cycle Q Clear(g_c), s	0.0	10.4	8.4	9.8	4.6	0.0				3.4	0.0	4.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1183	521	818	2362	0				503	0	224
V/C Ratio(X)	0.00	0.68	0.57	0.82	0.31	0.00				0.49	0.00	0.68
Avail Cap(c_a), veh/h	0	1431	630	1166	2968	0				2324	0	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.3	14.6	19.3	3.7	0.0				21.2	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.6	0.4	2.0	0.0	0.0				0.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.1	3.6	4.9	2.3	0.0				1.7	0.0	2.2
LnGrp Delay(d),s/veh	0.0	15.9	15.0	21.3	3.8	0.0				21.4	0.0	23.1
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		1098			1401						399	
Approach Delay, s/veh		15.7			12.1						22.1	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.8	23.0		12.7		40.8		
Change Period (Y+Rc), s	5.1	5.1		5.1		5.1		
Max Green Setting (Gmax), s	12.1	21.6		35.0		44.8		
Max Q Clear Time (g_c+I1), s	11.8	12.4		6.9		6.6		
Green Ext Time (p_c), s	0.9	5.4		0.7		10.3		

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	670	0	0	1128	460	171	85	317	0	0	0
Future Volume (veh/h)	240	670	0	0	1128	460	171	85	317	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	261	728	0	0	1226	500	139	158	345			
Adj No. of Lanes	1	2	0	0	3	0	1	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	293	2639	0	0	1846	749	244	257	436			
Arrive On Green	0.28	1.00	0.00	0.00	0.87	0.87	0.14	0.14	0.14			
Sat Flow, veh/h	1774	3632	0	0	3694	1431	1774	1863	3167			
Grp Volume(v), veh/h	261	728	0	0	1179	547	139	158	345			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1566	1774	1863	1583			
Q Serve(g_s), s	12.7	0.0	0.0	0.0	9.4	9.5	6.6	7.2	9.5			
Cycle Q Clear(g_c), s	12.7	0.0	0.0	0.0	9.4	9.5	6.6	7.2	9.5			
Prop In Lane	1.00		0.00	0.00		0.91	1.00		1.00			
Lane Grp Cap(c), veh/h	293	2639	0	0	1775	820	244	257	436			
V/C Ratio(X)	0.89	0.28	0.00	0.00	0.66	0.67	0.57	0.62	0.79			
Avail Cap(c_a), veh/h	392	2639	0	0	1775	820	333	350	595			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.69	0.69	0.00	0.00	0.55	0.55	1.00	1.00	1.00			
Uniform Delay (d), s/veh	31.8	0.0	0.0	0.0	3.3	3.3	36.3	36.6	37.5			
Incr Delay (d2), s/veh	10.8	0.2	0.0	0.0	1.1	2.4	0.8	0.9	3.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.0	0.1	0.0	0.0	4.1	4.1	3.3	3.8	4.3			
LnGrp Delay(d),s/veh	42.6	0.2	0.0	0.0	4.4	5.7	37.1	37.5	41.0			
LnGrp LOS	D	A			A	A	D	D	D			
Approach Vol, veh/h		989			1726			642				
Approach Delay, s/veh		11.4			4.8			39.3				
Approach LOS		B			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		72.5			20.0	52.5		17.5
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		62.6			19.9	37.6		16.9
Max Q Clear Time (g_c+I1), s		2.0			14.7	11.5		11.5
Green Ext Time (p_c), s		22.5			0.2	15.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1087	310	292	1207	60	121	70	111	100	252	60
Future Volume (veh/h)	100	1087	310	292	1207	60	121	70	111	100	252	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	109	1182	282	317	1312	58	132	76	121	109	274	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	1229	290	311	1844	81	133	134	213	108	280	66
Arrive On Green	0.07	0.43	0.43	0.18	0.53	0.53	0.08	0.21	0.21	0.06	0.19	0.19
Sat Flow, veh/h	1774	2834	669	1774	3448	152	1774	645	1026	1774	1448	343
Grp Volume(v), veh/h	109	733	731	317	672	698	132	0	197	109	0	339
Grp Sat Flow(s),veh/h/ln	1774	1770	1733	1774	1770	1831	1774	0	1671	1774	0	1791
Q Serve(g_s), s	8.5	56.0	57.8	24.5	39.9	40.1	10.4	0.0	14.8	8.5	0.0	26.3
Cycle Q Clear(g_c), s	8.5	56.0	57.8	24.5	39.9	40.1	10.4	0.0	14.8	8.5	0.0	26.3
Prop In Lane	1.00		0.39	1.00		0.08	1.00		0.61	1.00		0.19
Lane Grp Cap(c), veh/h	132	767	751	311	946	979	133	0	347	108	0	346
V/C Ratio(X)	0.83	0.96	0.97	1.02	0.71	0.71	0.99	0.00	0.57	1.01	0.00	0.98
Avail Cap(c_a), veh/h	197	778	762	311	946	979	133	0	347	108	0	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.8	38.3	38.8	57.7	24.4	24.5	64.6	0.0	49.8	65.7	0.0	56.1
Incr Delay (d2), s/veh	10.5	21.8	25.7	56.2	2.4	2.3	74.9	0.0	1.4	89.6	0.0	42.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	31.9	33.0	16.8	20.0	20.8	7.8	0.0	7.0	6.8	0.0	17.1
LnGrp Delay(d),s/veh	74.3	60.1	64.5	113.9	26.8	26.8	139.5	0.0	51.2	155.3	0.0	98.9
LnGrp LOS	E	E	E	F	C	C	F		D	F		F
Approach Vol, veh/h		1573			1687			329			448	
Approach Delay, s/veh		63.1			43.2			86.6			112.6	
Approach LOS		E			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	65.9	14.0	31.9	13.9	80.0	12.0	33.9
Change Period (Y+Rc), s	3.5	5.3	3.5	* 4.9	3.5	5.3	3.5	4.9
Max Green Setting (Gmax), s	14.5	61.5	10.5	* 27	15.5	70.5	8.5	28.3
Max Q Clear Time (g_c+I1), s	10.5	59.8	12.4	28.3	10.5	42.1	10.5	16.8
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.1	21.5	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	62.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	935	166	391	1189	116	148	62	170	104	116	87
Future Volume (veh/h)	67	935	166	391	1189	116	148	62	170	104	116	87
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	73	1016	156	425	1292	117	161	67	185	113	126	95
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	1101	169	446	1829	165	276	426	361	301	426	356
Arrive On Green	0.05	0.36	0.36	0.25	0.56	0.56	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1774	3071	471	1774	3284	296	1153	1863	1579	1121	1863	1559
Grp Volume(v), veh/h	73	585	587	425	694	715	161	67	185	113	126	95
Grp Sat Flow(s),veh/h/ln	1774	1770	1772	1774	1770	1810	1153	1863	1579	1121	1863	1559
Q Serve(g_s), s	3.8	29.6	29.7	22.0	26.7	27.0	12.5	2.7	9.6	8.4	5.2	4.7
Cycle Q Clear(g_c), s	3.8	29.6	29.7	22.0	26.7	27.0	17.8	2.7	9.6	11.1	5.2	4.7
Prop In Lane	1.00		0.27	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	634	635	446	986	1009	276	426	361	301	426	356
V/C Ratio(X)	0.78	0.92	0.92	0.95	0.70	0.71	0.58	0.16	0.51	0.38	0.30	0.27
Avail Cap(c_a), veh/h	123	651	652	446	986	1009	346	538	456	369	538	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	28.7	28.8	34.4	15.1	15.1	37.2	28.8	31.5	33.3	29.8	29.6
Incr Delay (d2), s/veh	14.8	19.0	19.3	30.5	2.4	2.4	0.7	0.1	0.4	0.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	17.8	17.9	14.5	13.6	14.0	4.0	1.4	4.2	2.6	2.7	2.0
LnGrp Delay(d),s/veh	58.5	47.7	48.0	64.9	17.5	17.6	37.9	28.9	31.9	33.6	30.0	29.8
LnGrp LOS	E	D	D	E	B	B	D	C	C	C	C	C
Approach Vol, veh/h		1245			1834			413			334	
Approach Delay, s/veh		48.5			28.5			33.8			31.1	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	40.2		26.3	8.4	58.8		26.3
Change Period (Y+Rc), s	3.5	6.7		4.9	3.5	6.7		4.9
Max Green Setting (Gmax), s	3.5	34.4		27.0	6.5	51.4		27.0
Max Q Clear Time (g_c+I1), s	4.0	31.7		13.1	5.8	29.0		19.8
Green Ext Time (p_c), s	0.0	1.8		1.6	0.0	20.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	727	280	200	1226	90	210	90	50	40	160	330
Future Volume (veh/h)	172	727	280	200	1226	90	210	90	50	40	160	330
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	187	790	218	217	1333	86	228	98	54	43	174	359
Adj No. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	524	1420	392	270	1448	93	279	539	277	83	323	288
Arrive On Green	0.25	0.87	0.87	0.13	0.72	0.72	0.08	0.24	0.24	0.02	0.18	0.18
Sat Flow, veh/h	3442	2732	754	3442	3377	217	3442	2251	1157	3442	1770	1581
Grp Volume(v), veh/h	187	512	496	217	697	722	228	76	76	43	174	359
Grp Sat Flow(s),veh/h/ln	1721	1770	1716	1721	1770	1824	1721	1770	1639	1721	1770	1581
Q Serve(g_s), s	5.8	9.6	9.6	8.0	42.5	43.0	8.5	4.4	4.8	1.6	11.6	23.7
Cycle Q Clear(g_c), s	5.8	9.6	9.6	8.0	42.5	43.0	8.5	4.4	4.8	1.6	11.6	23.7
Prop In Lane	1.00		0.44	1.00		0.12	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	524	920	892	270	759	783	279	423	392	83	323	288
V/C Ratio(X)	0.36	0.56	0.56	0.80	0.92	0.92	0.82	0.18	0.20	0.52	0.54	1.25
Avail Cap(c_a), veh/h	524	920	892	357	903	930	304	423	392	146	323	288
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	4.8	4.8	55.5	16.6	16.6	58.8	39.3	39.5	62.7	48.2	53.2
Incr Delay (d2), s/veh	0.4	2.4	2.5	8.0	15.5	15.6	14.7	0.2	0.2	4.8	1.8	136.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	5.1	4.9	4.1	23.3	24.4	4.6	2.2	2.2	0.8	5.8	21.2
LnGrp Delay(d),s/veh	43.7	7.2	7.3	63.5	32.1	32.2	73.5	39.5	39.7	67.5	50.0	189.4
LnGrp LOS	D	A	A	E	C	C	E	D	D	E	D	F
Approach Vol, veh/h		1195			1636			380			576	
Approach Delay, s/veh		12.9			36.3			59.9			138.2	
Approach LOS		B			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	73.3	14.1	29.0	25.5	61.5	6.7	36.4
Change Period (Y+Rc), s	3.5	5.7	3.5	5.3	5.7	* 5.7	3.5	5.3
Max Green Setting (Gmax), s	10.5	63.3	11.5	23.7	10.5	* 66	5.5	29.7
Max Q Clear Time (g_c+I1), s	10.0	11.6	10.5	25.7	7.8	45.0	3.6	6.8
Green Ext Time (p_c), s	0.2	9.7	0.1	0.0	1.8	10.7	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	695	152	280	1176	265	95	55	155	100	70	100
Future Volume (veh/h)	70	695	152	280	1176	265	95	55	155	100	70	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	76	755	165	304	1278	288	82	90	168	92	99	109
Adj No. of Lanes	2	2	1	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	681	1986	876	357	1604	851	214	225	191	151	159	135
Arrive On Green	0.33	0.94	0.94	0.17	0.76	0.76	0.12	0.12	0.12	0.09	0.09	0.09
Sat Flow, veh/h	3442	3539	1561	3442	3539	1581	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	76	755	165	304	1278	288	82	90	168	92	99	109
Grp Sat Flow(s),veh/h/ln	1721	1770	1561	1721	1770	1581	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.0	2.7	1.1	11.1	28.8	7.0	5.5	5.8	13.6	6.5	6.7	8.8
Cycle Q Clear(g_c), s	2.0	2.7	1.1	11.1	28.8	7.0	5.5	5.8	13.6	6.5	6.7	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	681	1986	876	357	1604	851	214	225	191	151	159	135
V/C Ratio(X)	0.11	0.38	0.19	0.85	0.80	0.34	0.38	0.40	0.88	0.61	0.62	0.81
Avail Cap(c_a), veh/h	681	1986	876	543	2006	1031	232	244	207	205	215	183
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.56	0.56	0.56	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	1.9	1.8	52.7	12.2	6.9	52.7	52.8	56.2	57.4	57.5	58.4
Incr Delay (d2), s/veh	0.0	0.4	0.4	3.0	2.4	0.6	0.4	0.4	29.1	1.5	1.5	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.3	0.5	5.4	14.1	3.6	2.7	3.0	7.5	3.3	3.5	4.3
LnGrp Delay(d),s/veh	35.6	2.3	2.2	55.7	14.6	7.5	53.1	53.2	85.3	58.9	59.0	71.1
LnGrp LOS	D	A	A	E	B	A	D	D	F	E	E	E
Approach Vol, veh/h		996			1870			340			300	
Approach Delay, s/veh		4.8			20.2			69.0			63.3	
Approach LOS		A			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	78.2		15.1	31.0	64.2		19.7
Change Period (Y+Rc), s	3.5	5.3		4.0	5.3	* 5.3		4.0
Max Green Setting (Gmax), s	20.5	60.7		15.0	7.5	* 74		17.0
Max Q Clear Time (g_c+I1), s	13.1	4.7		10.8	4.0	30.8		15.6
Green Ext Time (p_c), s	0.4	15.4		0.3	2.5	28.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	660	193	1164	1393	160	159	677	513	191	1326	144
Future Volume (veh/h)	132	660	193	1164	1393	160	159	677	513	191	1326	144
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	143	717	210	1265	1514	174	173	736	558	208	1441	137
Adj No. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	746	229	1290	2156	248	184	1055	912	319	1562	148
Arrive On Green	0.09	0.24	0.24	0.37	0.47	0.47	0.09	0.35	0.35	0.15	0.44	0.44
Sat Flow, veh/h	3442	5085	1564	3442	4628	531	3442	5085	1538	3442	5990	569
Grp Volume(v), veh/h	143	717	210	1265	1109	579	173	736	558	208	1156	422
Grp Sat Flow(s),veh/h/ln	1721	1695	1564	1721	1695	1769	1721	1695	1538	1721	1602	1753
Q Serve(g_s), s	5.5	18.8	17.6	49.1	35.0	35.1	6.7	16.8	20.0	7.7	30.6	30.7
Cycle Q Clear(g_c), s	5.5	18.8	17.6	49.1	35.0	35.1	6.7	16.8	20.0	7.7	30.6	30.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	191	746	229	1290	1580	824	184	1055	912	319	1253	457
V/C Ratio(X)	0.75	0.96	0.92	0.98	0.70	0.70	0.94	0.70	0.61	0.65	0.92	0.92
Avail Cap(c_a), veh/h	260	746	229	1290	1580	824	184	1254	973	319	1253	457
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.3	50.6	50.2	41.7	28.6	28.6	61.3	40.5	5.3	55.0	36.8	36.8
Incr Delay (d2), s/veh	4.2	22.4	35.1	20.4	1.5	2.8	47.8	3.6	2.9	10.0	12.5	26.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	10.3	9.8	26.8	16.6	17.7	4.4	8.2	8.8	4.1	14.8	18.1
LnGrp Delay(d),s/veh	64.5	73.0	85.3	62.1	30.1	31.5	109.1	44.1	8.2	65.0	49.4	63.7
LnGrp LOS	E	E	F	E	C	C	F	D	A	E	D	E
Approach Vol, veh/h		1070			2953			1467			1786	
Approach Delay, s/veh		74.3			44.1			38.1			54.6	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	55.2	26.3	11.8	41.7	12.1	69.4	19.0	34.5
Change Period (Y+Rc), s	4.6	6.5	4.6	6.5	4.6	6.5	6.5	* 6.5
Max Green Setting (Gmax), s	50.6	19.8	7.2	35.2	10.2	60.2	9.1	* 33
Max Q Clear Time (g_c+I1), s	51.1	20.8	8.7	32.7	7.5	37.1	9.7	22.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.1	19.9	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	40	71	120	30	80	67	992	125	160	2457	146
Future Volume (veh/h)	152	40	71	120	30	80	67	992	125	160	2457	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	104	128	77	82	101	87	73	1078	136	174	2671	146
Adj No. of Lanes	1	1	1	1	1	1	2	4	0	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	162	136	126	132	112	638	3664	458	222	3120	170
Arrive On Green	0.09	0.09	0.09	0.07	0.07	0.07	0.37	1.00	1.00	0.13	1.00	1.00
Sat Flow, veh/h	1774	1863	1560	1774	1863	1583	3442	5803	726	3442	6263	341
Grp Volume(v), veh/h	104	128	77	82	101	87	73	891	323	174	2046	771
Grp Sat Flow(s),veh/h/ln	1774	1863	1560	1774	1863	1583	1721	1602	1723	1721	1602	1798
Q Serve(g_s), s	7.7	9.1	6.4	6.1	7.2	7.3	1.9	0.0	0.0	6.6	1.5	1.6
Cycle Q Clear(g_c), s	7.7	9.1	6.4	6.1	7.2	7.3	1.9	0.0	0.0	6.6	1.5	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		0.19
Lane Grp Cap(c), veh/h	155	162	136	126	132	112	638	3034	1088	222	2394	895
V/C Ratio(X)	0.67	0.79	0.57	0.65	0.76	0.77	0.11	0.29	0.30	0.78	0.85	0.86
Avail Cap(c_a), veh/h	230	241	202	191	200	170	638	3034	1088	344	2698	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.22	0.22	0.22
Uniform Delay (d), s/veh	59.8	60.4	59.2	61.1	61.6	61.6	35.2	0.0	0.0	57.9	0.1	0.1
Incr Delay (d2), s/veh	5.0	9.9	3.7	2.1	3.8	5.3	0.0	0.2	0.5	0.6	1.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	2.9	3.1	3.8	3.4	0.9	0.1	0.2	3.1	0.4	0.9
LnGrp Delay(d),s/veh	64.8	70.3	62.8	63.2	65.4	66.9	35.2	0.2	0.5	58.4	1.1	2.8
LnGrp LOS	E	E	E	E	E	E	D	A	A	E	A	A
Approach Vol, veh/h		309			270			1287			2991	
Approach Delay, s/veh		66.6			65.2			2.3			4.9	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.2	91.4		16.3	31.2	73.4		14.1
Change Period (Y+Rc), s	4.5	6.2		4.5	6.2	* 6.2		4.5
Max Green Setting (Gmax), s	13.5	69.8		17.5	7.5	* 76		14.5
Max Q Clear Time (g_c+I1), s	9.6	2.0		11.1	3.9	3.6		9.3
Green Ext Time (p_c), s	0.1	19.3		0.7	2.8	63.7		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	190	150	162	210	250	100	787	167	292	2241	110
Future Volume (veh/h)	70	190	150	162	210	250	100	787	167	292	2241	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	76	207	34	176	228	272	109	855	182	317	2436	120
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	260	42	242	316	276	131	1145	351	713	2880	884
Arrive On Green	0.05	0.09	0.09	0.14	0.18	0.18	0.12	0.38	0.38	0.80	1.00	1.00
Sat Flow, veh/h	1774	3044	491	1774	1770	1547	1774	5085	1561	1774	5085	1561
Grp Volume(v), veh/h	76	119	122	176	228	272	109	855	182	317	2436	120
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1770	1547	1774	1695	1561	1774	1695	1561
Q Serve(g_s), s	5.7	8.9	9.2	12.8	16.4	23.7	8.1	19.7	12.2	7.4	0.0	0.0
Cycle Q Clear(g_c), s	5.7	8.9	9.2	12.8	16.4	23.7	8.1	19.7	12.2	7.4	0.0	0.0
Prop In Lane	1.00		0.28	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	151	151	242	316	276	131	1145	351	713	2880	884
V/C Ratio(X)	0.80	0.78	0.81	0.73	0.72	0.98	0.83	0.75	0.52	0.44	0.85	0.14
Avail Cap(c_a), veh/h	112	198	197	242	316	276	151	1872	575	713	2880	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.65	0.65	0.65
Uniform Delay (d), s/veh	63.1	60.5	60.6	55.9	52.3	55.3	58.4	38.8	36.4	8.7	0.0	0.0
Incr Delay (d2), s/veh	23.9	12.6	15.4	9.2	7.4	49.7	22.8	3.5	4.2	0.3	2.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.9	5.1	6.9	8.7	13.9	4.8	9.6	5.6	3.5	0.6	0.1
LnGrp Delay(d),s/veh	87.0	73.1	76.0	65.0	59.7	105.0	81.2	42.3	40.6	8.9	2.2	0.2
LnGrp LOS	F	E	E	E	E	F	F	D	D	A	A	A
Approach Vol, veh/h		317			676			1146			2873	
Approach Delay, s/veh		77.6			79.3			45.7			2.8	
Approach LOS		E			E			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	35.7	23.3	16.5	13.5	81.8	10.8	29.0
Change Period (Y+Rc), s	5.3	* 5.3	4.9	* 4.9	3.5	5.3	3.5	4.9
Max Green Setting (Gmax), s	35.5	* 50	17.5	* 15	11.5	73.7	8.5	24.1
Max Q Clear Time (g_c+I1), s	9.4	21.7	14.8	11.2	10.1	2.0	7.7	25.7
Green Ext Time (p_c), s	23.0	8.7	0.8	0.4	0.0	52.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	40	50	320	100	262	141	836	153	209	1832	100
Future Volume (veh/h)	30	40	50	320	100	262	141	836	153	209	1832	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.99	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	60	43	228	276	285	153	909	166	227	1991	109
Adj No. of Lanes	0	2	1	1	1	1	1	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	99	60	347	364	306	179	1500	273	933	2627	143
Arrive On Green	0.04	0.04	0.04	0.20	0.20	0.20	0.03	0.11	0.11	0.18	0.36	0.36
Sat Flow, veh/h	1226	2438	1469	1774	1863	1566	1774	4308	783	3442	4928	269
Grp Volume(v), veh/h	48	45	43	228	276	285	153	714	361	227	1367	733
Grp Sat Flow(s),veh/h/ln	1801	1863	1469	1774	1863	1566	1774	1695	1701	1721	1695	1807
Q Serve(g_s), s	3.6	3.2	3.9	16.0	18.9	24.2	11.6	27.1	27.2	7.6	47.9	48.3
Cycle Q Clear(g_c), s	3.6	3.2	3.9	16.0	18.9	24.2	11.6	27.1	27.2	7.6	47.9	48.3
Prop In Lane	0.68		1.00	1.00		1.00	1.00		0.46	1.00		0.15
Lane Grp Cap(c), veh/h	73	76	60	347	364	306	179	1180	592	933	1807	963
V/C Ratio(X)	0.66	0.59	0.72	0.66	0.76	0.93	0.85	0.61	0.61	0.24	0.76	0.76
Avail Cap(c_a), veh/h	73	76	60	355	373	313	243	1796	901	933	1807	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71	0.43	0.43	0.43
Uniform Delay (d), s/veh	63.8	63.6	64.0	50.1	51.3	53.4	64.3	50.9	51.0	43.4	35.7	35.8
Incr Delay (d2), s/veh	22.1	13.4	36.4	3.3	7.6	32.3	11.3	1.6	3.3	0.0	1.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.9	2.2	8.2	10.5	13.2	6.3	13.0	13.4	3.6	22.8	24.9
LnGrp Delay(d),s/veh	85.9	77.1	100.4	53.5	58.8	85.6	75.6	52.6	54.3	43.4	37.0	38.3
LnGrp LOS	F	E	F	D	E	F	E	D	D	D	D	D
Approach Vol, veh/h		136			789			1228			2327	
Approach Delay, s/veh		87.6			67.0			55.9			38.0	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		9.0	17.1	77.5		31.4	42.1	52.5
Change Period (Y+Rc), s		3.5	3.5	5.5		5.0	5.5	* 5.5
Max Green Setting (Gmax), s		5.5	18.5	66.5		27.0	13.5	* 72
Max Q Clear Time (g_c+I1), s		5.9	13.6	50.3		26.2	9.6	29.2
Green Ext Time (p_c), s		0.0	0.1	15.2		0.2	3.8	17.8

Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	99.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	10	20	200	30	220	25	332	25	140	621	30
Future Vol, veh/h	20	10	20	200	30	220	25	332	25	140	621	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	11	22	217	33	239	27	361	27	152	675	33
Number of Lanes	0	1	1	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	13.2	19.4	35.6	181.9
HCM LOS	B	C	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	7%	0%	67%	0%	100%	0%	100%	0%
Vol Thru, %	93%	0%	33%	0%	0%	12%	0%	95%
Vol Right, %	0%	100%	0%	100%	0%	88%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	357	25	30	20	200	250	140	651
LT Vol	25	0	20	0	200	0	140	0
Through Vol	332	0	10	0	0	30	0	621
RT Vol	0	25	0	20	0	220	0	30
Lane Flow Rate	388	27	33	22	217	272	152	708
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.812	0.051	0.084	0.049	0.495	0.535	0.327	1.413
Departure Headway (Hd)	8.099	7.339	10.129	9.042	8.879	7.722	7.735	7.189
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	450	491	356	398	409	470	463	502
Service Time	5.799	5.039	7.829	6.742	6.579	5.422	5.517	4.971
HCM Lane V/C Ratio	0.862	0.055	0.093	0.055	0.531	0.579	0.328	1.41
HCM Control Delay	37.4	10.4	13.8	12.2	20	19	14.3	218
HCM Lane LOS	E	B	B	B	C	C	B	F
HCM 95th-tile Q	7.5	0.2	0.3	0.2	2.7	3.1	1.4	33.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	30	80	50	20	40	170	1082	40	150	1941	140
Future Volume (veh/h)	80	30	80	50	20	40	170	1082	40	150	1941	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	87	33	87	54	22	43	185	1176	43	163	2110	152
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	40	127	64	26	51	209	1509	55	683	2790	199
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.20	0.50	0.50	0.51	0.77	0.77
Sat Flow, veh/h	1303	494	1548	771	314	614	1774	5036	184	1774	4837	346
Grp Volume(v), veh/h	120	0	87	119	0	0	185	792	427	163	1474	788
Grp Sat Flow(s),veh/h/ln	1798	0	1548	1700	0	0	1774	1695	1830	1774	1695	1793
Q Serve(g_s), s	8.9	0.0	7.4	9.3	0.0	0.0	13.7	25.8	25.8	6.9	32.4	33.3
Cycle Q Clear(g_c), s	8.9	0.0	7.4	9.3	0.0	0.0	13.7	25.8	25.8	6.9	32.4	33.3
Prop In Lane	0.72		1.00	0.45		0.36	1.00		0.10	1.00		0.19
Lane Grp Cap(c), veh/h	147	0	127	142	0	0	209	1016	548	683	1955	1034
V/C Ratio(X)	0.82	0.00	0.69	0.84	0.00	0.00	0.89	0.78	0.78	0.24	0.75	0.76
Avail Cap(c_a), veh/h	186	0	161	164	0	0	263	1700	917	683	1955	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.50	0.50	0.50	0.58	0.58	0.58
Uniform Delay (d), s/veh	61.0	0.0	60.3	61.0	0.0	0.0	53.4	30.1	30.1	21.9	10.4	10.5
Incr Delay (d2), s/veh	15.8	0.0	4.8	24.8	0.0	0.0	14.2	3.0	5.5	0.1	1.6	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	3.3	5.4	0.0	0.0	7.5	12.3	13.7	3.4	15.3	17.1
LnGrp Delay(d),s/veh	76.8	0.0	65.1	85.8	0.0	0.0	67.6	33.1	35.6	22.0	12.0	13.7
LnGrp LOS	E		E	F			E	C	D	C	B	B
Approach Vol, veh/h		207			119			1404			2425	
Approach Delay, s/veh		71.9			85.8			38.4			13.2	
Approach LOS		E			F			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	45.8		16.0	19.9	82.9		16.2
Change Period (Y+Rc), s	5.0	* 5.3		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	12.0	* 68		14.0	20.0	69.0		13.0
Max Q Clear Time (g_c+I1), s	9.9	27.8		10.9	15.7	35.3		11.3
Green Ext Time (p_c), s	10.9	12.6		0.2	0.2	26.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	44.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	5	10	180	15	205	10	292	70	270	521	10
Future Vol, veh/h	10	5	10	180	15	205	10	292	70	270	521	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	11	196	16	223	11	317	76	293	566	11
Number of Lanes	0	1	0	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	12.6	16.7	22.2	70.1
HCM LOS	B	C	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	40%	100%	0%	100%	0%
Vol Thru, %	97%	0%	20%	0%	7%	0%	98%
Vol Right, %	0%	100%	40%	0%	93%	0%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	302	70	25	180	220	270	531
LT Vol	10	0	10	180	0	270	0
Through Vol	292	0	5	0	15	0	521
RT Vol	0	70	10	0	205	0	10
Lane Flow Rate	328	76	27	196	239	293	577
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.675	0.141	0.065	0.442	0.464	0.603	1.101
Departure Headway (Hd)	7.663	6.926	8.947	8.406	7.223	7.392	6.868
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	476	521	403	430	502	487	525
Service Time	5.363	4.626	6.947	6.106	4.923	5.158	4.633
HCM Lane V/C Ratio	0.689	0.146	0.067	0.456	0.476	0.602	1.099
HCM Control Delay	24.8	10.8	12.6	17.6	16	20.8	95.2
HCM Lane LOS	C	B	B	C	C	C	F
HCM 95th-tile Q	4.9	0.5	0.2	2.2	2.4	3.9	18.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	160	30	418	130	201	20	204	189	426	899	70
Future Volume (veh/h)	40	160	30	418	130	201	20	204	189	426	899	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	43	174	33	454	141	218	22	222	205	463	977	76
Adj No. of Lanes	0	2	0	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	269	53	484	508	860	31	650	705	490	1467	114
Arrive On Green	0.11	0.11	0.11	0.27	0.27	0.27	0.02	0.18	0.18	0.28	0.44	0.44
Sat Flow, veh/h	597	2508	494	1774	1863	1552	1774	3539	1491	1774	3321	258
Grp Volume(v), veh/h	132	0	118	454	141	218	22	222	205	463	521	532
Grp Sat Flow(s),veh/h/ln	1833	0	1766	1774	1863	1552	1774	1770	1491	1774	1770	1809
Q Serve(g_s), s	7.7	0.0	7.1	27.8	6.6	8.2	1.4	6.1	9.6	28.4	25.8	25.8
Cycle Q Clear(g_c), s	7.7	0.0	7.1	27.8	6.6	8.2	1.4	6.1	9.6	28.4	25.8	25.8
Prop In Lane	0.33		0.28	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	197	0	189	484	508	860	31	650	705	490	782	799
V/C Ratio(X)	0.67	0.00	0.62	0.94	0.28	0.25	0.70	0.34	0.29	0.95	0.67	0.67
Avail Cap(c_a), veh/h	446	0	430	497	522	872	96	833	782	528	847	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	47.4	39.4	31.7	13.1	54.2	39.4	19.0	39.3	24.5	24.5
Incr Delay (d2), s/veh	1.5	0.0	1.3	25.5	0.3	0.2	9.9	0.3	0.2	24.7	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	3.5	17.0	3.4	3.6	0.8	3.0	6.0	17.2	13.0	13.3
LnGrp Delay(d),s/veh	49.1	0.0	48.6	64.9	32.0	13.3	64.1	39.8	19.2	64.0	26.3	26.2
LnGrp LOS	D		D	E	C	B	E	D	B	E	C	C
Approach Vol, veh/h		250			813			449			1516	
Approach Delay, s/veh		48.9			45.4			31.6			37.8	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.6	25.3		15.9	6.0	53.9		35.2
Change Period (Y+Rc), s	4.0	4.9		4.0	4.0	4.9		4.9
Max Green Setting (Gmax), s	8.0	26.1		27.0	6.0	53.1		31.1
Max Q Clear Time (g_c+I1), s	10.4	11.6		9.7	3.4	27.8		29.8
Green Ext Time (p_c), s	0.3	7.7		0.7	0.0	10.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	560	115	360	615	106	69	147	162	233	614	100
Future Volume (veh/h)	30	560	115	360	615	106	69	147	162	233	614	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	33	609	125	391	668	90	75	160	176	253	667	109
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	706	145	422	1426	192	88	688	574	397	688	573
Arrive On Green	0.02	0.24	0.24	0.24	0.46	0.46	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1774	2915	597	1774	3127	421	692	1863	1556	1037	1863	1551
Grp Volume(v), veh/h	33	369	365	391	378	380	75	160	176	253	667	109
Grp Sat Flow(s),veh/h/ln	1774	1770	1742	1774	1770	1779	692	1863	1556	1037	1863	1551
Q Serve(g_s), s	1.8	19.0	19.1	20.5	14.0	14.1	1.6	5.6	7.6	21.2	33.5	4.5
Cycle Q Clear(g_c), s	1.8	19.0	19.1	20.5	14.0	14.1	35.1	5.6	7.6	26.8	33.5	4.5
Prop In Lane	1.00		0.34	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	429	422	422	807	811	88	688	574	397	688	573
V/C Ratio(X)	0.76	0.86	0.86	0.93	0.47	0.47	0.85	0.23	0.31	0.64	0.97	0.19
Avail Cap(c_a), veh/h	530	504	497	439	807	811	88	688	574	397	688	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	34.5	34.5	35.4	17.9	17.9	47.4	20.7	21.3	29.9	29.5	20.3
Incr Delay (d2), s/veh	23.3	12.5	13.0	25.2	0.4	0.4	52.0	0.2	0.3	3.4	26.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	10.7	10.7	12.9	6.9	7.0	3.2	2.9	3.3	6.4	22.2	2.0
LnGrp Delay(d),s/veh	69.4	47.0	47.6	60.6	18.3	18.3	99.4	20.9	21.6	33.3	56.4	20.5
LnGrp LOS	E	D	D	E	B	B	F	C	C	C	E	C
Approach Vol, veh/h		767			1149			411			1029	
Approach Delay, s/veh		48.2			32.7			35.5			46.9	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	28.9		40.0	5.8	49.2		40.0
Change Period (Y+Rc), s	3.5	5.9		4.9	3.5	5.9		4.9
Max Green Setting (Gmax), s	2.5	27.1		35.1	28.4	22.2		35.1
Max Q Clear Time (g_c+I1), s	2.5	21.1		35.5	3.8	16.1		37.1
Green Ext Time (p_c), s	0.2	2.0		0.0	0.1	4.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	769	481	548	1051	0	0	0	0	228	5	210
Future Volume (veh/h)	0	769	481	548	1051	0	0	0	0	228	5	210
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	836	407	596	1142	0				248	5	80
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	877	423	619	2726	0				274	6	249
Arrive On Green	0.00	0.64	0.64	0.70	1.00	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	2376	1103	1774	3632	0				1741	35	1583
Grp Volume(v), veh/h	0	646	597	596	1142	0				253	0	80
Grp Sat Flow(s),veh/h/ln	0	1770	1617	1774	1770	0				1776	0	1583
Q Serve(g_s), s	0.0	48.7	50.0	44.8	0.0	0.0				20.3	0.0	6.5
Cycle Q Clear(g_c), s	0.0	48.7	50.0	44.8	0.0	0.0				20.3	0.0	6.5
Prop In Lane	0.00		0.68	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	679	621	619	2726	0				279	0	249
V/C Ratio(X)	0.00	0.95	0.96	0.96	0.42	0.00				0.91	0.00	0.32
Avail Cap(c_a), veh/h	0	688	629	619	2726	0				332	0	296
HCM Platoon Ratio	1.00	1.67	1.67	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.66	0.66	0.47	0.47	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.8	25.0	21.0	0.0	0.0				60.0	0.0	54.2
Incr Delay (d2), s/veh	0.0	18.5	21.3	16.4	0.2	0.0				22.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	26.8	25.5	24.2	0.1	0.0				11.7	0.0	2.9
LnGrp Delay(d),s/veh	0.0	43.3	46.3	37.4	0.2	0.0				82.8	0.0	54.5
LnGrp LOS		D	D	D	A					F		D
Approach Vol, veh/h		1243			1738						333	
Approach Delay, s/veh		44.7			13.0						76.0	
Approach LOS		D			B						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	56.0	61.1		27.9		117.1		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	46.3	* 56		27.1		107.4		
Max Q Clear Time (g_c+I1), s	45.8	52.0		22.3		2.0		
Green Ext Time (p_c), s	0.0	3.6		0.5		26.8		

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

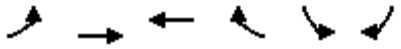
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	757	0	0	1246	397	373	0	438	0	0	0
Future Volume (veh/h)	230	757	0	0	1246	397	373	0	438	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	250	823	0	0	1354	361	405	0	96			
Adj No. of Lanes	1	2	0	0	2	1	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	271	2409	0	0	1744	780	438	0	380			
Arrive On Green	0.26	1.00	0.00	0.00	0.82	0.82	0.25	0.00	0.25			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	1774	0	1541			
Grp Volume(v), veh/h	250	823	0	0	1354	361	405	0	96			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1541			
Q Serve(g_s), s	19.9	0.0	0.0	0.0	27.2	9.4	32.3	0.0	7.3			
Cycle Q Clear(g_c), s	19.9	0.0	0.0	0.0	27.2	9.4	32.3	0.0	7.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	271	2409	0	0	1744	780	438	0	380			
V/C Ratio(X)	0.92	0.34	0.00	0.00	0.78	0.46	0.92	0.00	0.25			
Avail Cap(c_a), veh/h	329	2409	0	0	1744	780	513	0	445			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.17	0.17	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	53.2	0.0	0.0	0.0	8.9	7.3	53.3	0.0	43.9			
Incr Delay (d2), s/veh	6.9	0.1	0.0	0.0	2.8	1.6	20.4	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.2	0.0	0.0	0.0	13.5	4.3	18.3	0.0	3.1			
LnGrp Delay(d),s/veh	60.1	0.1	0.0	0.0	11.7	8.9	73.7	0.0	44.1			
LnGrp LOS	E	A			B	A	E		D			
Approach Vol, veh/h		1073			1715			501				
Approach Delay, s/veh		14.0			11.1			68.1				
Approach LOS		B			B			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		104.1			27.2	76.9		40.9
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		92.6			26.9	60.6		41.9
Max Q Clear Time (g_c+I1), s		2.0			21.9	29.2		34.3
Green Ext Time (p_c), s		18.8			0.2	14.8		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	237	928	1183	264	408	480
Future Volume (veh/h)	237	928	1183	264	408	480
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	258	1009	1286	254	443	207
Adj No. of Lanes	1	2	3	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	805	2739	1438	436	529	243
Arrive On Green	0.76	1.00	0.47	0.47	0.15	0.15
Sat Flow, veh/h	1774	3632	5253	1543	3442	1583
Grp Volume(v), veh/h	258	1009	1286	254	443	207
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1543	1721	1583
Q Serve(g_s), s	6.7	0.0	33.5	17.4	18.1	18.5
Cycle Q Clear(g_c), s	6.7	0.0	33.5	17.4	18.1	18.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	805	2739	1438	436	529	243
V/C Ratio(X)	0.32	0.37	0.89	0.58	0.84	0.85
Avail Cap(c_a), veh/h	805	2739	1704	517	1089	501
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.58	0.58	1.00	1.00
Uniform Delay (d), s/veh	10.4	0.0	36.3	32.0	59.6	59.8
Incr Delay (d2), s/veh	0.1	0.3	5.5	3.3	2.7	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.1	16.2	7.8	8.8	15.8
LnGrp Delay(d),s/veh	10.5	0.3	41.8	35.3	62.3	66.0
LnGrp LOS	B	A	D	D	E	E
Approach Vol, veh/h		1267	1540		650	
Approach Delay, s/veh		2.4	40.7		63.5	
Approach LOS		A	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		117.6		27.4	71.2	46.4		
Change Period (Y+Rc), s		5.4		5.1	5.4	* 5.4		
Max Green Setting (Gmax), s		88.6		45.9	34.9	* 49		
Max Q Clear Time (g_c+I1), s		2.0		20.5	8.7	35.5		
Green Ext Time (p_c), s		5.8		1.8	5.5	5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	783	170	180	1196	93	120	100	150	228	280	250
Future Volume (veh/h)	128	783	170	180	1196	93	120	100	150	228	280	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	139	851	185	196	1300	87	130	109	136	248	304	234
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	1045	606	469	1706	762	157	203	167	285	347	289
Arrive On Green	0.09	0.30	0.30	0.44	0.80	0.80	0.09	0.11	0.11	0.16	0.19	0.19
Sat Flow, veh/h	1774	3539	1575	1774	3539	1580	1774	1863	1537	1774	1863	1552
Grp Volume(v), veh/h	139	851	185	196	1300	87	130	109	136	248	304	234
Grp Sat Flow(s),veh/h/ln	1774	1770	1575	1774	1770	1580	1774	1863	1537	1774	1863	1552
Q Serve(g_s), s	8.5	24.5	3.3	8.3	20.4	0.7	7.9	6.1	9.5	15.0	17.5	15.9
Cycle Q Clear(g_c), s	8.5	24.5	3.3	8.3	20.4	0.7	7.9	6.1	9.5	15.0	17.5	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	1045	606	469	1706	762	157	203	167	285	347	289
V/C Ratio(X)	0.83	0.81	0.31	0.42	0.76	0.11	0.83	0.54	0.81	0.87	0.88	0.81
Avail Cap(c_a), veh/h	169	1277	709	469	1706	762	185	286	236	285	388	323
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	36.0	9.2	24.9	7.5	1.6	49.3	46.4	47.9	45.0	43.5	42.9
Incr Delay (d2), s/veh	24.0	6.1	1.1	0.2	3.3	0.3	19.5	2.2	13.5	23.0	18.2	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	12.8	2.1	4.1	10.1	0.3	4.8	3.3	4.7	9.2	10.7	7.8
LnGrp Delay(d),s/veh	73.0	42.1	10.3	25.2	10.8	1.9	68.8	48.6	61.4	68.1	61.8	55.9
LnGrp LOS	E	D	B	C	B	A	E	D	E	E	E	E
Approach Vol, veh/h		1175			1583			375			786	
Approach Delay, s/veh		40.7			12.1			60.2			62.0	
Approach LOS		D			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	37.8	13.3	24.6	13.8	58.3	21.8	16.1
Change Period (Y+Rc), s	5.3	* 5.3	3.5	4.1	3.5	5.3	4.1	* 4.1
Max Green Setting (Gmax), s	9.5	* 40	11.5	22.9	10.5	48.7	17.5	* 17
Max Q Clear Time (g_c+I1), s	10.3	26.5	9.9	19.5	10.5	22.4	17.0	11.5
Green Ext Time (p_c), s	6.3	5.9	0.0	1.0	0.0	12.7	0.2	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

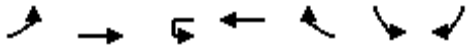
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	870	231	580	1147	222	450
Future Volume (veh/h)	870	231	580	1147	222	450
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	946	216	630	1247	241	489
Adj No. of Lanes	2	0	2	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1242	283	765	2466	365	677
Arrive On Green	0.73	0.73	0.44	1.00	0.21	0.21
Sat Flow, veh/h	2944	650	3442	3632	1774	1583
Grp Volume(v), veh/h	587	575	630	1247	241	489
Grp Sat Flow(s),veh/h/ln	1770	1731	1721	1770	1774	1583
Q Serve(g_s), s	18.2	18.3	14.4	0.0	11.2	18.5
Cycle Q Clear(g_c), s	18.2	18.3	14.4	0.0	11.2	18.5
Prop In Lane		0.38	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	771	754	765	2466	365	677
V/C Ratio(X)	0.76	0.76	0.82	0.51	0.66	0.72
Avail Cap(c_a), veh/h	771	754	822	2466	365	677
HCM Platoon Ratio	1.67	1.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.62	0.62	1.00	1.00
Uniform Delay (d), s/veh	9.4	9.4	23.5	0.0	32.9	21.3
Incr Delay (d2), s/veh	7.0	7.2	4.8	0.5	3.5	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	9.8	7.2	0.2	5.8	10.6
LnGrp Delay(d),s/veh	16.4	16.6	28.3	0.5	36.4	24.6
LnGrp LOS	B	B	C	A	D	C
Approach Vol, veh/h	1162			1877	730	
Approach Delay, s/veh	16.5			9.8	28.5	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		68.0			23.5	44.5		22.0
Change Period (Y+Rc), s		5.3			3.5	5.3		3.5
Max Green Setting (Gmax), s		62.7			21.5	37.7		18.5
Max Q Clear Time (g_c+I1), s		2.0			16.4	20.3		20.5
Green Ext Time (p_c), s		51.4			2.1	16.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	460	860	5	1037	120	120	700
Future Volume (veh/h)	460	860	5	1037	120	120	700
Number	1	6		2	12	7	14
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1863	1900	1863	1863
Adj Flow Rate, veh/h	500	935		1127	120	130	761
Adj No. of Lanes	2	2		2	0	1	2
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	1131	2817		1315	140	189	1212
Arrive On Green	0.11	0.26		0.68	0.68	0.11	0.11
Sat Flow, veh/h	3442	3632		3311	342	1774	2787
Grp Volume(v), veh/h	500	935		619	628	130	761
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1791	1774	1393
Q Serve(g_s), s	12.2	19.2		24.0	24.2	6.4	0.0
Cycle Q Clear(g_c), s	12.2	19.2		24.0	24.2	6.4	0.0
Prop In Lane	1.00				0.19	1.00	1.00
Lane Grp Cap(c), veh/h	1131	2817		723	732	189	1212
V/C Ratio(X)	0.44	0.33		0.86	0.86	0.69	0.63
Avail Cap(c_a), veh/h	1131	2817		808	818	266	1333
HCM Platoon Ratio	0.33	0.33		1.67	1.67	1.00	1.00
Upstream Filter(I)	0.60	0.60		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	13.9		12.3	12.3	38.8	19.8
Incr Delay (d2), s/veh	0.1	0.2		12.4	12.5	1.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	9.5		13.6	14.2	3.2	9.5
LnGrp Delay(d),s/veh	32.5	14.0		24.7	24.8	40.5	20.3
LnGrp LOS	C	B		C	C	D	C
Approach Vol, veh/h		1435		1247		891	
Approach Delay, s/veh		20.5		24.8		23.2	
Approach LOS		C		C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.9	42.1		13.1		76.9		
Change Period (Y+Rc), s	5.3	* 5.3		3.5		5.3		
Max Green Setting (Gmax), s	23.1	* 41		13.5		58.7		
Max Q Clear Time (g_c+I1), s	14.2	26.2		8.4		21.2		
Green Ext Time (p_c), s	3.7	10.5		1.2		14.9		

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	580	187	322	579	326	213	693	193	694	1617	489
Future Volume (veh/h)	283	580	187	322	579	326	213	693	193	694	1617	489
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	308	630	203	350	629	270	232	753	210	754	1758	532
Adj No. of Lanes	2	2	0	2	2	0	1	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	666	214	379	666	286	418	1477	407	797	1839	565
Arrive On Green	0.16	0.42	0.42	0.11	0.28	0.28	0.39	0.62	0.62	0.39	0.60	0.60
Sat Flow, veh/h	3442	2622	844	3442	2402	1030	1774	3953	1090	3442	5085	1561
Grp Volume(v), veh/h	308	425	408	350	463	436	232	645	318	754	1758	532
Grp Sat Flow(s),veh/h/ln	1721	1770	1696	1721	1770	1663	1774	1695	1653	1721	1695	1561
Q Serve(g_s), s	12.3	32.3	32.4	14.1	35.9	35.9	14.2	14.7	15.0	29.7	45.3	40.6
Cycle Q Clear(g_c), s	12.3	32.3	32.4	14.1	35.9	35.9	14.2	14.7	15.0	29.7	45.3	40.6
Prop In Lane	1.00		0.50	1.00		0.62	1.00		0.66	1.00		1.00
Lane Grp Cap(c), veh/h	334	449	431	379	491	461	418	1266	617	797	1839	565
V/C Ratio(X)	0.92	0.95	0.95	0.92	0.94	0.94	0.56	0.51	0.52	0.95	0.96	0.94
Avail Cap(c_a), veh/h	334	461	442	379	491	461	418	1266	617	870	1849	567
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.56	0.56	0.56	0.96	0.96	0.96	0.51	0.51	0.51
Uniform Delay (d), s/veh	58.1	39.4	39.4	61.7	49.5	49.5	36.8	19.3	19.3	42.1	26.7	22.6
Incr Delay (d2), s/veh	29.4	28.5	29.6	18.2	18.3	19.2	0.9	1.4	2.9	10.7	7.8	16.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	19.3	18.7	7.7	20.0	18.9	7.1	7.1	7.3	15.1	22.2	19.8
LnGrp Delay(d),s/veh	87.5	67.9	69.0	79.9	67.8	68.7	37.7	20.7	22.2	52.8	34.4	39.0
LnGrp LOS	F	E	E	E	E	E	D	C	C	D	C	D
Approach Vol, veh/h		1141			1249			1195			3044	
Approach Delay, s/veh		73.6			71.5			24.4			39.8	
Approach LOS		E			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.6	57.6	21.1	41.2	38.3	55.9	17.8	44.5
Change Period (Y+Rc), s	* 4.2	5.3	5.7	* 5.7	5.3	* 5.3	* 4.2	5.7
Max Green Setting (Gmax), s	* 35	33.3	15.4	* 37	17.8	* 51	* 14	38.3
Max Q Clear Time (g_c+I1), s	31.7	17.0	16.1	34.4	16.2	47.3	14.3	37.9
Green Ext Time (p_c), s	0.7	6.7	0.0	1.1	0.2	3.3	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	48.8
HCM 2010 LOS	D

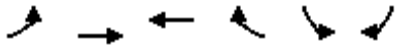
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	996	10	90	1117	120	10	10	10	110	5	120
Future Volume (veh/h)	131	996	10	90	1117	120	10	10	10	110	5	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	142	1083	11	98	1214	120	11	11	11	120	5	130
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	1990	20	125	1685	166	21	21	21	212	7	180
Arrive On Green	0.10	0.55	0.55	0.07	0.52	0.52	0.04	0.04	0.04	0.12	0.12	0.12
Sat Flow, veh/h	1774	3588	36	1774	3248	320	576	576	576	1774	58	1506
Grp Volume(v), veh/h	142	534	560	98	660	674	33	0	0	120	0	135
Grp Sat Flow(s),veh/h/ln	1774	1770	1855	1774	1770	1798	1729	0	0	1774	0	1564
Q Serve(g_s), s	5.8	14.4	14.4	4.0	21.3	21.5	1.4	0.0	0.0	4.8	0.0	6.2
Cycle Q Clear(g_c), s	5.8	14.4	14.4	4.0	21.3	21.5	1.4	0.0	0.0	4.8	0.0	6.2
Prop In Lane	1.00		0.02	1.00		0.18	0.33		0.33	1.00		0.96
Lane Grp Cap(c), veh/h	177	981	1029	125	918	933	63	0	0	212	0	187
V/C Ratio(X)	0.80	0.54	0.54	0.78	0.72	0.72	0.52	0.00	0.00	0.56	0.00	0.72
Avail Cap(c_a), veh/h	202	990	1038	190	967	982	580	0	0	571	0	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	10.6	10.6	34.1	13.8	13.8	35.3	0.0	0.0	31.0	0.0	31.6
Incr Delay (d2), s/veh	15.8	0.8	0.8	5.2	2.8	2.8	2.5	0.0	0.0	0.9	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.2	7.5	2.2	11.0	11.2	0.7	0.0	0.0	2.4	0.0	2.8
LnGrp Delay(d),s/veh	48.6	11.4	11.3	39.3	16.5	16.6	37.8	0.0	0.0	31.8	0.0	33.6
LnGrp LOS	D	B	B	D	B	B	D			C		C
Approach Vol, veh/h		1236			1432			33			255	
Approach Delay, s/veh		15.6			18.1			37.8			32.8	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	46.6		12.9	10.9	43.9		6.7
Change Period (Y+Rc), s	3.0	5.3		4.0	3.5	5.3		4.0
Max Green Setting (Gmax), s	8.0	41.7		24.0	8.5	40.7		25.0
Max Q Clear Time (g_c+I1), s	5.0	16.4		8.2	7.8	23.5		3.4
Green Ext Time (p_c), s	0.0	21.3		0.6	0.0	15.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	241	885	577	114	394	420
Future Volume (veh/h)	241	885	577	114	394	420
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	262	962	627	98	428	457
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	292	1951	1042	163	563	502
Arrive On Green	0.16	0.55	0.34	0.34	0.32	0.32
Sat Flow, veh/h	1774	3632	3151	477	1774	1583
Grp Volume(v), veh/h	262	962	362	363	428	457
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1766	1774	1583
Q Serve(g_s), s	11.0	12.7	12.9	13.0	16.5	21.1
Cycle Q Clear(g_c), s	11.0	12.7	12.9	13.0	16.5	21.1
Prop In Lane	1.00			0.27	1.00	1.00
Lane Grp Cap(c), veh/h	292	1951	603	602	563	502
V/C Ratio(X)	0.90	0.49	0.60	0.60	0.76	0.91
Avail Cap(c_a), veh/h	292	2049	652	650	607	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	10.5	20.8	20.8	23.4	24.9
Incr Delay (d2), s/veh	28.3	0.4	2.3	2.3	5.2	18.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	6.3	6.6	6.6	8.9	2.6
LnGrp Delay(d),s/veh	59.4	10.9	23.1	23.1	28.6	43.7
LnGrp LOS	E	B	C	C	C	D
Approach Vol, veh/h		1224	725		885	
Approach Delay, s/veh		21.3	23.1		36.4	
Approach LOS		C	C		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		48.4		27.6	16.0	32.4		
Change Period (Y+Rc), s		6.5		3.5	3.5	6.5		
Max Green Setting (Gmax), s		44.0		26.0	12.5	28.0		
Max Q Clear Time (g_c+I1), s		14.7		23.1	13.0	15.0		
Green Ext Time (p_c), s		21.3		1.0	0.0	10.9		

Intersection Summary		
HCM 2010 Ctrl Delay		26.5
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1052	150	133	523	90	230	283	126	320	273	230
Future Volume (veh/h)	140	1052	150	133	523	90	230	283	126	320	273	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	152	1143	151	145	568	81	250	308	115	348	297	202
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	994	131	174	978	139	277	420	339	373	520	441
Arrive On Green	0.10	0.32	0.32	0.10	0.31	0.31	0.16	0.23	0.23	0.21	0.28	0.28
Sat Flow, veh/h	1774	3139	414	1774	3106	442	1774	1863	1502	1774	1863	1578
Grp Volume(v), veh/h	152	643	651	145	323	326	250	308	115	348	297	202
Grp Sat Flow(s),veh/h/ln	1774	1770	1783	1774	1770	1778	1774	1863	1502	1774	1863	1578
Q Serve(g_s), s	10.2	38.3	38.3	9.7	18.5	18.6	16.7	18.6	7.8	23.3	16.5	12.8
Cycle Q Clear(g_c), s	10.2	38.3	38.3	9.7	18.5	18.6	16.7	18.6	7.8	23.3	16.5	12.8
Prop In Lane	1.00		0.23	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	560	564	174	557	560	277	420	339	373	520	441
V/C Ratio(X)	0.82	1.15	1.15	0.83	0.58	0.58	0.90	0.73	0.34	0.93	0.57	0.46
Avail Cap(c_a), veh/h	403	560	564	381	557	560	359	479	386	388	520	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	41.4	41.4	53.6	34.7	34.8	50.1	43.5	39.3	47.0	37.4	36.0
Incr Delay (d2), s/veh	12.1	85.9	87.9	9.7	2.4	2.4	18.4	6.9	1.3	28.3	2.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	32.0	32.6	5.2	9.4	9.5	9.6	10.4	3.3	14.3	8.9	5.8
LnGrp Delay(d),s/veh	65.3	127.3	129.2	63.3	37.1	37.2	68.6	50.3	40.5	75.3	39.8	37.6
LnGrp LOS	E	F	F	E	D	D	E	D	D	E	D	D
Approach Vol, veh/h		1446			794			673			847	
Approach Delay, s/veh		121.6			42.0			55.4			53.9	
Approach LOS		F			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	44.0	22.4	38.7	16.1	43.8	28.9	32.2
Change Period (Y+Rc), s	4.0	5.7	3.5	4.9	3.5	5.7	3.5	4.9
Max Green Setting (Gmax), s	24.0	38.3	24.5	33.1	27.5	37.3	26.5	31.1
Max Q Clear Time (g_c+I1), s	11.7	40.3	18.7	18.5	12.2	20.6	25.3	20.6
Green Ext Time (p_c), s	0.3	0.0	0.2	7.1	0.5	14.5	0.1	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	77.7
HCM 2010 LOS	E

Intersection	
Intersection Delay, s/veh	56.1
Intersection LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	200	193	150	20	229	600
Future Vol, veh/h	200	193	150	20	229	600
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	217	210	163	22	249	652
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	23.2	12.8	80.6
HCM LOS	C	B	F

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	51%	100%	0%
Vol Thru, %	88%	0%	0%	100%
Vol Right, %	12%	49%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	393	229	600
LT Vol	0	200	229	0
Through Vol	150	0	0	600
RT Vol	20	193	0	0
Lane Flow Rate	185	427	249	652
Geometry Grp	5	2	7	7
Degree of Util (X)	0.329	0.713	0.47	1.14
Departure Headway (Hd)	6.604	6.221	6.799	6.291
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	549	585	533	580
Service Time	4.604	4.221	4.506	3.997
HCM Lane V/C Ratio	0.337	0.73	0.467	1.124
HCM Control Delay	12.8	23.2	15.4	105.5
HCM Lane LOS	B	C	C	F
HCM 95th-tile Q	1.4	5.8	2.5	21.4

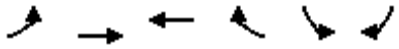
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑↑						↑	↱
Traffic Volume (veh/h)	0	506	170	445	690	0	0	0	0	80	10	230
Future Volume (veh/h)	0	506	170	445	690	0	0	0	0	80	10	230
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	550	185	484	750	0				87	11	250
Adj No. of Lanes	0	1	1	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	637	529	522	2457	0				285	36	285
Arrive On Green	0.00	0.34	0.34	0.29	0.69	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	1863	1548	1774	3632	0				1583	200	1583
Grp Volume(v), veh/h	0	550	185	484	750	0				98	0	250
Grp Sat Flow(s),veh/h/ln	0	1863	1548	1774	1770	0				1784	0	1583
Q Serve(g_s), s	0.0	22.4	7.3	21.5	6.7	0.0				3.9	0.0	12.5
Cycle Q Clear(g_c), s	0.0	22.4	7.3	21.5	6.7	0.0				3.9	0.0	12.5
Prop In Lane	0.00		1.00	1.00		0.00				0.89		1.00
Lane Grp Cap(c), veh/h	0	637	529	522	2457	0				321	0	285
V/C Ratio(X)	0.00	0.86	0.35	0.93	0.31	0.00				0.30	0.00	0.88
Avail Cap(c_a), veh/h	0	707	587	619	2782	0				352	0	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.9	20.0	27.8	4.8	0.0				28.9	0.0	32.4
Incr Delay (d2), s/veh	0.0	9.2	0.1	17.2	0.0	0.0				0.2	0.0	20.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.1	3.1	13.0	3.2	0.0				1.9	0.0	7.1
LnGrp Delay(d),s/veh	0.0	34.2	20.1	44.9	4.8	0.0				29.1	0.0	53.1
LnGrp LOS		C	C	D	A					C		D
Approach Vol, veh/h		735			1234						348	
Approach Delay, s/veh		30.6			20.6						46.3	
Approach LOS		C			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.6	32.8		19.7		61.4		
Change Period (Y+Rc), s	4.7	5.1		5.1		5.1		
Max Green Setting (Gmax), s	13.9	30.8		16.0		63.8		
Max Q Clear Time (g_c+I1), s	23.5	24.4		14.5		8.7		
Green Ext Time (p_c), s	0.4	3.4		0.2		7.3		

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	175	420	1135	375	0	0
Future Volume (veh/h)	175	420	1135	375	0	0
Number	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	190	457	1234	408		
Adj No. of Lanes	1	1	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	314	1553	1812	784		
Arrive On Green	0.18	0.83	0.51	0.51		
Sat Flow, veh/h	1774	1863	3632	1532		
Grp Volume(v), veh/h	190	457	1234	408		
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1532		
Q Serve(g_s), s	3.2	1.8	8.5	5.7		
Cycle Q Clear(g_c), s	3.2	1.8	8.5	5.7		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	314	1553	1812	784		
V/C Ratio(X)	0.61	0.29	0.68	0.52		
Avail Cap(c_a), veh/h	530	1986	2203	954		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.3	0.6	5.9	5.3		
Incr Delay (d2), s/veh	0.7	0.0	0.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	0.8	4.0	2.4		
LnGrp Delay(d),s/veh	13.0	0.6	6.3	5.5		
LnGrp LOS	B	A	A	A		
Approach Vol, veh/h		647	1642			
Approach Delay, s/veh		4.3	6.1			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		32.4			10.4	22.0		
Change Period (Y+Rc), s		5.4			* 4.7	5.4		
Max Green Setting (Gmax), s		34.6			* 9.7	20.2		
Max Q Clear Time (g_c+I1), s		3.8			5.2	10.5		
Green Ext Time (p_c), s		11.1			0.1	6.1		

Intersection Summary	
HCM 2010 Ctrl Delay	5.6
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	358	0	0	920	71	301	100	168	60	0	300
Future Volume (veh/h)	72	358	0	0	920	71	301	100	168	60	0	300
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	78	389	0	0	1000	77	230	267	158	65	0	326
Adj No. of Lanes	1	1	0	0	3	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	126	686	0	0	1150	88	313	329	276	70	0	350
Arrive On Green	0.07	0.37	0.00	0.00	0.24	0.24	0.18	0.18	0.18	0.26	0.00	0.26
Sat Flow, veh/h	1774	1863	0	0	4972	369	1774	1863	1562	265	0	1329
Grp Volume(v), veh/h	78	389	0	0	705	372	230	267	158	391	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	0	1695	1783	1774	1863	1562	1595	0	0
Q Serve(g_s), s	3.5	13.6	0.0	0.0	16.2	16.3	10.0	11.2	7.5	19.5	0.0	0.0
Cycle Q Clear(g_c), s	3.5	13.6	0.0	0.0	16.2	16.3	10.0	11.2	7.5	19.5	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.21	1.00		1.00	0.17		0.83
Lane Grp Cap(c), veh/h	126	686	0	0	812	427	313	329	276	419	0	0
V/C Ratio(X)	0.62	0.57	0.00	0.00	0.87	0.87	0.73	0.81	0.57	0.93	0.00	0.00
Avail Cap(c_a), veh/h	155	730	0	0	838	441	351	369	309	419	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.7	20.5	0.0	0.0	29.7	29.7	31.7	32.2	30.7	29.3	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.5	0.0	0.0	9.0	15.9	7.8	12.7	2.8	27.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.0	0.0	0.0	8.6	9.8	5.5	6.9	3.5	11.8	0.0	0.0
LnGrp Delay(d),s/veh	38.7	21.0	0.0	0.0	38.7	45.7	39.4	44.8	33.5	56.5	0.0	0.0
LnGrp LOS	D	C			D	D	D	D	C	E		
Approach Vol, veh/h		467			1077			655			391	
Approach Delay, s/veh		23.9			41.1			40.2			56.5	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		35.4		26.5	10.5	24.9		19.5
Change Period (Y+Rc), s		5.4		5.1	* 4.7	5.4		5.1
Max Green Setting (Gmax), s		31.9		21.4	* 7.1	20.1		16.1
Max Q Clear Time (g_c+I1), s		15.6		21.5	5.5	18.3		13.2
Green Ext Time (p_c), s		6.0		0.0	0.0	1.2		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	40.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	428	85	210	761	120	100	70	120	40	90	50
Future Volume (veh/h)	65	428	85	210	761	120	100	70	120	40	90	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	0.98		0.95	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	71	465	92	228	827	130	109	76	89	43	98	54
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	715	141	267	899	141	179	113	112	107	219	105
Arrive On Green	0.05	0.48	0.48	0.15	0.57	0.57	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1774	1504	298	1774	1564	246	517	488	483	238	946	453
Grp Volume(v), veh/h	71	0	557	228	0	957	274	0	0	195	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1801	1774	0	1810	1488	0	0	1636	0	0
Q Serve(g_s), s	3.3	0.0	19.8	10.5	0.0	40.1	6.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.3	0.0	19.8	10.5	0.0	40.1	14.4	0.0	0.0	8.3	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.14	0.40		0.32	0.22		0.28
Lane Grp Cap(c), veh/h	91	0	856	267	0	1040	404	0	0	431	0	0
V/C Ratio(X)	0.78	0.00	0.65	0.85	0.00	0.92	0.68	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	95	0	856	327	0	1087	464	0	0	496	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.4	0.0	16.8	34.8	0.0	16.2	30.2	0.0	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	32.1	0.0	1.9	16.6	0.0	12.2	3.6	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	10.2	6.4	0.0	23.2	6.3	0.0	0.0	4.0	0.0	0.0
LnGrp Delay(d),s/veh	71.6	0.0	18.6	51.4	0.0	28.4	33.8	0.0	0.0	28.9	0.0	0.0
LnGrp LOS	E		B	D		C	C			C		
Approach Vol, veh/h		628			1185			274			195	
Approach Delay, s/veh		24.6			32.8			33.8			28.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.2	44.5		23.5	7.8	52.8		23.5
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	15.5	39.5		23.0	4.5	50.5		23.0
Max Q Clear Time (g_c+I1), s	12.5	21.8		10.3	5.3	42.1		16.4
Green Ext Time (p_c), s	0.2	11.8		2.9	0.0	6.2		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	20.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	204	493	801	184	41	238
Future Vol, veh/h	204	493	801	184	41	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	222	536	871	200	45	259

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1071	0	-	0	1950	971
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	979	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	651	-	-	-	71	307
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	364	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	651	-	-	-	47	307
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	240	-

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	137.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	651	-	-	-	267
HCM Lane V/C Ratio	0.341	-	-	-	1.136
HCM Control Delay (s)	13.4	-	-	-	137.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.5	-	-	-	13.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	389	75	400	785	10	65	5	140	10	10	10
Future Volume (veh/h)	5	389	75	400	785	10	65	5	140	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	5	423	82	435	853	11	71	5	125	11	11	11
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	392	1040	202	630	1263	16	156	24	156	143	129	94
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	638	1510	293	890	1835	24	435	145	954	365	789	577
Grp Volume(v), veh/h	5	0	505	435	0	864	201	0	0	33	0	0
Grp Sat Flow(s),veh/h/ln	638	0	1803	890	0	1859	1534	0	0	1731	0	0
Q Serve(g_s), s	0.3	0.0	7.0	23.7	0.0	15.5	5.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	15.8	0.0	7.0	30.7	0.0	15.5	7.2	0.0	0.0	0.9	0.0	0.0
Prop In Lane	1.00		0.16	1.00		0.01	0.35		0.62	0.33		0.33
Lane Grp Cap(c), veh/h	392	0	1241	630	0	1279	336	0	0	367	0	0
V/C Ratio(X)	0.01	0.00	0.41	0.69	0.00	0.68	0.60	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	398	0	1258	638	0	1296	522	0	0	556	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	0.0	3.9	10.5	0.0	5.2	23.0	0.0	0.0	20.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.5	4.1	0.0	1.9	0.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.5	6.4	0.0	8.3	3.1	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	9.8	0.0	4.3	14.6	0.0	7.1	23.6	0.0	0.0	20.5	0.0	0.0
LnGrp LOS	A		A	B		A	C			C		
Approach Vol, veh/h		510			1299			201			33	
Approach Delay, s/veh		4.4			9.6			23.6			20.5	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		44.5		12.9		44.5		12.9
Change Period (Y+Rc), s		5.0		3.5		5.0		3.5
Max Green Setting (Gmax), s		40.0		16.5		40.0		16.5
Max Q Clear Time (g_c+I1), s		17.8		2.9		32.7		9.2
Green Ext Time (p_c), s		19.0		0.8		6.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	345	184	232	805	1253	863
Future Volume (veh/h)	345	184	232	805	1253	863
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	375	200	252	875	1362	938
Adj No. of Lanes	2	1	1	3	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	654	301	261	3333	1624	990
Arrive On Green	0.19	0.19	0.15	0.66	0.46	0.46
Sat Flow, veh/h	3442	1583	1774	5253	3632	1500
Grp Volume(v), veh/h	375	200	252	875	1362	938
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1695	1770	1500
Q Serve(g_s), s	7.1	8.3	10.1	5.1	24.1	32.7
Cycle Q Clear(g_c), s	7.1	8.3	10.1	5.1	24.1	32.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	654	301	261	3333	1624	990
V/C Ratio(X)	0.57	0.66	0.96	0.26	0.84	0.95
Avail Cap(c_a), veh/h	1594	733	261	3333	1624	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	26.7	30.2	5.1	17.0	10.1
Incr Delay (d2), s/veh	1.1	3.6	45.6	0.1	4.1	17.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	7.4	8.2	2.4	12.7	23.0
LnGrp Delay(d),s/veh	27.4	30.3	75.8	5.2	21.1	27.6
LnGrp LOS	C	C	E	A	C	C
Approach Vol, veh/h	575			1127	2300	
Approach Delay, s/veh	28.4			20.9	23.7	
Approach LOS	C			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.7		18.5	14.0	38.7		
Change Period (Y+Rc), s		6.0		5.0	3.5	* 6		
Max Green Setting (Gmax), s		46.0		33.0	10.5	* 33		
Max Q Clear Time (g_c+I1), s		7.1		10.3	12.1	34.7		
Green Ext Time (p_c), s		33.4		3.2	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	190	90	265	235	195	635
Future Volume (veh/h)	190	90	265	235	195	635
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	207	98	288	255	212	690
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	282	251	383	339	269	1222
Arrive On Green	0.16	0.16	0.43	0.43	0.15	0.66
Sat Flow, veh/h	1774	1583	893	791	1774	1863
Grp Volume(v), veh/h	207	98	0	543	212	690
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1684	1774	1863
Q Serve(g_s), s	5.1	2.5	0.0	12.5	5.3	9.3
Cycle Q Clear(g_c), s	5.1	2.5	0.0	12.5	5.3	9.3
Prop In Lane	1.00	1.00		0.47	1.00	
Lane Grp Cap(c), veh/h	282	251	0	721	269	1222
V/C Ratio(X)	0.74	0.39	0.00	0.75	0.79	0.56
Avail Cap(c_a), veh/h	619	553	0	827	368	1442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	17.3	0.0	11.1	18.7	4.3
Incr Delay (d2), s/veh	1.4	0.4	0.0	3.1	8.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.1	0.0	6.4	3.2	4.8
LnGrp Delay(d),s/veh	19.8	17.7	0.0	14.2	27.4	4.9
LnGrp LOS	B	B		B	C	A
Approach Vol, veh/h	305		543			902
Approach Delay, s/veh	19.1		14.2			10.2
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.4	24.1		11.3		34.6		
Change Period (Y+Rc), s	3.5	4.5		4.0		4.5		
Max Green Setting (Gmax), s	9.5	22.5		16.0		35.5		
Max Q Clear Time (g_c+I1), s	7.3	14.5		7.1		11.3		
Green Ext Time (p_c), s	0.2	5.1		0.3		10.6		

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	35.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↰					↖		↱
Traffic Vol, veh/h	0	410	530	530	320	0	0	0	0	50	0	130
Future Vol, veh/h	0	410	530	530	320	0	0	0	0	50	0	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	446	576	576	348	0	0	0	0	54	0	141

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	-	446	0	0			1946	-	348
Stage 1	-	-	-	-	-	-			1500	-	-
Stage 2	-	-	-	-	-	-			446	-	-
Critical Hdwy	-	-	-	4.12	-	-			6.42	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	-	-
Follow-up Hdwy	-	-	-	2.218	-	-			3.518	-	3.318
Pot Cap-1 Maneuver	0	-	0	1114	-	0			71	0	695
Stage 1	0	-	0	-	-	0			204	0	-
Stage 2	0	-	0	-	-	0			645	0	-
Platoon blocked, %		-			-						
Mov Cap-1 Maneuver	-	-	-	1114	-	-			~ 25	0	695
Mov Cap-2 Maneuver	-	-	-	-	-	-			~ 25	0	-
Stage 1	-	-	-	-	-	-			73	0	-
Stage 2	-	-	-	-	-	-			645	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	7.3	250.6
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	1114	-	25	695
HCM Lane V/C Ratio	-	0.517	-	2.174	0.203
HCM Control Delay (s)	-	11.6	0$	872.1	11.5
HCM Lane LOS	-	B	A	F	B
HCM 95th %tile Q(veh)	-	3.1	-	6.7	0.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	109.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	260	200	0	0	710	160	140	0	160	0	0	0
Future Vol, veh/h	260	200	0	0	710	160	140	0	160	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	283	217	0	0	772	174	152	0	174	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	52.1	172.9	14.8
HCM LOS	F	F	B

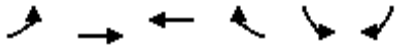
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2
Vol Left, %	100%	0%	57%	0%	0%
Vol Thru, %	0%	0%	43%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	160	460	710	160
LT Vol	140	0	260	0	0
Through Vol	0	0	200	710	0
RT Vol	0	160	0	0	160
Lane Flow Rate	152	174	500	772	174
Geometry Grp	7	7	6	7	7
Degree of Util (X)	0.343	0.333	0.934	1.399	0.281
Departure Headway (Hd)	8.693	7.45	7.158	6.527	5.812
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	417	485	510	563	619
Service Time	6.393	5.15	5.158	4.262	3.547
HCM Lane V/C Ratio	0.365	0.359	0.98	1.371	0.281
HCM Control Delay	15.9	13.8	52.1	209.4	10.8
HCM Lane LOS	C	B	F	F	B
HCM 95th-tile Q	1.5	1.4	11.4	35.5	1.1

Intersection	
Intersection Delay, s/veh	358.8
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	530	260	681	1511	42	10
Future Vol, veh/h	530	260	681	1511	42	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	576	283	740	1642	46	11
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	77.5	468.4	13.8
HCM LOS	F	F	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	530	260	681	1511	42	10
LT Vol	530	0	0	0	42	0
Through Vol	0	260	681	0	0	0
RT Vol	0	0	0	1511	0	10
Lane Flow Rate	576	283	740	1642	46	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	1.108	0.504	1.2	2.345	0.113	0.023
Departure Headway (Hd)	8.768	8.264	6.053	5.346	10.25	9.019
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	421	441	607	706	352	399
Service Time	6.468	5.964	3.753	3.046	7.95	6.719
HCM Lane V/C Ratio	1.368	0.642	1.219	2.326	0.131	0.028
HCM Control Delay	106.2	19.1	126.5	622.5	14.3	11.9
HCM Lane LOS	F	C	F	F	B	B
HCM 95th-tile Q	16.1	2.8	25.4	118.2	0.4	0.1



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	252	1952	359	880	230
Future Volume (veh/h)	50	252	1952	359	880	230
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	274	2122	390	957	250
Adj No. of Lanes	1	1	2	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	69	1217	2064	904	941	433
Arrive On Green	0.04	0.65	0.58	0.58	0.27	0.27
Sat Flow, veh/h	1774	1863	3632	1550	3442	1583
Grp Volume(v), veh/h	54	274	2122	390	957	250
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1550	1721	1583
Q Serve(g_s), s	4.5	8.9	87.2	21.0	40.9	20.4
Cycle Q Clear(g_c), s	4.5	8.9	87.2	21.0	40.9	20.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	69	1217	2064	904	941	433
V/C Ratio(X)	0.78	0.23	1.03	0.43	1.02	0.58
Avail Cap(c_a), veh/h	75	1223	2064	904	941	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	10.5	31.2	17.4	54.3	46.9
Incr Delay (d2), s/veh	34.0	0.0	27.4	0.1	33.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	4.6	50.3	9.0	23.7	0.2
LnGrp Delay(d),s/veh	105.2	10.6	58.5	17.5	87.8	48.1
LnGrp LOS	F	B	F	B	F	D
Approach Vol, veh/h		328	2512		1207	
Approach Delay, s/veh		26.1	52.2		79.6	
Approach LOS		C	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		103.5		46.0	10.5	93.0		
Change Period (Y+Rc), s		5.8		5.1	* 4.7	5.8		
Max Green Setting (Gmax), s		98.2		40.9	* 6.3	87.2		
Max Q Clear Time (g_c+I1), s		10.9		42.9	6.5	89.2		
Green Ext Time (p_c), s		26.5		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	58.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	10	474	10	272	30	778	395	244	1133	40
Future Volume (veh/h)	30	10	10	474	10	272	30	778	395	244	1133	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	33	11	11	411	157	296	33	846	0	265	1232	43
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	16	56	521	169	318	43	1090	488	298	1564	685
Arrive On Green	0.04	0.04	0.04	0.29	0.29	0.29	0.02	0.31	0.00	0.17	0.44	0.44
Sat Flow, veh/h	1347	449	1583	1774	574	1082	1774	3539	1583	1774	3539	1549
Grp Volume(v), veh/h	44	0	11	411	0	453	33	846	0	265	1232	43
Grp Sat Flow(s),veh/h/ln	1795	0	1583	1774	0	1655	1774	1770	1583	1774	1770	1549
Q Serve(g_s), s	2.4	0.0	0.7	21.3	0.0	26.6	1.8	21.7	0.0	14.6	29.8	1.6
Cycle Q Clear(g_c), s	2.4	0.0	0.7	21.3	0.0	26.6	1.8	21.7	0.0	14.6	29.8	1.6
Prop In Lane	0.75		1.00	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	0	56	521	0	486	43	1090	488	298	1564	685
V/C Ratio(X)	0.70	0.00	0.20	0.79	0.00	0.93	0.77	0.78	0.00	0.89	0.79	0.06
Avail Cap(c_a), veh/h	287	0	254	550	0	514	284	1268	567	408	1564	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	46.8	32.4	0.0	34.3	48.5	31.4	0.0	40.7	23.9	16.0
Incr Delay (d2), s/veh	5.0	0.0	0.6	6.5	0.0	22.7	10.6	2.8	0.0	13.5	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.3	11.3	0.0	15.2	1.0	11.0	0.0	8.3	15.4	0.7
LnGrp Delay(d),s/veh	52.7	0.0	47.5	38.9	0.0	57.1	59.0	34.3	0.0	54.2	27.6	16.1
LnGrp LOS	D		D	D		E	E	C		D	C	B
Approach Vol, veh/h		55			864			879			1540	
Approach Delay, s/veh		51.7			48.4			35.2			31.9	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.8	37.3		8.0	7.4	50.7		33.8
Change Period (Y+Rc), s	4.0	* 6.5		4.5	5.0	6.5		4.5
Max Green Setting (Gmax), s	23.0	* 36		16.0	16.0	41.5		31.0
Max Q Clear Time (g_c+I1), s	16.6	23.7		4.4	3.8	31.8		28.6
Green Ext Time (p_c), s	0.2	7.0		0.1	0.0	9.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	5253	0	3442	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	1721	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3092	3765	3421	3072	3156	1847	2052	2248	1689	3047	3264	3008
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	3765	3421	3072	3156	1847	2052	2248	1689	3047	3264	3008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	0	9999	9999	0	9999	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3539	1583	1774	3632	0	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	0	1774	1863	0	1774	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	3092	3764	1683	3092	3764	0	3092	3764	0	3092	3764	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	3764	1683	3092	3764	0	3092	3764	0	3092	3764	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	4.534	2.8	4.534	4.534	4.534	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	2.234	0.5	2.234	2.234	2.234	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	7.2	5.5	7.2	7.2	7.2	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	2	0	0	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	2.8	4.534	2.8	4.534	2.8	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	0.5	2.234	0.5	2.234	0.5	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	5.5	7.2	5.5	7.2	5.5	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3092	6453	0	3092	6453	0	3092	6453	2814	3092	6453	2814
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	6453	0	3092	6453	0	3092	6453	2814	3092	6453	2814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1863	0	1774	1863	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	1863	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	3092376	453124	292608	3092376	453124	292608	0	800046	292608	0	800046	292608	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	1833141	268610	173386	1833141	268610	173386	0	1280068	173386	0	1280068	173386	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS													
Approach Vol, veh/h		0			0			0			0		
Approach Delay, s/veh		0.0			0.0			0.0			0.0		
Approach LOS													

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	3092	3764	5212	8146	9443	0923	7645	2128	8146	944	0	8000
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	1833	1828	2528	3950	3839	1033	1224	2528	3950	3904	12	8000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	240	0	210	5	973	370	200	684	55
Future Volume (veh/h)	10	20	10	240	0	210	5	973	370	200	684	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	22	11	261	0	228	5	1058	402	217	743	60
Adj No. of Lanes	1	1	1	2	0	1	1	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	2	2	2	2	2	2	2
Cap, veh/h	202	212	169	0	0	0	9	1708	742	329	2028	864
Arrive On Green	0.11	0.11	0.11	0.00	0.00	0.00	0.01	0.48	0.48	0.10	0.57	0.57
Sat Flow, veh/h	1774	1863	1486		0		1774	3539	1539	3442	3539	1507
Grp Volume(v), veh/h	11	22	11		0.0		5	1058	402	217	743	60
Grp Sat Flow(s),veh/h/ln	1774	1863	1486				1774	1770	1539	1721	1770	1507
Q Serve(g_s), s	0.3	0.6	0.4				0.2	11.8	9.8	3.3	6.1	0.9
Cycle Q Clear(g_c), s	0.3	0.6	0.4				0.2	11.8	9.8	3.3	6.1	0.9
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	212	169				9	1708	742	329	2028	864
V/C Ratio(X)	0.05	0.10	0.06				0.53	0.62	0.54	0.66	0.37	0.07
Avail Cap(c_a), veh/h	1125	1182	943				132	2027	881	469	2245	956
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	21.3	21.2				26.6	10.2	9.7	23.4	6.2	5.1
Incr Delay (d2), s/veh	0.2	0.4	0.3				15.7	0.4	0.6	0.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.2				0.1	5.8	4.3	1.6	2.9	0.4
LnGrp Delay(d),s/veh	21.4	21.7	21.5				42.3	10.7	10.3	24.2	6.3	5.1
LnGrp LOS	C	C	C				D	B	B	C	A	A
Approach Vol, veh/h		44						1465			1020	
Approach Delay, s/veh		21.5						10.7			10.0	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	9.6	32.4		11.6	4.8	37.2		
Change Period (Y+Rc), s	4.5	6.5		5.5	4.5	6.5		
Max Green Setting (Gmax), s	7.3	30.7		34.0	4.0	34.0		
Max Q Clear Time (g_c+I1), s	5.3	13.8		2.6	2.2	8.1		
Green Ext Time (p_c), s	0.1	11.7		0.2	0.0	15.6		

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	850	230	770	900	0	0	0	0	340	5	220
Future Volume (veh/h)	0	850	230	770	900	0	0	0	0	340	5	220
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	924	250	837	978	0				374	0	239
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1153	498	942	2365	0				649	0	290
Arrive On Green	0.00	0.33	0.33	0.27	0.67	0.00				0.18	0.00	0.18
Sat Flow, veh/h	0	3632	1530	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	924	250	837	978	0				374	0	239
Grp Sat Flow(s),veh/h/ln	0	1770	1530	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	16.3	9.0	16.0	8.7	0.0				6.6	0.0	10.0
Cycle Q Clear(g_c), s	0.0	16.3	9.0	16.0	8.7	0.0				6.6	0.0	10.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1153	498	942	2365	0				649	0	290
V/C Ratio(X)	0.00	0.80	0.50	0.89	0.41	0.00				0.58	0.00	0.82
Avail Cap(c_a), veh/h	0	1178	509	1070	2520	0				828	0	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.1	18.6	23.9	5.2	0.0				25.6	0.0	26.9
Incr Delay (d2), s/veh	0.0	3.7	0.3	7.9	0.2	0.0				0.3	0.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.5	3.9	8.6	4.3	0.0				3.2	0.0	5.1
LnGrp Delay(d),s/veh	0.0	24.7	18.9	31.8	5.5	0.0				25.9	0.0	36.1
LnGrp LOS		C	B	C	A					C		D
Approach Vol, veh/h		1174			1815						613	
Approach Delay, s/veh		23.5			17.6						29.9	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	23.5	27.4		17.6		50.9		
Change Period (Y+Rc), s	4.7	5.1		5.1		5.1		
Max Green Setting (Gmax), s	21.1	22.8		16.0		48.8		
Max Q Clear Time (g_c+I1), s	18.0	18.3		12.0		10.7		
Green Ext Time (p_c), s	0.8	4.0		0.6		23.7		

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1000	0	0	1240	290	430	10	860	0	0	0
Future Volume (veh/h)	190	1000	0	0	1240	290	430	10	860	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	207	1087	0	0	1348	315	467	11	935			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	247	1855	0	0	1634	490	586	14	940			
Arrive On Green	0.14	0.52	0.00	0.00	0.32	0.32	0.34	0.34	0.34			
Sat Flow, veh/h	1774	3632	0	0	5253	1526	1735	41	2787			
Grp Volume(v), veh/h	207	1087	0	0	1348	315	478	0	935			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1526	1776	0	1393			
Q Serve(g_s), s	8.4	15.6	0.0	0.0	18.1	13.0	18.0	0.0	24.7			
Cycle Q Clear(g_c), s	8.4	15.6	0.0	0.0	18.1	13.0	18.0	0.0	24.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	247	1855	0	0	1634	490	599	0	940			
V/C Ratio(X)	0.84	0.59	0.00	0.00	0.82	0.64	0.80	0.00	0.99			
Avail Cap(c_a), veh/h	272	1914	0	0	1647	494	599	0	940			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.9	12.1	0.0	0.0	23.1	21.4	22.2	0.0	24.4			
Incr Delay (d2), s/veh	17.2	0.7	0.0	0.0	3.3	2.2	6.9	0.0	27.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.3	7.7	0.0	0.0	8.9	5.7	9.9	0.0	13.0			
LnGrp Delay(d),s/veh	48.1	12.8	0.0	0.0	26.4	23.6	29.1	0.0	52.2			
LnGrp LOS	D	B			C	C	C		D			
Approach Vol, veh/h		1294			1663			1413				
Approach Delay, s/veh		18.4			25.9			44.4				
Approach LOS		B			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.8			15.0	28.8		30.0
Change Period (Y+Rc), s		5.1			* 4.7	5.1		5.1
Max Green Setting (Gmax), s		39.9			* 11	23.9		24.9
Max Q Clear Time (g_c+I1), s		17.6			10.4	20.1		26.7
Green Ext Time (p_c), s		18.9			0.0	3.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	480	270	30	380	110	300	230	30	130	350	440
Future Volume (veh/h)	270	480	270	30	380	110	300	230	30	130	350	440
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	293	522	293	33	413	120	326	250	25	141	380	128
Adj No. of Lanes	2	1	2	1	2	0	2	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	373	632	1255	46	714	205	407	800	79	176	592	197
Arrive On Green	0.11	0.34	0.34	0.03	0.26	0.26	0.12	0.25	0.25	0.10	0.23	0.23
Sat Flow, veh/h	3442	1863	2728	1774	2714	781	3442	3253	323	1774	2611	868
Grp Volume(v), veh/h	293	522	293	33	268	265	326	135	140	141	256	252
Grp Sat Flow(s),veh/h/ln	1721	1863	1364	1774	1770	1725	1721	1770	1806	1774	1770	1710
Q Serve(g_s), s	6.7	20.9	2.9	1.5	10.7	10.9	7.5	5.1	5.1	6.3	10.6	10.8
Cycle Q Clear(g_c), s	6.7	20.9	2.9	1.5	10.7	10.9	7.5	5.1	5.1	6.3	10.6	10.8
Prop In Lane	1.00		1.00	1.00		0.45	1.00		0.18	1.00		0.51
Lane Grp Cap(c), veh/h	373	632	1255	46	465	454	407	435	444	176	401	388
V/C Ratio(X)	0.78	0.83	0.23	0.72	0.58	0.58	0.80	0.31	0.32	0.80	0.64	0.65
Avail Cap(c_a), veh/h	403	811	1516	92	655	638	446	670	683	258	698	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	24.6	4.6	39.2	26.0	26.0	34.8	25.0	25.0	35.8	28.3	28.4
Incr Delay (d2), s/veh	9.2	6.3	0.1	14.4	1.6	1.7	8.9	0.5	0.5	9.0	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	11.8	1.4	0.9	5.4	5.4	4.0	2.5	2.6	3.5	5.4	5.3
LnGrp Delay(d),s/veh	44.4	30.9	4.7	53.7	27.6	27.7	43.8	25.5	25.5	44.7	30.4	30.7
LnGrp LOS	D	C	A	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1108			566			601			649	
Approach Delay, s/veh		27.5			29.2			35.4			33.6	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	25.9	8.1	33.5	15.1	24.4	14.3	27.3
Change Period (Y+Rc), s	5.5	6.0	6.0	* 6	5.5	6.0	5.5	6.0
Max Green Setting (Gmax), s	14.8	30.7	4.2	* 35	10.5	32.0	9.5	30.0
Max Q Clear Time (g_c+I1), s	8.7	7.1	3.5	22.9	9.5	12.8	8.7	12.9
Green Ext Time (p_c), s	0.1	6.0	0.3	4.7	0.1	5.6	0.1	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	341	272	641	336	250	524
Future Volume (veh/h)	341	272	641	336	250	524
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	371	0	697	0	272	570
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	445	397	1087	486	324	1991
Arrive On Green	0.25	0.00	0.31	0.00	0.18	0.56
Sat Flow, veh/h	1774	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	371	0	697	0	272	570
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1774	1770
Q Serve(g_s), s	10.9	0.0	9.4	0.0	8.2	4.6
Cycle Q Clear(g_c), s	10.9	0.0	9.4	0.0	8.2	4.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	445	397	1087	486	324	1991
V/C Ratio(X)	0.83	0.00	0.64	0.00	0.84	0.29
Avail Cap(c_a), veh/h	869	775	1393	623	386	2420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	0.0	16.5	0.0	21.7	6.3
Incr Delay (d2), s/veh	4.2	0.0	0.6	0.0	11.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	4.6	0.0	5.0	2.2
LnGrp Delay(d),s/veh	23.7	0.0	17.1	0.0	33.1	6.4
LnGrp LOS	C		B		C	A
Approach Vol, veh/h	371		697			842
Approach Delay, s/veh	23.7		17.1			15.0
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.1	22.2		18.8		36.3		
Change Period (Y+Rc), s	4.0	5.3		5.0		5.3		
Max Green Setting (Gmax), s	12.0	21.7		27.0		37.7		
Max Q Clear Time (g_c+I1), s	10.2	11.4		12.9		6.6		
Green Ext Time (p_c), s	0.1	5.6		1.0		9.7		

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	21.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	530	61	244	551	72	189
Future Vol, veh/h	530	61	244	551	72	189
Conflicting Peds, #/hr	0	9	9	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	576	66	265	599	78	205

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	651	0	1747	618
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	1129	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	935	-	95	489
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	309	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	935	-	~ 54	485
Mov Cap-2 Maneuver	-	-	-	-	~ 54	-
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	178	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	124.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	54	485	-	-	935	-
HCM Lane V/C Ratio	1.449	0.424	-	-	0.284	-
HCM Control Delay (s)	$ 404.5	17.8	-	-	10.4	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	7.1	2.1	-	-	1.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	667	222	797	580	0	0	0	0	553	5	195
Future Volume (veh/h)	0	667	222	797	580	0	0	0	0	553	5	195
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	725	241	866	630	0				605	0	212
Adj No. of Lanes	0	2	0	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	787	262	1084	2407	0				697	0	311
Arrive On Green	0.00	0.30	0.30	0.32	0.68	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	2704	868	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	491	475	866	630	0				605	0	212
Grp Sat Flow(s),veh/h/ln	0	1770	1710	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	22.8	22.8	19.6	5.9	0.0				14.0	0.0	10.6
Cycle Q Clear(g_c), s	0.0	22.8	22.8	19.6	5.9	0.0				14.0	0.0	10.6
Prop In Lane	0.00		0.51	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	534	515	1084	2407	0				697	0	311
V/C Ratio(X)	0.00	0.92	0.92	0.80	0.26	0.00				0.87	0.00	0.68
Avail Cap(c_a), veh/h	0	554	535	1084	2407	0				789	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.7	28.7	26.6	5.3	0.0				33.1	0.0	31.7
Incr Delay (d2), s/veh	0.0	23.6	24.2	4.0	0.3	0.0				8.5	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	14.6	14.1	9.9	2.9	0.0				7.7	0.0	4.9
LnGrp Delay(d),s/veh	0.0	52.3	52.9	30.6	5.6	0.0				41.6	0.0	34.9
LnGrp LOS		D	D	C	A					D		C
Approach Vol, veh/h		966			1496						817	
Approach Delay, s/veh		52.6			20.1						39.9	
Approach LOS		D			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	32.2	31.0		21.8		63.2		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	24.3	* 27		18.9		55.6		
Max Q Clear Time (g_c+I1), s	21.6	24.8		16.0		7.9		
Green Ext Time (p_c), s	1.5	0.8		0.7		5.4		

Intersection Summary	
HCM 2010 Ctrl Delay	34.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1018	0	0	1222	471	155	5	905	0	0	0
Future Volume (veh/h)	202	1018	0	0	1222	471	155	5	905	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	220	1107	0	0	1328	512	168	5	713			
Adj No. of Lanes	1	2	0	0	3	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	257	2050	0	0	1927	584	497	15	802			
Arrive On Green	0.14	0.58	0.00	0.00	0.13	0.13	0.29	0.29	0.29			
Sat Flow, veh/h	1774	3632	0	0	5253	1542	1725	51	2787			
Grp Volume(v), veh/h	220	1107	0	0	1328	512	173	0	713			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1542	1776	0	1393			
Q Serve(g_s), s	10.3	16.3	0.0	0.0	21.3	27.7	6.5	0.0	20.8			
Cycle Q Clear(g_c), s	10.3	16.3	0.0	0.0	21.3	27.7	6.5	0.0	20.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.97		1.00			
Lane Grp Cap(c), veh/h	257	2050	0	0	1927	584	512	0	802			
V/C Ratio(X)	0.86	0.54	0.00	0.00	0.69	0.88	0.34	0.00	0.89			
Avail Cap(c_a), veh/h	278	2050	0	0	1927	584	625	0	980			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.95	0.95	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.5	11.0	0.0	0.0	32.4	35.2	23.9	0.0	29.0			
Incr Delay (d2), s/veh	22.1	1.0	0.0	0.0	1.9	16.0	0.1	0.0	7.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.6	8.1	0.0	0.0	10.3	14.5	3.2	0.0	8.9			
LnGrp Delay(d),s/veh	57.5	12.0	0.0	0.0	34.3	51.2	24.0	0.0	36.7			
LnGrp LOS	E	B			C	D	C		D			
Approach Vol, veh/h		1327			1840			886				
Approach Delay, s/veh		19.5			39.0			34.2				
Approach LOS		B			D			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		55.4			17.0	38.4		29.6
Change Period (Y+Rc), s		* 6.2			* 4.7	6.2		5.1
Max Green Setting (Gmax), s		* 44			* 13	25.8		29.9
Max Q Clear Time (g_c+I1), s		18.3			12.3	29.7		22.8
Green Ext Time (p_c), s		16.3			0.1	0.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1813	110	75	1561	102	82
Future Volume (veh/h)	1813	110	75	1561	102	82
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1971	111	82	1697	111	89
Adj No. of Lanes	2	0	1	4	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1874	104	142	4584	248	222
Arrive On Green	0.37	0.37	0.08	0.72	0.14	0.14
Sat Flow, veh/h	3496	190	1774	6669	1774	1583
Grp Volume(v), veh/h	1014	1068	82	1697	111	89
Grp Sat Flow(s),veh/h/ln	1770	1823	1774	1602	1774	1583
Q Serve(g_s), s	46.8	46.8	3.8	8.7	4.9	4.4
Cycle Q Clear(g_c), s	46.8	46.8	3.8	8.7	4.9	4.4
Prop In Lane		0.10	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	974	1004	142	4584	248	222
V/C Ratio(X)	1.04	1.06	0.58	0.37	0.45	0.40
Avail Cap(c_a), veh/h	974	1004	190	4584	253	225
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	26.8	37.7	4.7	33.5	33.3
Incr Delay (d2), s/veh	33.1	40.5	1.4	0.2	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.8	34.8	1.9	3.8	2.4	1.9
LnGrp Delay(d),s/veh	59.9	67.4	39.1	4.9	34.0	33.7
LnGrp LOS	F	F	D	A	C	C
Approach Vol, veh/h	2082			1779	200	
Approach Delay, s/veh	63.7			6.5	33.9	
Approach LOS	E			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.0	54.0				68.0		17.0
Change Period (Y+Rc), s	7.2	* 7.2				7.2		5.1
Max Green Setting (Gmax), s	9.1	* 47				60.6		12.1
Max Q Clear Time (g_c+I1), s	5.8	48.8				10.7		6.9
Green Ext Time (p_c), s	2.2	0.0				42.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	37.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1747	148	195	1503	93	160
Future Volume (veh/h)	1747	148	195	1503	93	160
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1899	161	212	1634	101	174
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2002	167	227	2746	231	206
Arrive On Green	0.61	0.61	0.13	0.78	0.13	0.13
Sat Flow, veh/h	3400	276	1774	3632	1774	1583
Grp Volume(v), veh/h	1004	1056	212	1634	101	174
Grp Sat Flow(s),veh/h/ln	1770	1814	1774	1770	1774	1583
Q Serve(g_s), s	60.6	64.6	13.9	22.5	6.2	12.6
Cycle Q Clear(g_c), s	60.6	64.6	13.9	22.5	6.2	12.6
Prop In Lane		0.15	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1071	1098	227	2746	231	206
V/C Ratio(X)	0.94	0.96	0.93	0.60	0.44	0.84
Avail Cap(c_a), veh/h	1071	1098	227	2746	424	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	21.9	50.7	5.5	47.0	49.8
Incr Delay (d2), s/veh	15.2	18.9	41.4	0.5	1.3	9.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	33.8	37.8	9.4	10.9	3.1	6.0
LnGrp Delay(d),s/veh	36.3	40.8	92.0	6.0	48.3	58.8
LnGrp LOS	D	D	F	A	D	E
Approach Vol, veh/h	2060			1846	275	
Approach Delay, s/veh	38.6			15.9	54.9	
Approach LOS	D			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.3	20.0	77.0				97.0
Change Period (Y+Rc), s		5.0	5.0	6.0				6.0
Max Green Setting (Gmax), s		28.0	15.0	71.0				91.0
Max Q Clear Time (g_c+I1), s		14.6	15.9	66.6				24.5
Green Ext Time (p_c), s		0.7	0.0	4.4				65.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	840	802	365	210	518	195	390	1250	95	290	1115	840
Future Volume (veh/h)	840	802	365	210	518	195	390	1250	95	290	1115	840
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	913	872	301	228	563	169	424	1359	89	315	1212	754
Adj No. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	988	1085	477	249	566	250	436	1429	94	385	1476	907
Arrive On Green	0.29	0.31	0.31	0.14	0.16	0.16	0.21	0.49	0.49	0.19	0.48	0.48
Sat Flow, veh/h	3442	3539	1555	1774	3539	1560	3442	4877	319	3442	5085	1559
Grp Volume(v), veh/h	913	872	301	228	563	169	424	945	503	315	1212	754
Grp Sat Flow(s),veh/h/ln	1721	1770	1555	1774	1770	1560	1721	1695	1806	1721	1695	1559
Q Serve(g_s), s	38.6	34.0	25.0	19.0	23.8	11.8	18.3	39.9	39.9	13.2	30.6	43.5
Cycle Q Clear(g_c), s	38.6	34.0	25.0	19.0	23.8	11.8	18.3	39.9	39.9	13.2	30.6	43.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	988	1085	477	249	566	250	436	993	529	385	1476	907
V/C Ratio(X)	0.92	0.80	0.63	0.91	0.99	0.68	0.97	0.95	0.95	0.82	0.82	0.83
Avail Cap(c_a), veh/h	1055	1102	484	278	566	250	436	1003	535	385	1476	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	47.9	44.7	63.6	62.9	35.3	58.9	37.3	37.3	59.5	35.3	22.6
Incr Delay (d2), s/veh	13.0	4.2	2.3	29.2	36.3	7.1	35.7	18.9	28.7	12.2	5.3	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.2	17.2	11.0	11.3	14.5	5.6	10.9	21.2	24.0	6.9	14.9	30.0
LnGrp Delay(d),s/veh	64.9	52.1	47.1	92.8	99.2	42.4	94.6	56.2	66.0	71.7	40.6	31.3
LnGrp LOS	E	D	D	F	F	D	F	E	E	E	D	C
Approach Vol, veh/h		2086			960			1872			2281	
Approach Delay, s/veh		57.0			87.7			67.5			41.8	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.8	49.9	25.3	52.0	23.2	49.5	47.3	30.0
Change Period (Y+Rc), s	6.0	* 6	* 4.2	* 6	* 4.2	6.0	* 4.2	6.0
Max Green Setting (Gmax), s	15.2	* 44	* 24	* 47	* 19	40.6	* 46	24.0
Max Q Clear Time (g_c+I1), s	15.2	41.9	21.0	36.0	20.3	45.5	40.6	25.8
Green Ext Time (p_c), s	0.0	2.0	0.1	6.6	0.0	0.0	2.5	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	70	30	231	50	264	40	837	255	306	716	30
Future Volume (veh/h)	30	70	30	231	50	264	40	837	255	306	716	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	33	76	33	251	54	287	43	910	277	333	778	33
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	93	40	417	60	321	54	983	800	353	1455	62
Arrive On Green	0.10	0.10	0.10	0.24	0.24	0.24	0.03	0.28	0.28	0.20	0.42	0.42
Sat Flow, veh/h	404	930	404	1774	257	1365	1774	3539	1541	1774	3459	147
Grp Volume(v), veh/h	142	0	0	251	0	341	43	910	277	333	398	413
Grp Sat Flow(s),veh/h/ln	1738	0	0	1774	0	1622	1774	1770	1541	1774	1770	1836
Q Serve(g_s), s	7.8	0.0	0.0	12.3	0.0	19.9	2.4	24.5	10.5	18.1	16.5	16.5
Cycle Q Clear(g_c), s	7.8	0.0	0.0	12.3	0.0	19.9	2.4	24.5	10.5	18.1	16.5	16.5
Prop In Lane	0.23		0.23	1.00		0.84	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	174	0	0	417	0	381	54	983	800	353	744	773
V/C Ratio(X)	0.82	0.00	0.00	0.60	0.00	0.89	0.79	0.93	0.35	0.94	0.53	0.53
Avail Cap(c_a), veh/h	284	0	0	507	0	464	109	1015	814	353	744	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	0.0	0.0	33.4	0.0	36.3	47.2	34.4	14.2	38.7	21.2	21.2
Incr Delay (d2), s/veh	3.5	0.0	0.0	0.5	0.0	15.5	9.1	13.2	0.1	33.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	6.1	0.0	10.5	1.3	13.7	6.6	12.1	8.0	8.3
LnGrp Delay(d),s/veh	46.7	0.0	0.0	33.9	0.0	51.8	56.2	47.6	14.3	71.7	21.6	21.6
LnGrp LOS	D			C		D	E	D	B	E	C	C
Approach Vol, veh/h		142			592			1230			1144	
Approach Delay, s/veh		46.7			44.2			40.4			36.2	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.0	32.5		14.3	9.0	46.5		28.1
Change Period (Y+Rc), s	3.5	5.3		4.5	6.0	5.3		5.1
Max Green Setting (Gmax), s	19.5	28.1		16.0	6.0	39.1		28.0
Max Q Clear Time (g_c+I1), s	20.1	26.5		9.8	4.4	18.5		21.9
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	8.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	476	80	80	422	43	102	196	140	40	183	61
Future Volume (veh/h)	75	476	80	80	422	43	102	196	140	40	183	61
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	82	517	87	87	459	47	111	213	77	43	199	66
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	525	808	136	373	1192	122	336	387	140	318	395	131
Arrive On Green	0.08	0.52	0.52	0.37	0.37	0.37	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	1553	261	810	3243	331	1104	1307	472	1084	1336	443
Grp Volume(v), veh/h	82	0	604	87	250	256	111	0	290	43	0	265
Grp Sat Flow(s),veh/h/ln	1774	0	1815	810	1770	1804	1104	0	1779	1084	0	1779
Q Serve(g_s), s	1.2	0.0	11.8	4.3	5.1	5.2	4.6	0.0	6.8	1.7	0.0	6.1
Cycle Q Clear(g_c), s	1.2	0.0	11.8	8.6	5.1	5.2	10.7	0.0	6.8	8.5	0.0	6.1
Prop In Lane	1.00		0.14	1.00		0.18	1.00		0.27	1.00		0.25
Lane Grp Cap(c), veh/h	525	0	944	373	650	663	336	0	526	318	0	526
V/C Ratio(X)	0.16	0.00	0.64	0.23	0.38	0.39	0.33	0.00	0.55	0.14	0.00	0.50
Avail Cap(c_a), veh/h	612	0	1203	448	815	831	525	0	830	503	0	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.3	0.0	8.5	14.3	11.5	11.5	18.8	0.0	14.7	18.2	0.0	14.4
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.5	0.5	0.5	0.2	0.0	0.3	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	6.1	1.0	2.6	2.7	1.4	0.0	3.4	0.5	0.0	3.0
LnGrp Delay(d),s/veh	7.4	0.0	9.6	14.8	12.1	12.1	19.0	0.0	15.0	18.3	0.0	14.7
LnGrp LOS	A		A	B	B	B	B		B	B		B
Approach Vol, veh/h		686			593			401			308	
Approach Delay, s/veh		9.3			12.5			16.1			15.2	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		29.7		19.7	7.6	22.2		19.7
Change Period (Y+Rc), s		4.0		5.1	3.5	4.0		5.1
Max Green Setting (Gmax), s		32.8		23.1	6.5	22.8		23.1
Max Q Clear Time (g_c+I1), s		13.8		10.5	3.2	10.6		12.7
Green Ext Time (p_c), s		10.3		2.1	0.0	7.6		2.0

Intersection Summary		
HCM 2010 Ctrl Delay		12.5
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	576	80	200	735	170	30	30	200	140	30	30
Future Volume (veh/h)	20	576	80	200	735	170	30	30	200	140	30	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	626	87	217	799	185	33	33	174	152	33	33
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	902	125	486	1338	578	477	75	394	349	247	247
Arrive On Green	0.05	0.29	0.29	0.14	0.38	0.38	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	3123	433	3442	3539	1528	1325	259	1364	1170	854	854
Grp Volume(v), veh/h	22	354	359	217	799	185	33	0	207	152	0	66
Grp Sat Flow(s),veh/h/ln	1774	1770	1786	1721	1770	1528	1325	0	1622	1170	0	1708
Q Serve(g_s), s	0.6	9.7	9.7	3.2	9.9	4.7	1.0	0.0	5.7	6.6	0.0	1.6
Cycle Q Clear(g_c), s	0.6	9.7	9.7	3.2	9.9	4.7	2.6	0.0	5.7	12.3	0.0	1.6
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.84	1.00		0.50
Lane Grp Cap(c), veh/h	92	511	516	486	1338	578	477	0	469	349	0	494
V/C Ratio(X)	0.24	0.69	0.70	0.45	0.60	0.32	0.07	0.00	0.44	0.44	0.00	0.13
Avail Cap(c_a), veh/h	325	704	711	505	1338	578	945	0	1041	762	0	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	17.2	17.2	21.5	13.6	12.0	15.3	0.0	15.8	20.8	0.0	14.3
Incr Delay (d2), s/veh	0.5	0.7	0.7	0.2	0.5	0.1	0.0	0.0	0.2	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.8	4.9	1.5	4.9	2.0	0.4	0.0	2.6	2.1	0.0	0.7
LnGrp Delay(d),s/veh	25.3	17.9	17.9	21.7	14.1	12.1	15.3	0.0	16.0	21.1	0.0	14.4
LnGrp LOS	C	B	B	C	B	B	B		B	C		B
Approach Vol, veh/h		735			1201			240			218	
Approach Delay, s/veh		18.2			15.2			15.9			19.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	20.9		20.9	7.9	25.7		20.9
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	8.0	21.7		35.0	10.0	19.7		35.0
Max Q Clear Time (g_c+I1), s	5.2	11.7		14.3	2.6	11.9		7.7
Green Ext Time (p_c), s	0.1	4.0		1.4	0.0	4.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	765	281	506	715	0	0	0	0	380	0	220
Future Volume (veh/h)	0	765	281	506	715	0	0	0	0	380	0	220
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	832	305	550	777	0				413	0	239
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1207	536	680	2217	0				703	0	314
Arrive On Green	0.00	0.34	0.34	0.20	0.63	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3632	1572	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	832	305	550	777	0				413	0	239
Grp Sat Flow(s),veh/h/ln	0	1770	1572	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	11.8	9.2	8.9	6.1	0.0				6.1	0.0	8.3
Cycle Q Clear(g_c), s	0.0	11.8	9.2	8.9	6.1	0.0				6.1	0.0	8.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1207	536	680	2217	0				703	0	314
V/C Ratio(X)	0.00	0.69	0.57	0.81	0.35	0.00				0.59	0.00	0.76
Avail Cap(c_a), veh/h	0	1450	644	942	2729	0				2137	0	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.5	15.7	22.3	5.2	0.0				21.1	0.0	22.0
Incr Delay (d2), s/veh	0.0	0.7	0.4	2.5	0.0	0.0				0.3	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.8	4.0	4.4	2.9	0.0				3.0	0.0	3.7
LnGrp Delay(d),s/veh	0.0	17.2	16.0	24.8	5.2	0.0				21.4	0.0	23.5
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		1137			1327						652	
Approach Delay, s/veh		16.9			13.3						22.2	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.6	24.9		16.6		41.5		
Change Period (Y+Rc), s	5.1	5.1		5.1		5.1		
Max Green Setting (Gmax), s	15.9	23.8		35.0		44.8		
Max Q Clear Time (g_c+I1), s	10.9	13.8		10.3		8.1		
Green Ext Time (p_c), s	0.6	6.0		1.2		11.0		

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	895	0	0	1016	595	205	90	734	0	0	0
Future Volume (veh/h)	250	895	0	0	1016	595	205	90	734	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	272	973	0	0	1104	647	160	185	798			
Adj No. of Lanes	1	2	0	0	3	0	1	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	307	2265	0	0	1390	649	432	453	754			
Arrive On Green	0.17	0.64	0.00	0.00	0.41	0.41	0.24	0.24	0.24			
Sat Flow, veh/h	1774	3632	0	0	3558	1583	1774	1863	3099			
Grp Volume(v), veh/h	272	973	0	0	1104	647	160	185	798			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1774	1863	1549			
Q Serve(g_s), s	13.5	12.3	0.0	0.0	25.6	36.7	6.8	7.5	21.9			
Cycle Q Clear(g_c), s	13.5	12.3	0.0	0.0	25.6	36.7	6.8	7.5	21.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	307	2265	0	0	1390	649	432	453	754			
V/C Ratio(X)	0.88	0.43	0.00	0.00	0.79	1.00	0.37	0.41	1.06			
Avail Cap(c_a), veh/h	365	2265	0	0	1390	649	432	453	754			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.66	0.66	0.00	0.00	0.47	0.47	1.00	1.00	1.00			
Uniform Delay (d), s/veh	36.3	8.0	0.0	0.0	23.2	26.5	28.3	28.6	34.0			
Incr Delay (d2), s/veh	12.7	0.4	0.0	0.0	2.3	23.5	0.2	0.2	49.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.7	6.1	0.0	0.0	12.4	20.2	3.3	3.9	14.5			
LnGrp Delay(d),s/veh	49.0	8.4	0.0	0.0	25.5	49.9	28.5	28.8	83.4			
LnGrp LOS	D	A			C	D	C	C	F			
Approach Vol, veh/h		1245			1751			1143				
Approach Delay, s/veh		17.3			34.5			66.9				
Approach LOS		B			C			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		63.0			20.7	42.3		27.0
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		57.6			18.5	34.0		21.9
Max Q Clear Time (g_c+I1), s		14.3			15.5	38.7		23.9
Green Ext Time (p_c), s		23.5			0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1452	260	201	1206	70	214	162	265	60	151	50
Future Volume (veh/h)	90	1452	260	201	1206	70	214	162	265	60	151	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	98	1578	268	218	1311	71	233	176	288	65	164	54
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	1509	251	183	1821	98	195	158	259	65	235	78
Arrive On Green	0.07	0.50	0.50	0.10	0.53	0.53	0.11	0.25	0.25	0.04	0.18	0.18
Sat Flow, veh/h	1774	3039	505	1774	3415	185	1774	637	1042	1774	1343	442
Grp Volume(v), veh/h	98	904	942	218	678	704	233	0	464	65	0	218
Grp Sat Flow(s),veh/h/ln	1774	1770	1774	1774	1770	1830	1774	0	1679	1774	0	1785
Q Serve(g_s), s	8.2	74.5	74.5	15.5	43.5	43.7	16.5	0.0	37.3	5.5	0.0	17.2
Cycle Q Clear(g_c), s	8.2	74.5	74.5	15.5	43.5	43.7	16.5	0.0	37.3	5.5	0.0	17.2
Prop In Lane	1.00		0.28	1.00		0.10	1.00		0.62	1.00		0.25
Lane Grp Cap(c), veh/h	119	879	881	183	943	976	195	0	417	65	0	313
V/C Ratio(X)	0.83	1.03	1.07	1.19	0.72	0.72	1.19	0.00	1.11	1.00	0.00	0.70
Avail Cap(c_a), veh/h	148	879	881	183	943	976	195	0	417	65	0	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.1	37.7	37.8	67.3	26.5	26.6	66.8	0.0	56.4	72.2	0.0	58.1
Incr Delay (d2), s/veh	21.4	37.8	50.7	126.6	2.5	2.5	126.5	0.0	77.8	111.3	0.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	45.6	48.9	14.0	22.0	22.8	14.9	0.0	26.3	4.7	0.0	8.9
LnGrp Delay(d),s/veh	90.6	75.6	88.4	193.9	29.0	29.1	193.2	0.0	134.2	183.6	0.0	63.3
LnGrp LOS	F	F	F	F	C	C	F		F	F		E
Approach Vol, veh/h		1944			1600			697			283	
Approach Delay, s/veh		82.6			51.5			153.9			90.9	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	79.8	20.0	31.2	13.5	85.3	9.0	42.2
Change Period (Y+Rc), s	3.5	5.3	3.5	* 4.9	3.5	5.3	3.5	4.9
Max Green Setting (Gmax), s	15.5	74.5	16.5	* 27	12.5	77.5	5.5	37.3
Max Q Clear Time (g_c+I1), s	17.5	76.5	18.5	19.2	10.2	45.7	7.5	39.3
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	26.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	83.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	1740	144	239	1108	117	135	91	332	85	81	74
Future Volume (veh/h)	103	1740	144	239	1108	117	135	91	332	85	81	74
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	112	1891	150	260	1204	116	147	99	160	92	88	80
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	1890	148	251	2068	199	221	336	280	202	336	285
Arrive On Green	0.08	0.57	0.57	0.14	0.63	0.63	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	3326	260	1774	3263	314	1208	1863	1553	1113	1863	1575
Grp Volume(v), veh/h	112	994	1047	260	652	668	147	99	160	92	88	80
Grp Sat Flow(s),veh/h/ln	1774	1770	1817	1774	1770	1807	1208	1863	1553	1113	1863	1575
Q Serve(g_s), s	8.6	76.3	78.3	19.5	29.4	29.6	16.4	6.3	13.0	10.7	5.6	6.0
Cycle Q Clear(g_c), s	8.6	76.3	78.3	19.5	29.4	29.6	22.0	6.3	13.0	17.1	5.6	6.0
Prop In Lane	1.00		0.14	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	135	1006	1032	251	1122	1145	221	336	280	202	336	285
V/C Ratio(X)	0.83	0.99	1.01	1.04	0.58	0.58	0.66	0.29	0.57	0.46	0.26	0.28
Avail Cap(c_a), veh/h	187	1006	1032	251	1122	1145	241	366	305	220	366	310
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	29.3	29.7	59.1	14.6	14.7	58.0	48.9	51.6	56.2	48.5	48.7
Incr Delay (d2), s/veh	14.5	25.6	31.5	66.3	0.8	0.8	4.4	0.2	1.1	0.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	44.2	48.0	14.1	14.6	14.9	5.7	3.3	5.6	3.3	2.9	2.6
LnGrp Delay(d),s/veh	77.3	54.9	61.2	125.5	15.5	15.5	62.4	49.0	52.6	56.8	48.7	48.9
LnGrp LOS	E	D	F	F	B	B	E	D	D	E	D	D
Approach Vol, veh/h		2153			1580			406			260	
Approach Delay, s/veh		59.1			33.6			55.3			51.7	
Approach LOS		E			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.0	85.0		29.8	14.0	94.0		29.8
Change Period (Y+Rc), s	3.5	6.7		4.9	3.5	6.7		4.9
Max Green Setting (Gmax), s	19.5	78.3		27.1	14.5	83.3		27.1
Max Q Clear Time (g_c+I1), s	21.5	80.3		19.1	10.6	31.6		24.0
Green Ext Time (p_c), s	0.0	0.0		1.1	0.0	50.1		0.6

Intersection Summary		
HCM 2010 Ctrl Delay		49.2
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	1407	370	150	1131	220	310	140	80	110	120	343
Future Volume (veh/h)	410	1407	370	150	1131	220	310	140	80	110	120	343
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	446	1529	337	163	1229	223	337	152	74	120	130	308
Adj No. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	514	1621	346	279	1517	273	370	203	94	447	193	172
Arrive On Green	0.25	0.93	0.93	0.16	1.00	1.00	0.11	0.09	0.09	0.13	0.11	0.11
Sat Flow, veh/h	3442	2902	620	3442	2997	540	3442	2349	1091	3442	1770	1583
Grp Volume(v), veh/h	446	914	952	163	722	730	337	113	113	120	130	308
Grp Sat Flow(s),veh/h/ln	1721	1770	1753	1721	1770	1767	1721	1770	1670	1721	1770	1583
Q Serve(g_s), s	16.8	34.1	53.2	5.9	0.0	0.0	13.1	8.4	9.0	4.2	9.5	14.7
Cycle Q Clear(g_c), s	16.8	34.1	53.2	5.9	0.0	0.0	13.1	8.4	9.0	4.2	9.5	14.7
Prop In Lane	1.00		0.35	1.00		0.31	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	514	988	979	279	896	895	370	153	144	447	193	172
V/C Ratio(X)	0.87	0.92	0.97	0.58	0.81	0.82	0.91	0.74	0.78	0.27	0.67	1.79
Avail Cap(c_a), veh/h	854	1039	1030	279	896	895	370	258	244	447	193	172
HCM Platoon Ratio	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	3.2	3.8	54.5	0.0	0.0	59.6	60.2	60.4	53.0	57.9	60.2
Incr Delay (d2), s/veh	5.3	15.4	22.9	2.1	5.2	5.6	26.1	6.7	9.0	0.3	8.9	376.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	18.1	27.8	2.9	1.3	1.4	7.6	4.4	4.5	2.0	5.1	24.4
LnGrp Delay(d),s/veh	54.6	18.5	26.7	56.6	5.2	5.6	85.7	66.9	69.4	53.3	66.8	436.4
LnGrp LOS	D	B	C	E	A	A	F	E	E	D	E	F
Approach Vol, veh/h		2312			1615			563			558	
Approach Delay, s/veh		28.8			10.6			78.7			267.9	
Approach LOS		C			B			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	79.3	18.0	20.0	23.7	73.3	21.0	17.0
Change Period (Y+Rc), s	5.7	* 5.7	3.5	5.3	3.5	5.7	3.5	5.3
Max Green Setting (Gmax), s	8.5	* 79	14.5	14.7	33.5	54.3	9.5	19.7
Max Q Clear Time (g_c+I1), s	7.9	55.2	15.1	16.7	18.8	2.0	6.2	11.0
Green Ext Time (p_c), s	0.0	16.6	0.0	0.0	1.4	17.4	0.6	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	55.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1217	330	340	829	282	382	100	400	204	70	150
Future Volume (veh/h)	160	1217	330	340	829	282	382	100	400	204	70	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	174	1323	158	370	901	264	262	323	359	149	178	141
Adj No. of Lanes	2	2	1	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	738	1578	695	415	1198	709	355	373	310	194	204	169
Arrive On Green	0.43	0.89	0.89	0.20	0.57	0.57	0.20	0.20	0.20	0.11	0.11	0.11
Sat Flow, veh/h	3442	3539	1559	3442	3539	1583	1774	1863	1549	1774	1863	1550
Grp Volume(v), veh/h	174	1323	158	370	901	264	262	323	359	149	178	141
Grp Sat Flow(s),veh/h/ln	1721	1770	1559	1721	1770	1583	1774	1863	1549	1774	1863	1550
Q Serve(g_s), s	4.3	21.7	1.9	14.1	26.0	11.3	18.7	22.7	27.0	11.0	12.7	12.0
Cycle Q Clear(g_c), s	4.3	21.7	1.9	14.1	26.0	11.3	18.7	22.7	27.0	11.0	12.7	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	738	1578	695	415	1198	709	355	373	310	194	204	169
V/C Ratio(X)	0.24	0.84	0.23	0.89	0.75	0.37	0.74	0.87	1.16	0.77	0.87	0.83
Avail Cap(c_a), veh/h	738	1578	695	446	1696	932	355	373	310	197	207	172
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.29	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	5.2	4.2	53.1	25.0	15.6	50.7	52.3	54.0	58.5	59.2	58.9
Incr Delay (d2), s/veh	0.0	1.7	0.2	12.1	2.7	0.9	7.0	18.2	101.3	14.9	29.9	26.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	9.7	0.8	7.4	13.0	6.0	9.9	13.6	20.3	6.2	8.2	6.4
LnGrp Delay(d),s/veh	31.5	6.9	4.4	65.2	27.8	16.5	57.7	70.5	155.3	73.3	89.1	85.0
LnGrp LOS	C	A	A	E	C	B	E	E	F	E	F	F
Approach Vol, veh/h		1655			1535			944			468	
Approach Delay, s/veh		9.3			34.8			99.2			82.8	
Approach LOS		A			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.8	65.5		18.8	34.2	51.0		31.0
Change Period (Y+Rc), s	3.5	5.3		4.0	5.3	* 5.3		4.0
Max Green Setting (Gmax), s	17.5	58.7		15.0	11.5	* 65		27.0
Max Q Clear Time (g_c+I1), s	16.1	23.7		14.7	6.3	28.0		29.0
Green Ext Time (p_c), s	0.1	24.3		0.0	4.6	17.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	343	1194	254	933	820	201	408	1596	835	250	752	203
Future Volume (veh/h)	343	1194	254	933	820	201	408	1596	835	250	752	203
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	373	1298	276	1014	891	218	443	1735	796	272	817	166
Adj No. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1074	328	801	1369	334	1102	2330	1078	265	1086	216
Arrive On Green	0.20	0.35	0.35	0.23	0.34	0.34	0.53	0.77	0.77	0.13	0.34	0.34
Sat Flow, veh/h	3442	5085	1552	3442	4083	994	3442	5085	1549	3442	5405	1074
Grp Volume(v), veh/h	373	1298	276	1014	739	370	443	1735	796	272	724	259
Grp Sat Flow(s),veh/h/ln	1721	1695	1552	1721	1695	1687	1721	1695	1549	1721	1602	1673
Q Serve(g_s), s	14.2	28.5	22.1	31.4	25.0	25.2	10.3	25.1	23.6	10.4	18.1	18.7
Cycle Q Clear(g_c), s	14.2	28.5	22.1	31.4	25.0	25.2	10.3	25.1	23.6	10.4	18.1	18.7
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	421	1074	328	801	1137	566	1102	2330	1078	265	966	336
V/C Ratio(X)	0.89	1.21	0.84	1.27	0.65	0.65	0.40	0.74	0.74	1.03	0.75	0.77
Avail Cap(c_a), veh/h	510	1074	328	801	1137	566	1102	2330	1078	265	1371	477
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	0.45	0.45	0.45	1.00	1.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	43.7	41.6	51.8	38.1	38.2	23.7	11.5	3.4	58.8	41.8	42.0
Incr Delay (d2), s/veh	6.6	98.2	8.9	129.9	1.4	2.9	0.1	1.4	2.8	62.1	5.3	15.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	23.0	10.2	29.3	11.9	12.2	4.8	11.8	8.6	7.2	8.4	10.1
LnGrp Delay(d),s/veh	59.4	141.9	50.6	181.7	39.5	41.1	23.8	12.9	6.3	121.0	47.2	57.6
LnGrp LOS	E	F	D	F	D	D	C	B	A	F	D	E
Approach Vol, veh/h		1947			2123			2974			1255	
Approach Delay, s/veh		113.2			107.7			12.7			65.3	
Approach LOS		F			F			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.9	35.0	49.7	33.6	21.1	51.8	15.0	68.4
Change Period (Y+Rc), s	6.5	* 6.5	6.5	* 6.5	4.6	6.5	4.6	6.5
Max Green Setting (Gmax), s	31.4	* 29	14.4	* 39	20.0	39.9	10.4	42.5
Max Q Clear Time (g_c+I1), s	33.4	30.5	12.3	20.7	16.2	27.2	12.4	27.1
Green Ext Time (p_c), s	0.0	0.0	2.0	6.4	0.3	8.4	0.0	13.5

Intersection Summary	
HCM 2010 Ctrl Delay	68.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	416	70	202	140	70	140	296	2018	55	175	1512	252
Future Volume (veh/h)	416	70	202	140	70	140	296	2018	55	175	1512	252
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	506	0	220	114	129	152	322	2193	60	190	1643	234
Adj No. of Lanes	2	0	1	1	1	1	2	4	0	2	4	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	597	0	261	198	207	174	369	2586	71	556	2669	380
Arrive On Green	0.17	0.00	0.17	0.11	0.11	0.11	0.21	0.80	0.80	0.32	0.93	0.93
Sat Flow, veh/h	3548	0	1548	1774	1863	1558	3442	6461	177	3442	5712	813
Grp Volume(v), veh/h	506	0	220	114	129	152	322	1631	622	190	1382	495
Grp Sat Flow(s),veh/h/ln	1774	0	1548	1774	1863	1558	1721	1602	1832	1721	1602	1719
Q Serve(g_s), s	18.7	0.0	18.6	8.2	8.9	13.0	12.2	28.4	28.5	5.7	6.0	6.0
Cycle Q Clear(g_c), s	18.7	0.0	18.6	8.2	8.9	13.0	12.2	28.4	28.5	5.7	6.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.47
Lane Grp Cap(c), veh/h	597	0	261	198	207	174	369	1924	733	556	2245	803
V/C Ratio(X)	0.85	0.00	0.84	0.58	0.62	0.88	0.87	0.85	0.85	0.34	0.62	0.62
Avail Cap(c_a), veh/h	802	0	350	204	214	179	472	2058	784	556	2245	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.28	0.28	0.28	0.22	0.22	0.22
Uniform Delay (d), s/veh	54.5	0.0	54.4	57.0	57.3	59.1	52.1	10.9	10.9	40.2	2.6	2.6
Incr Delay (d2), s/veh	6.4	0.0	13.2	2.3	3.8	33.2	3.7	1.5	3.7	0.0	0.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	8.9	4.2	4.8	7.2	6.0	12.2	14.4	2.7	2.2	2.5
LnGrp Delay(d),s/veh	60.9	0.0	67.6	59.3	61.0	92.3	55.9	12.4	14.6	40.3	2.8	3.3
LnGrp LOS	E		E	E	E	F	E	B	B	D	A	A
Approach Vol, veh/h		726			395			2575			2067	
Approach Delay, s/veh		62.9			72.6			18.3			6.4	
Approach LOS		E			E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	28.0	60.2		27.2	19.0	69.3		19.5
Change Period (Y+Rc), s	6.2	* 6.2		4.5	4.5	6.2		4.5
Max Green Setting (Gmax), s	14.5	* 58		30.5	18.5	50.8		15.5
Max Q Clear Time (g_c+I1), s	10.7	30.5		20.7	14.2	8.0		15.0
Green Ext Time (p_c), s	2.0	23.6		2.0	0.3	29.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	210	270	197	260	322	245	1840	158	316	1456	135
Future Volume (veh/h)	130	210	270	197	260	322	245	1840	158	316	1456	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	141	228	58	214	283	350	266	2000	172	343	1583	147
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	335	83	217	277	247	452	2175	667	361	1846	575
Arrive On Green	0.09	0.12	0.12	0.12	0.16	0.16	0.51	0.86	0.86	0.34	0.61	0.61
Sat Flow, veh/h	1774	2809	700	1774	1770	1583	1774	5085	1560	1774	5085	1583
Grp Volume(v), veh/h	141	142	144	214	283	350	266	2000	172	343	1583	147
Grp Sat Flow(s),veh/h/ln	1774	1770	1739	1774	1770	1583	1774	1695	1560	1774	1695	1583
Q Serve(g_s), s	10.7	10.4	10.7	16.3	21.1	21.1	14.2	36.0	2.8	25.5	34.5	4.5
Cycle Q Clear(g_c), s	10.7	10.4	10.7	16.3	21.1	21.1	14.2	36.0	2.8	25.5	34.5	4.5
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	211	207	217	277	247	452	2175	667	361	1846	575
V/C Ratio(X)	0.93	0.67	0.70	0.99	1.02	1.41	0.59	0.92	0.26	0.95	0.86	0.26
Avail Cap(c_a), veh/h	151	211	207	217	277	247	452	2175	667	361	2098	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.53	0.53	0.53	0.70	0.70	0.70
Uniform Delay (d), s/veh	61.4	56.9	57.1	59.1	57.0	57.0	28.1	8.2	5.8	43.9	23.7	10.6
Incr Delay (d2), s/veh	52.8	7.5	9.1	57.1	60.2	208.6	1.1	4.4	0.5	27.6	3.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	5.5	5.7	11.4	14.9	23.6	7.0	16.2	1.2	15.1	16.5	2.1
LnGrp Delay(d),s/veh	114.2	64.4	66.1	116.3	117.2	265.6	29.2	12.6	6.3	71.5	27.6	11.3
LnGrp LOS	F	E	E	F	F	F	C	B	A	E	C	B
Approach Vol, veh/h		427			847			2438			2073	
Approach Delay, s/veh		81.4			178.3			14.0			33.7	
Approach LOS		F			F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	63.0	20.0	21.0	39.7	54.3	15.0	26.0
Change Period (Y+Rc), s	3.5	5.3	3.5	4.9	5.3	* 5.3	3.5	4.9
Max Green Setting (Gmax), s	27.5	57.7	16.5	16.1	29.5	* 56	11.5	21.1
Max Q Clear Time (g_c+I1), s	27.5	38.0	18.3	12.7	16.2	36.5	12.7	23.1
Green Ext Time (p_c), s	0.0	16.5	0.0	1.6	11.7	12.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	90	91	313	100	259	185	1509	296	394	1790	90
Future Volume (veh/h)	50	90	91	313	100	259	185	1509	296	394	1790	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	138	72	224	271	282	201	1640	322	428	1946	98
Adj No. of Lanes	0	2	1	1	1	1	1	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	187	106	315	331	275	223	1899	370	565	2467	124
Arrive On Green	0.07	0.07	0.07	0.18	0.18	0.18	0.21	0.74	0.74	0.27	0.83	0.83
Sat Flow, veh/h	980	2696	1526	1774	1863	1549	1774	4273	833	3442	4960	249
Grp Volume(v), veh/h	100	92	72	224	271	282	201	1299	663	428	1329	715
Grp Sat Flow(s),veh/h/ln	1814	1863	1526	1774	1863	1549	1774	1695	1716	1721	1695	1819
Q Serve(g_s), s	7.3	6.5	6.2	16.0	18.9	24.0	14.9	37.0	38.0	15.4	25.9	26.2
Cycle Q Clear(g_c), s	7.3	6.5	6.2	16.0	18.9	24.0	14.9	37.0	38.0	15.4	25.9	26.2
Prop In Lane	0.54		1.00	1.00		1.00	1.00		0.49	1.00		0.14
Lane Grp Cap(c), veh/h	126	129	106	315	331	275	223	1507	762	565	1686	905
V/C Ratio(X)	0.79	0.71	0.68	0.71	0.82	1.02	0.90	0.86	0.87	0.76	0.79	0.79
Avail Cap(c_a), veh/h	128	131	107	315	331	275	283	1570	794	565	1686	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.46	0.46	0.46	0.49	0.49	0.49
Uniform Delay (d), s/veh	61.9	61.5	61.4	52.2	53.4	55.5	52.5	14.4	14.6	46.5	7.9	8.0
Incr Delay (d2), s/veh	29.4	17.9	17.6	6.2	13.9	60.6	12.3	3.3	6.6	2.6	1.9	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.0	3.1	8.4	11.0	14.9	8.0	17.5	18.9	7.5	11.8	13.4
LnGrp Delay(d),s/veh	91.3	79.4	79.0	58.5	67.3	116.2	64.8	17.7	21.2	49.2	9.8	11.5
LnGrp LOS	F	E	E	E	E	F	E	B	C	D	A	B
Approach Vol, veh/h		264			777			2163			2472	
Approach Delay, s/veh		83.8			82.5			23.2			17.1	
Approach LOS		F			F			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		12.9	20.5	72.6		29.0	27.7	65.5
Change Period (Y+Rc), s		3.5	3.5	5.5		5.0	5.5	* 5.5
Max Green Setting (Gmax), s		9.5	21.5	62.5		24.0	21.5	* 63
Max Q Clear Time (g_c+I1), s		9.3	16.9	28.2		26.0	17.4	40.0
Green Ext Time (p_c), s		0.0	0.1	30.2		0.0	0.7	20.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	69.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	20	180	20	130	10	561	140	160	422	10
Future Vol, veh/h	10	10	20	180	20	130	10	561	140	160	422	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	22	196	22	141	11	610	152	174	459	11
Number of Lanes	0	1	1	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	12.6	16.8	119.7	41.2
HCM LOS	B	C	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	50%	0%	100%	0%	100%	0%
Vol Thru, %	98%	0%	50%	0%	0%	13%	0%	98%
Vol Right, %	0%	100%	0%	100%	0%	87%	0%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	571	140	20	20	180	150	160	432
LT Vol	10	0	10	0	180	0	160	0
Through Vol	561	0	10	0	0	20	0	422
RT Vol	0	140	0	20	0	130	0	10
Lane Flow Rate	621	152	22	22	196	163	174	470
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	1.237	0.273	0.056	0.05	0.46	0.331	0.366	0.922
Departure Headway (Hd)	7.176	6.451	9.811	8.814	8.887	7.739	7.967	7.437
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	509	555	367	409	409	468	454	493
Service Time	4.936	4.21	7.511	6.514	6.587	5.439	5.667	5.137
HCM Lane V/C Ratio	1.22	0.274	0.06	0.054	0.479	0.348	0.383	0.953
HCM Control Delay	146.2	11.6	13.1	12	18.9	14.2	15.2	50.8
HCM Lane LOS	F	B	B	B	C	B	C	F
HCM 95th-tile Q	24.3	1.1	0.2	0.2	2.4	1.4	1.7	10.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	20	150	70	30	60	330	1733	100	165	1581	165
Future Volume (veh/h)	242	20	150	70	30	60	330	1733	100	165	1581	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	263	22	103	76	33	65	359	1884	109	179	1718	179
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	22	255	66	29	56	401	2518	145	202	1832	190
Arrive On Green	0.16	0.16	0.16	0.09	0.09	0.09	0.38	0.86	0.86	0.19	0.66	0.66
Sat Flow, veh/h	1643	137	1566	742	322	634	1774	4918	284	1774	4669	485
Grp Volume(v), veh/h	285	0	103	174	0	0	359	1297	696	179	1246	651
Grp Sat Flow(s),veh/h/ln	1781	0	1566	1698	0	0	1774	1695	1812	1774	1695	1764
Q Serve(g_s), s	21.5	0.0	8.0	12.0	0.0	0.0	25.7	20.7	20.9	13.3	44.3	44.8
Cycle Q Clear(g_c), s	21.5	0.0	8.0	12.0	0.0	0.0	25.7	20.7	20.9	13.3	44.3	44.8
Prop In Lane	0.92		1.00	0.44		0.37	1.00		0.16	1.00		0.27
Lane Grp Cap(c), veh/h	290	0	255	151	0	0	401	1736	928	202	1330	692
V/C Ratio(X)	0.98	0.00	0.40	1.15	0.00	0.00	0.90	0.75	0.75	0.89	0.94	0.94
Avail Cap(c_a), veh/h	290	0	255	151	0	0	401	1736	928	237	1356	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	0.52	0.52	0.52
Uniform Delay (d), s/veh	56.3	0.0	50.6	61.5	0.0	0.0	40.5	6.3	6.3	53.8	21.8	21.9
Incr Delay (d2), s/veh	47.6	0.0	0.4	120.2	0.0	0.0	2.7	0.3	0.5	16.8	8.1	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	0.0	3.5	10.7	0.0	0.0	12.8	9.0	10.1	7.4	21.7	24.1
LnGrp Delay(d),s/veh	103.9	0.0	51.0	181.7	0.0	0.0	43.2	6.6	6.8	70.6	29.8	35.9
LnGrp LOS	F		D	F			D	A	A	E	C	D
Approach Vol, veh/h		388			174			2352			2076	
Approach Delay, s/veh		89.9			181.7			12.2			35.3	
Approach LOS		F			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.4	74.4		27.0	35.8	58.0		17.0
Change Period (Y+Rc), s	4.0	5.3		5.0	5.3	* 5		5.0
Max Green Setting (Gmax), s	18.0	63.7		22.0	28.0	* 54		12.0
Max Q Clear Time (g_c+I1), s	15.3	22.9		23.5	27.7	46.8		14.0
Green Ext Time (p_c), s	0.1	27.7		0.0	0.0	6.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	42.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	10	110	20	300	10	416	85	160	422	5
Future Vol, veh/h	10	10	10	110	20	300	10	416	85	160	422	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	120	22	326	11	452	92	174	459	5
Number of Lanes	0	1	0	1	1	0	0	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	13.6	23.2	54.5	47.5
HCM LOS	B	C	F	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	33%	100%	0%	100%	0%
Vol Thru, %	98%	0%	33%	0%	6%	0%	99%
Vol Right, %	0%	100%	33%	0%	94%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	426	85	30	110	320	160	427
LT Vol	10	0	10	110	0	160	0
Through Vol	416	0	10	0	20	0	422
RT Vol	0	85	10	0	300	0	5
Lane Flow Rate	463	92	33	120	348	174	464
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.976	0.176	0.088	0.283	0.708	0.386	0.962
Departure Headway (Hd)	7.589	6.856	9.66	8.522	7.33	7.984	7.46
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	477	522	373	421	494	450	487
Service Time	5.353	4.62	7.66	6.281	5.088	5.748	5.224
HCM Lane V/C Ratio	0.971	0.176	0.088	0.285	0.704	0.387	0.953
HCM Control Delay	63.2	11.1	13.6	14.6	26.1	15.7	59.4
HCM Lane LOS	F	B	B	B	D	C	F
HCM 95th-tile Q	12.4	0.6	0.3	1.1	5.5	1.8	12.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	250	40	342	190	340	50	772	534	253	664	60
Future Volume (veh/h)	60	250	40	342	190	340	50	772	534	253	664	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	65	272	43	372	207	370	54	839	580	275	722	65
Adj No. of Lanes	0	2	0	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	335	55	438	460	649	70	1086	864	299	1433	129
Arrive On Green	0.13	0.13	0.13	0.08	0.08	0.08	0.07	0.51	0.51	0.28	0.73	0.73
Sat Flow, veh/h	594	2598	428	1774	1863	1546	1774	3539	1541	1774	3285	296
Grp Volume(v), veh/h	200	0	180	372	207	370	54	839	580	275	389	398
Grp Sat Flow(s),veh/h/ln	1833	0	1787	1774	1863	1546	1774	1770	1541	1774	1770	1811
Q Serve(g_s), s	12.8	0.0	11.7	24.8	12.7	22.2	3.6	23.0	36.8	18.0	11.3	11.3
Cycle Q Clear(g_c), s	12.8	0.0	11.7	24.8	12.7	22.2	3.6	23.0	36.8	18.0	11.3	11.3
Prop In Lane	0.32		0.24	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	236	0	230	438	460	649	70	1086	864	299	772	790
V/C Ratio(X)	0.85	0.00	0.78	0.85	0.45	0.57	0.78	0.77	0.67	0.92	0.50	0.50
Avail Cap(c_a), veh/h	307	0	299	548	576	745	386	1086	864	386	772	790
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	0.0	50.6	52.9	47.3	32.9	55.5	25.9	14.2	42.3	10.7	10.7
Incr Delay (d2), s/veh	12.9	0.0	6.8	8.5	0.6	0.7	6.7	5.3	4.1	20.5	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	6.2	13.3	6.7	9.7	1.9	11.9	20.1	10.5	5.9	6.0
LnGrp Delay(d),s/veh	64.0	0.0	57.4	61.4	47.9	33.6	62.3	31.2	18.3	62.8	13.0	13.0
LnGrp LOS	E		E	E	D	C	E	C	B	E	B	B
Approach Vol, veh/h		380			949			1473			1062	
Approach Delay, s/veh		60.9			47.6			27.3			25.9	
Approach LOS		E			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.2	41.7		19.5	8.7	57.3		34.5
Change Period (Y+Rc), s	4.0	4.9		4.0	4.0	4.9		4.9
Max Green Setting (Gmax), s	26.1	18.9		20.1	26.1	18.9		37.1
Max Q Clear Time (g_c+I1), s	20.0	38.8		14.8	5.6	13.3		26.8
Green Ext Time (p_c), s	0.2	0.0		0.6	0.0	4.7		2.8

Intersection Summary		
HCM 2010 Ctrl Delay		35.2
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	800	87	381	701	162	151	330	344	170	255	70
Future Volume (veh/h)	70	800	87	381	701	162	151	330	344	170	255	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	76	870	95	414	762	137	164	359	374	185	277	76
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	1024	112	435	1527	274	263	591	880	171	591	491
Arrive On Green	0.09	0.53	0.53	0.41	0.85	0.85	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	3219	351	1774	2998	539	1021	1863	1549	720	1863	1547
Grp Volume(v), veh/h	76	478	487	414	450	449	164	359	374	185	277	76
Grp Sat Flow(s),veh/h/ln	1774	1770	1801	1774	1770	1768	1021	1863	1549	720	1863	1547
Q Serve(g_s), s	5.0	27.7	27.7	27.1	7.9	7.9	18.4	19.6	16.7	18.5	14.3	4.2
Cycle Q Clear(g_c), s	5.0	27.7	27.7	27.1	7.9	7.9	32.7	19.6	16.7	38.1	14.3	4.2
Prop In Lane	1.00		0.20	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	563	573	435	901	900	263	591	880	171	591	491
V/C Ratio(X)	0.79	0.85	0.85	0.95	0.50	0.50	0.62	0.61	0.42	1.08	0.47	0.15
Avail Cap(c_a), veh/h	170	563	573	466	901	900	263	591	880	171	591	491
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	25.7	25.7	34.7	5.0	5.0	45.9	34.6	15.1	54.0	32.8	29.4
Incr Delay (d2), s/veh	3.4	9.7	9.6	25.4	1.6	1.6	4.6	1.8	0.3	91.8	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	14.8	15.0	16.3	4.1	4.1	5.5	10.4	7.2	10.0	7.5	1.8
LnGrp Delay(d),s/veh	57.3	35.4	35.3	60.1	6.6	6.6	50.5	36.4	15.4	145.7	33.4	29.5
LnGrp LOS	E	D	D	E	A	A	D	D	B	F	C	C
Approach Vol, veh/h		1041			1313			897			538	
Approach Delay, s/veh		36.9			23.5			30.2			71.5	
Approach LOS		D			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.9	44.1		43.0	10.0	67.0		43.0
Change Period (Y+Rc), s	3.5	5.9		4.9	3.5	5.9		4.9
Max Green Setting (Gmax), s	9.5	36.1		38.1	11.5	56.1		38.1
Max Q Clear Time (g_c+I1), s	29.1	29.7		40.1	7.0	9.9		34.7
Green Ext Time (p_c), s	0.4	4.9		0.0	0.0	17.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1143	511	455	1024	0	0	0	0	417	10	350
Future Volume (veh/h)	0	1143	511	455	1024	0	0	0	0	417	10	350
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	1242	519	495	1113	0				453	11	193
Adj No. of Lanes	0	2	0	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1135	453	633	3021	0				405	10	367
Arrive On Green	0.00	0.77	0.77	0.71	1.00	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	2564	987	1774	3632	0				1734	42	1569
Grp Volume(v), veh/h	0	873	888	495	1113	0				464	0	193
Grp Sat Flow(s),veh/h/ln	0	1770	1689	1774	1770	0				1776	0	1569
Q Serve(g_s), s	0.0	66.6	66.6	26.2	0.0	0.0				33.9	0.0	15.6
Cycle Q Clear(g_c), s	0.0	66.6	66.6	26.2	0.0	0.0				33.9	0.0	15.6
Prop In Lane	0.00		0.58	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	813	776	633	3021	0				415	0	367
V/C Ratio(X)	0.00	1.07	1.14	0.78	0.37	0.00				1.12	0.00	0.53
Avail Cap(c_a), veh/h	0	813	776	633	3021	0				415	0	367
HCM Platoon Ratio	1.00	1.67	1.67	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.54	0.54	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.9	16.9	17.1	0.0	0.0				55.6	0.0	48.5
Incr Delay (d2), s/veh	0.0	46.0	73.8	0.5	0.0	0.0				80.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	41.6	45.7	12.6	0.0	0.0				25.8	0.0	6.8
LnGrp Delay(d),s/veh	0.0	62.9	90.7	17.6	0.0	0.0				135.6	0.0	49.2
LnGrp LOS		F	F	B	A					F		D
Approach Vol, veh/h		1761			1608						657	
Approach Delay, s/veh		76.9			5.4						110.2	
Approach LOS		E			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	57.3	72.0		39.0		129.3		
Change Period (Y+Rc), s	5.4	* 5.4		5.1		5.4		
Max Green Setting (Gmax), s	29.3	* 67		33.9		100.6		
Max Q Clear Time (g_c+I1), s	28.2	68.6		35.9		2.0		
Green Ext Time (p_c), s	0.6	0.0		0.0		24.7		

Intersection Summary	
HCM 2010 Ctrl Delay	53.8
HCM 2010 LOS	D

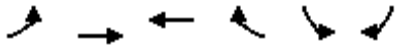
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	1260	0	0	1117	489	382	0	629	0	0	0
Future Volume (veh/h)	280	1260	0	0	1117	489	382	0	629	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	304	1370	0	0	1214	423	415	0	499			
Adj No. of Lanes	1	2	0	0	2	1	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	307	2076	0	0	1339	599	605	0	532			
Arrive On Green	0.29	0.98	0.00	0.00	0.63	0.63	0.34	0.00	0.34			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	1774	0	1560			
Grp Volume(v), veh/h	304	1370	0	0	1214	423	415	0	499			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1560			
Q Serve(g_s), s	24.7	3.3	0.0	0.0	42.9	25.8	29.2	0.0	44.9			
Cycle Q Clear(g_c), s	24.7	3.3	0.0	0.0	42.9	25.8	29.2	0.0	44.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	307	2076	0	0	1339	599	605	0	532			
V/C Ratio(X)	0.99	0.66	0.00	0.00	0.91	0.71	0.69	0.00	0.94			
Avail Cap(c_a), veh/h	307	2076	0	0	1339	599	674	0	593			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.77	0.77	1.00	0.00	1.00			
Uniform Delay (d), s/veh	51.4	0.6	0.0	0.0	24.5	21.3	41.1	0.0	46.3			
Incr Delay (d2), s/veh	13.1	0.2	0.0	0.0	8.4	5.3	2.3	0.0	21.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	13.2	0.9	0.0	0.0	22.1	12.0	14.7	0.0	22.6			
LnGrp Delay(d),s/veh	64.5	0.8	0.0	0.0	32.9	26.7	43.4	0.0	67.6			
LnGrp LOS	E	A			C	C	D		E			
Approach Vol, veh/h		1674			1637			914				
Approach Delay, s/veh		12.4			31.3			56.6				
Approach LOS		B			C			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		90.4			30.2	60.2		54.6
Change Period (Y+Rc), s		5.4			5.1	5.4		5.1
Max Green Setting (Gmax), s		79.4			25.1	49.2		55.1
Max Q Clear Time (g_c+I1), s		5.3			26.7	44.9		46.9
Green Ext Time (p_c), s		26.7			0.0	3.8		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	363	1486	1225	289	444	401
Future Volume (veh/h)	363	1486	1225	289	444	401
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	395	1615	1332	260	483	145
Adj No. of Lanes	1	2	3	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	414	2715	2536	767	552	254
Arrive On Green	0.47	1.00	0.83	0.83	0.16	0.16
Sat Flow, veh/h	1774	3632	5253	1537	3442	1583
Grp Volume(v), veh/h	395	1615	1332	260	483	145
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1537	1721	1583
Q Serve(g_s), s	31.1	0.0	11.3	5.7	19.9	12.3
Cycle Q Clear(g_c), s	31.1	0.0	11.3	5.7	19.9	12.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	414	2715	2536	767	552	254
V/C Ratio(X)	0.95	0.59	0.53	0.34	0.87	0.57
Avail Cap(c_a), veh/h	586	2715	2536	767	757	348
HCM Platoon Ratio	2.00	2.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.15	0.15	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	7.0	6.6	59.4	56.2
Incr Delay (d2), s/veh	11.6	0.4	0.1	0.2	7.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	0.2	5.1	2.4	10.1	10.8
LnGrp Delay(d),s/veh	49.6	0.4	7.1	6.7	67.3	57.7
LnGrp LOS	D	A	A	A	E	E
Approach Vol, veh/h		2010	1592		628	
Approach Delay, s/veh		10.1	7.1		65.1	
Approach LOS		B	A		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		116.6		28.4	38.9	77.7		
Change Period (Y+Rc), s		5.4		5.1	5.1	5.4		
Max Green Setting (Gmax), s		102.6		31.9	47.9	49.6		
Max Q Clear Time (g_c+I1), s		2.0		21.9	33.1	13.3		
Green Ext Time (p_c), s		36.4		1.4	0.8	23.2		

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	1245	170	240	1595	146	250	320	340	130	180	160
Future Volume (veh/h)	286	1245	170	240	1595	146	250	320	340	130	180	160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	311	1353	185	261	1734	159	272	348	370	141	196	174
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	989	3163	1617	283	1704	744	266	387	328	116	229	190
Arrive On Green	0.56	0.89	0.89	0.27	0.80	0.80	0.15	0.21	0.21	0.07	0.12	0.12
Sat Flow, veh/h	1774	3539	1543	1774	3539	1544	1774	1863	1581	1774	1863	1547
Grp Volume(v), veh/h	311	1353	185	261	1734	159	272	348	370	141	196	174
Grp Sat Flow(s),veh/h/ln	1774	1770	1543	1774	1770	1544	1774	1863	1581	1774	1863	1547
Q Serve(g_s), s	12.2	8.6	2.3	18.6	62.6	3.2	19.5	23.7	27.0	8.5	13.4	14.4
Cycle Q Clear(g_c), s	12.2	8.6	2.3	18.6	62.6	3.2	19.5	23.7	27.0	8.5	13.4	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	989	3163	1617	283	1704	744	266	387	328	116	229	190
V/C Ratio(X)	0.31	0.43	0.11	0.92	1.02	0.21	1.02	0.90	1.13	1.22	0.85	0.91
Avail Cap(c_a), veh/h	989	3163	1617	321	1704	744	266	387	328	116	229	190
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	1.2	3.0	46.9	12.7	6.9	55.3	50.2	124.6	60.8	55.9	56.3
Incr Delay (d2), s/veh	0.0	0.3	0.1	27.9	26.3	0.7	61.0	23.2	88.5	152.6	25.7	41.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	4.1	1.0	11.2	35.0	1.4	14.0	14.7	8.1	9.1	8.5	8.4
LnGrp Delay(d),s/veh	15.5	1.5	3.1	74.8	39.0	7.6	116.3	73.4	213.0	213.4	81.5	98.0
LnGrp LOS	B	A	A	E	F	A	F	E	F	F	F	F
Approach Vol, veh/h		1849			2154			990			511	
Approach Delay, s/veh		4.0			41.0			137.4			123.5	
Approach LOS		A			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	122.2	23.0	20.1	78.5	67.9	12.0	31.1
Change Period (Y+Rc), s	3.5	5.3	3.5	4.1	5.3	* 5.3	3.5	4.1
Max Green Setting (Gmax), s	23.5	54.6	19.5	16.0	15.5	* 63	8.5	27.0
Max Q Clear Time (g_c+I1), s	20.6	10.6	21.5	16.4	14.2	64.6	10.5	29.0
Green Ext Time (p_c), s	0.1	18.5	0.0	0.0	0.2	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

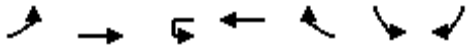
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1713	162	500	2052	229	400
Future Volume (veh/h)	1713	162	500	2052	229	400
Number	6	16	5	2	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	1862	164	543	2230	249	435
Adj No. of Lanes	2	0	2	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1830	159	625	2753	274	532
Arrive On Green	0.93	0.93	0.36	1.00	0.15	0.15
Sat Flow, veh/h	3389	286	3442	3632	1774	1583
Grp Volume(v), veh/h	987	1039	543	2230	249	435
Grp Sat Flow(s),veh/h/ln	1770	1812	1721	1770	1774	1583
Q Serve(g_s), s	72.2	72.2	19.1	0.0	17.9	9.1
Cycle Q Clear(g_c), s	72.2	72.2	19.1	0.0	17.9	9.1
Prop In Lane		0.16	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	983	1007	625	2753	274	532
V/C Ratio(X)	1.00	1.03	0.87	0.81	0.91	0.82
Avail Cap(c_a), veh/h	983	1007	625	2753	341	592
HCM Platoon Ratio	1.67	1.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.20	0.20	1.00	1.00
Uniform Delay (d), s/veh	4.7	4.7	39.9	0.0	54.1	39.5
Incr Delay (d2), s/veh	29.8	37.0	3.1	0.6	21.6	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.6	40.6	9.3	0.2	10.4	4.9
LnGrp Delay(d),s/veh	34.5	41.7	43.1	0.6	75.7	46.6
LnGrp LOS	F	F	D	A	E	D
Approach Vol, veh/h	2026			2773	684	
Approach Delay, s/veh	38.2			8.9	57.2	
Approach LOS	D			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		106.4			28.9	77.5		23.6
Change Period (Y+Rc), s		5.3			5.3	* 5.3		3.5
Max Green Setting (Gmax), s		96.2			20.5	* 72		25.0
Max Q Clear Time (g_c+I1), s		2.0			21.1	74.2		19.9
Green Ext Time (p_c), s		85.3			0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	800	1303	5	1652	150	130	730
Future Volume (veh/h)	800	1303	5	1652	150	130	730
Number	1	6		2	12	7	14
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1863	1900	1863	1863
Adj Flow Rate, veh/h	870	1416		1796	147	141	793
Adj No. of Lanes	2	2		2	0	1	2
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	900	2976		1832	148	162	984
Arrive On Green	0.52	1.00		0.92	0.92	0.09	0.09
Sat Flow, veh/h	3442	3632		3410	268	1774	2787
Grp Volume(v), veh/h	870	1416		947	996	141	793
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1815	1774	1393
Q Serve(g_s), s	31.7	0.0		50.6	66.2	10.2	11.9
Cycle Q Clear(g_c), s	31.7	0.0		50.6	66.2	10.2	11.9
Prop In Lane	1.00				0.15	1.00	1.00
Lane Grp Cap(c), veh/h	900	2976		977	1003	162	984
V/C Ratio(X)	0.97	0.48		0.97	0.99	0.87	0.81
Avail Cap(c_a), veh/h	919	2976		977	1003	162	984
HCM Platoon Ratio	2.00	2.00		1.67	1.67	1.00	1.00
Upstream Filter(I)	0.17	0.17		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	0.0		4.2	4.8	58.3	38.0
Incr Delay (d2), s/veh	6.4	0.1		22.1	26.9	34.9	4.6
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	0.0		27.0	35.6	6.6	24.1
LnGrp Delay(d),s/veh	36.8	0.1		26.3	31.7	93.1	42.7
LnGrp LOS	D	A		C	C	F	D
Approach Vol, veh/h		2286		1943		934	
Approach Delay, s/veh		14.1		29.1		50.3	
Approach LOS		B		C		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	37.5	77.1		15.4		114.6		
Change Period (Y+Rc), s	3.5	5.3		3.5		5.3		
Max Green Setting (Gmax), s	34.7	71.1		11.9		100.3		
Max Q Clear Time (g_c+I1), s	33.7	68.2		13.9		2.0		
Green Ext Time (p_c), s	0.3	2.9		0.0		95.2		

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	418	564	196	344	649	344	228	1061	303	642	1171	460
Future Volume (veh/h)	418	564	196	344	649	344	228	1061	303	642	1171	460
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	454	613	213	374	705	300	248	1153	329	698	1273	500
Adj No. of Lanes	2	2	0	2	2	0	1	3	0	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	658	228	463	644	274	269	1139	325	641	1649	503
Arrive On Green	0.21	0.43	0.43	0.22	0.44	0.44	0.25	0.48	0.48	0.31	0.54	0.54
Sat Flow, veh/h	3442	2579	895	3442	2421	1030	1774	3933	1122	3442	5085	1552
Grp Volume(v), veh/h	454	420	406	374	515	490	248	994	488	698	1273	500
Grp Sat Flow(s),veh/h/ln	1721	1770	1705	1721	1770	1681	1774	1695	1665	1721	1695	1552
Q Serve(g_s), s	17.8	32.5	32.6	14.8	38.3	38.3	19.6	41.7	41.7	26.8	28.4	46.0
Cycle Q Clear(g_c), s	17.8	32.5	32.6	14.8	38.3	38.3	19.6	41.7	41.7	26.8	28.4	46.0
Prop In Lane	1.00		0.53	1.00		0.61	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	425	451	435	463	471	447	269	982	482	641	1649	503
V/C Ratio(X)	1.07	0.93	0.93	0.81	1.09	1.10	0.92	1.01	1.01	1.09	0.77	0.99
Avail Cap(c_a), veh/h	425	478	461	463	471	447	269	982	482	641	1649	503
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.38	0.38	0.38	0.87	0.87	0.87	0.31	0.31	0.31
Uniform Delay (d), s/veh	57.1	40.1	40.2	54.1	40.0	40.0	53.0	37.2	37.2	49.6	28.8	32.9
Incr Delay (d2), s/veh	62.7	24.6	25.6	3.9	55.6	56.2	31.5	29.9	41.3	49.0	1.1	20.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	18.9	18.4	7.3	25.9	24.7	11.9	23.5	24.6	17.0	13.2	22.3
LnGrp Delay(d),s/veh	119.8	64.8	65.8	57.9	95.6	96.2	84.5	67.0	78.5	98.7	29.9	53.6
LnGrp LOS	F	E	E	E	F	F	F	F	F	F	C	D
Approach Vol, veh/h		1280			1379			1730			2471	
Approach Delay, s/veh		84.6			85.6			72.8			54.1	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	47.0	23.6	42.4	26.0	52.0	22.0	44.0
Change Period (Y+Rc), s	4.2	* 5.3	4.2	* 5.7	4.2	* 5.3	4.2	* 5.7
Max Green Setting (Gmax), s	26.8	* 42	17.2	* 39	21.8	* 47	17.8	* 38
Max Q Clear Time (g_c+I1), s	28.8	43.7	16.8	34.6	21.6	48.0	19.8	40.3
Green Ext Time (p_c), s	0.0	0.0	0.1	2.1	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	70.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

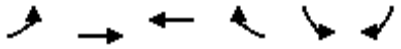
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	779	20	80	1105	180	41	10	30	240	10	311
Future Volume (veh/h)	220	779	20	80	1105	180	41	10	30	240	10	311
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	239	847	21	87	1201	170	45	11	33	261	11	338
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	1939	48	110	1315	185	45	11	33	296	8	257
Arrive On Green	0.28	0.92	0.92	0.10	0.70	0.70	0.05	0.05	0.05	0.17	0.17	0.17
Sat Flow, veh/h	1774	3529	88	1774	3116	439	864	211	633	1774	50	1541
Grp Volume(v), veh/h	239	425	443	87	680	691	89	0	0	261	0	349
Grp Sat Flow(s),veh/h/ln	1774	1770	1847	1774	1770	1785	1708	0	0	1774	0	1591
Q Serve(g_s), s	12.1	3.2	3.2	4.6	30.4	31.0	5.0	0.0	0.0	13.8	0.0	16.0
Cycle Q Clear(g_c), s	12.1	3.2	3.2	4.6	30.4	31.0	5.0	0.0	0.0	13.8	0.0	16.0
Prop In Lane	1.00		0.05	1.00		0.25	0.51		0.37	1.00		0.97
Lane Grp Cap(c), veh/h	293	972	1015	110	747	754	89	0	0	296	0	265
V/C Ratio(X)	0.81	0.44	0.44	0.79	0.91	0.92	1.00	0.00	0.00	0.88	0.00	1.32
Avail Cap(c_a), veh/h	293	972	1015	185	806	813	89	0	0	296	0	265
HCM Platoon Ratio	1.67	1.67	1.67	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.11	0.11	0.11	0.43	0.43	0.43	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.4	1.9	1.9	42.4	12.7	12.8	45.5	0.0	0.0	39.1	0.0	40.0
Incr Delay (d2), s/veh	1.9	0.2	0.2	2.0	8.6	9.1	95.6	0.0	0.0	24.5	0.0	166.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	1.3	1.4	2.3	16.1	16.5	4.7	0.0	0.0	8.8	0.0	19.3
LnGrp Delay(d),s/veh	35.3	2.1	2.1	44.4	21.3	21.8	141.1	0.0	0.0	63.6	0.0	206.5
LnGrp LOS	D	A	A	D	C	C	F			E		F
Approach Vol, veh/h		1107			1458			89			610	
Approach Delay, s/veh		9.2			22.9			141.1			145.4	
Approach LOS		A			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	58.0		20.0	21.2	45.8		9.0
Change Period (Y+Rc), s	3.0	5.3		4.0	5.3	* 5.3		4.0
Max Green Setting (Gmax), s	10.0	48.7		16.0	14.5	* 44		5.0
Max Q Clear Time (g_c+I1), s	5.6	5.2		18.0	14.1	33.0		7.0
Green Ext Time (p_c), s	0.0	8.8		0.0	0.1	7.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	351	698	924	226	154	371
Future Volume (veh/h)	351	698	924	226	154	371
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	382	759	1004	221	167	403
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	392	2163	1013	222	489	436
Arrive On Green	0.22	0.61	0.35	0.35	0.28	0.28
Sat Flow, veh/h	1774	3632	2980	634	1774	1583
Grp Volume(v), veh/h	382	759	615	610	167	403
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1751	1774	1583
Q Serve(g_s), s	18.9	9.4	30.5	30.7	6.7	21.9
Cycle Q Clear(g_c), s	18.9	9.4	30.5	30.7	6.7	21.9
Prop In Lane	1.00			0.36	1.00	1.00
Lane Grp Cap(c), veh/h	392	2163	621	614	489	436
V/C Ratio(X)	0.98	0.35	0.99	0.99	0.34	0.92
Avail Cap(c_a), veh/h	392	2163	621	614	522	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	8.5	28.5	28.6	25.6	31.1
Incr Delay (d2), s/veh	38.9	0.2	33.5	34.7	0.4	23.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	4.6	20.6	20.7	3.3	19.8
LnGrp Delay(d),s/veh	73.1	8.7	62.0	63.3	26.0	54.5
LnGrp LOS	E	A	E	E	C	D
Approach Vol, veh/h		1141	1225		570	
Approach Delay, s/veh		30.3	62.6		46.1	
Approach LOS		C	E		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		60.5		27.8	23.0	37.5		
Change Period (Y+Rc), s		6.5		3.5	3.5	6.5		
Max Green Setting (Gmax), s		54.0		26.0	19.5	31.0		
Max Q Clear Time (g_c+I1), s		11.4		23.9	20.9	32.7		
Green Ext Time (p_c), s		32.8		0.5	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	534	100	116	754	166	230	283	83	180	273	230
Future Volume (veh/h)	190	534	100	116	754	166	230	283	83	180	273	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	207	580	89	126	820	146	250	308	90	196	297	200
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	1065	163	133	910	162	257	486	407	219	446	373
Arrive On Green	0.12	0.35	0.35	0.08	0.30	0.30	0.15	0.26	0.26	0.12	0.24	0.24
Sat Flow, veh/h	1774	3078	471	1774	3003	535	1774	1863	1560	1774	1863	1561
Grp Volume(v), veh/h	207	333	336	126	483	483	250	308	90	196	297	200
Grp Sat Flow(s),veh/h/ln	1774	1770	1780	1774	1770	1768	1774	1863	1560	1774	1863	1561
Q Serve(g_s), s	10.8	14.1	14.2	6.6	24.4	24.4	13.1	13.6	4.2	10.1	13.4	10.4
Cycle Q Clear(g_c), s	10.8	14.1	14.2	6.6	24.4	24.4	13.1	13.6	4.2	10.1	13.4	10.4
Prop In Lane	1.00		0.26	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	613	616	133	536	536	257	486	407	219	446	373
V/C Ratio(X)	0.94	0.54	0.55	0.94	0.90	0.90	0.97	0.63	0.22	0.89	0.67	0.54
Avail Cap(c_a), veh/h	219	616	619	133	540	540	257	620	519	219	580	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	24.5	24.5	42.8	31.1	31.1	39.6	30.5	27.0	40.2	32.0	30.9
Incr Delay (d2), s/veh	45.6	1.8	1.8	60.9	19.0	19.0	47.8	2.9	0.6	33.0	3.7	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	7.1	7.2	5.5	14.6	14.6	9.8	7.4	1.9	7.0	7.4	4.8
LnGrp Delay(d),s/veh	86.1	26.3	26.3	103.8	50.0	50.0	87.4	33.4	27.6	73.2	35.8	33.4
LnGrp LOS	F	C	C	F	D	D	F	C	C	E	D	C
Approach Vol, veh/h		876			1092			648			693	
Approach Delay, s/veh		40.4			56.2			53.4			45.7	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	37.9	17.0	27.2	15.0	33.9	15.0	29.2
Change Period (Y+Rc), s	4.0	5.7	3.5	4.9	3.5	5.7	3.5	4.9
Max Green Setting (Gmax), s	7.0	32.4	13.5	29.0	11.5	28.4	11.5	31.0
Max Q Clear Time (g_c+I1), s	8.6	16.2	15.1	15.4	12.8	26.4	12.1	15.6
Green Ext Time (p_c), s	0.0	12.7	0.0	6.7	0.0	1.9	0.0	7.2

Intersection Summary	
HCM 2010 Ctrl Delay	49.3
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	160	225	320	30	263	270
Future Vol, veh/h	160	225	320	30	263	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	174	245	348	33	286	293
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	22.4	20.4	17.5
HCM LOS	C	C	C

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	42%	100%	0%
Vol Thru, %	91%	0%	0%	100%
Vol Right, %	9%	58%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	350	385	263	270
LT Vol	0	160	263	0
Through Vol	320	0	0	270
RT Vol	30	225	0	0
Lane Flow Rate	380	418	286	293
Geometry Grp	5	2	7	7
Degree of Util (X)	0.655	0.704	0.559	0.533
Departure Headway (Hd)	6.202	6.053	7.042	6.532
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	578	594	509	549
Service Time	4.283	4.127	4.831	4.32
HCM Lane V/C Ratio	0.657	0.704	0.562	0.534
HCM Control Delay	20.4	22.4	18.5	16.6
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	4.8	5.7	3.4	3.1

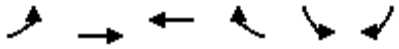
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱	↰	↑↑						↑	↱
Traffic Volume (veh/h)	0	750	310	187	569	0	0	0	0	240	10	261
Future Volume (veh/h)	0	750	310	187	569	0	0	0	0	240	10	261
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	815	337	203	618	0				261	11	284
Adj No. of Lanes	0	1	1	1	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	798	652	320	2380	0				341	14	317
Arrive On Green	0.00	0.86	0.86	0.06	0.22	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	1863	1522	1774	3632	0				1706	72	1583
Grp Volume(v), veh/h	0	815	337	203	618	0				272	0	284
Grp Sat Flow(s),veh/h/ln	0	1863	1522	1774	1770	0				1777	0	1583
Q Serve(g_s), s	0.0	34.3	4.6	8.9	11.5	0.0				11.6	0.0	14.0
Cycle Q Clear(g_c), s	0.0	34.3	4.6	8.9	11.5	0.0				11.6	0.0	14.0
Prop In Lane	0.00		1.00	1.00		0.00				0.96		1.00
Lane Grp Cap(c), veh/h	0	798	652	320	2380	0				355	0	317
V/C Ratio(X)	0.00	1.02	0.52	0.63	0.26	0.00				0.77	0.00	0.90
Avail Cap(c_a), veh/h	0	880	719	320	2380	0				355	0	317
HCM Platoon Ratio	1.00	2.00	2.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.7	3.6	35.0	14.7	0.0				30.2	0.0	31.2
Incr Delay (d2), s/veh	0.0	37.4	2.9	2.9	0.2	0.0				8.7	0.0	25.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	23.3	2.2	4.7	5.7	0.0				6.5	0.0	8.3
LnGrp Delay(d),s/veh	0.0	43.1	6.5	37.9	14.9	0.0				38.9	0.0	57.0
LnGrp LOS		F	A	D	B					D		E
Approach Vol, veh/h		1152			821						556	
Approach Delay, s/veh		32.4			20.6						48.2	
Approach LOS		C			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.1	40.8		21.1		58.9		
Change Period (Y+Rc), s	5.1	* 5.1		5.1		5.1		
Max Green Setting (Gmax), s	13.0	* 38		16.0		53.8		
Max Q Clear Time (g_c+I1), s	10.9	36.3		16.0		13.5		
Green Ext Time (p_c), s	0.1	0.8		0.0		3.1		

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	356	679	756	375	0	0
Future Volume (veh/h)	356	679	756	375	0	0
Number	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	387	738	822	408		
Adj No. of Lanes	1	1	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	419	1737	2257	975		
Arrive On Green	0.47	1.00	1.00	1.00		
Sat Flow, veh/h	1774	1863	3632	1529		
Grp Volume(v), veh/h	387	738	822	408		
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1529		
Q Serve(g_s), s	16.4	0.0	0.0	0.0		
Cycle Q Clear(g_c), s	16.4	0.0	0.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	419	1737	2257	975		
V/C Ratio(X)	0.92	0.42	0.36	0.42		
Avail Cap(c_a), veh/h	783	1737	2257	975		
HCM Platoon Ratio	2.00	2.00	2.00	2.00		
Upstream Filter(I)	0.34	0.34	0.74	0.74		
Uniform Delay (d), s/veh	20.5	0.0	0.0	0.0		
Incr Delay (d2), s/veh	1.4	0.3	0.3	1.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.9	0.1	0.1	0.3		
LnGrp Delay(d),s/veh	21.9	0.3	0.3	1.0		
LnGrp LOS	C	A	A	A		
Approach Vol, veh/h		1125	1230			
Approach Delay, s/veh		7.7	0.5			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		80.0			23.6	56.4		
Change Period (Y+Rc), s		5.4			* 4.7	5.4		
Max Green Setting (Gmax), s		74.6			* 35	34.6		
Max Q Clear Time (g_c+I1), s		2.0			18.4	2.0		
Green Ext Time (p_c), s		10.9			0.5	10.0		

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	528	0	0	647	82	273	203	213	40	0	220
Future Volume (veh/h)	151	528	0	0	647	82	273	203	213	40	0	220
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	164	574	0	0	703	89	259	274	199	43	0	239
Adj No. of Lanes	1	1	0	0	3	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	363	870	0	0	893	112	335	352	295	37	0	203
Arrive On Green	0.41	0.93	0.00	0.00	0.20	0.20	0.19	0.19	0.19	0.15	0.00	0.15
Sat Flow, veh/h	1774	1863	0	0	4745	575	1774	1863	1562	245	0	1364
Grp Volume(v), veh/h	164	574	0	0	519	273	259	274	199	282	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	0	1695	1761	1774	1863	1562	1610	0	0
Q Serve(g_s), s	5.4	4.2	0.0	0.0	11.6	11.8	11.1	11.2	9.5	11.9	0.0	0.0
Cycle Q Clear(g_c), s	5.4	4.2	0.0	0.0	11.6	11.8	11.1	11.2	9.5	11.9	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.33	1.00		1.00	0.15		0.85
Lane Grp Cap(c), veh/h	363	870	0	0	662	344	335	352	295	239	0	0
V/C Ratio(X)	0.45	0.66	0.00	0.00	0.78	0.79	0.77	0.78	0.67	1.18	0.00	0.00
Avail Cap(c_a), veh/h	363	870	0	0	831	432	397	417	350	239	0	0
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.73	0.73	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.4	1.5	0.0	0.0	30.6	30.7	30.8	30.8	30.1	34.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	3.6	0.0	0.0	6.8	13.0	8.7	8.7	4.9	114.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	2.4	0.0	0.0	6.0	7.0	6.2	6.6	4.5	12.9	0.0	0.0
LnGrp Delay(d),s/veh	20.7	5.2	0.0	0.0	37.4	43.6	39.5	39.5	35.1	148.8	0.0	0.0
LnGrp LOS	C	A			D	D	D	D	D	F		
Approach Vol, veh/h		738			792			732			282	
Approach Delay, s/veh		8.6			39.5			38.3			148.8	
Approach LOS		A			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		42.8		17.0	21.8	21.0		20.2
Change Period (Y+Rc), s		5.4		5.1	5.4	* 5.4		5.1
Max Green Setting (Gmax), s		34.6		11.9	10.3	* 20		17.9
Max Q Clear Time (g_c+I1), s		6.2		13.9	7.4	13.8		13.2
Green Ext Time (p_c), s		2.6		0.0	0.9	1.8		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	593	125	145	544	65	90	80	100	40	80	20
Future Volume (veh/h)	50	593	125	145	544	65	90	80	100	40	80	20
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	54	645	136	158	591	71	98	87	64	43	87	22
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	746	157	197	934	112	188	136	85	136	237	51
Arrive On Green	0.04	0.50	0.50	0.11	0.57	0.57	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	1493	315	1774	1632	196	538	665	416	317	1155	249
Grp Volume(v), veh/h	54	0	781	158	0	662	249	0	0	152	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1807	1774	0	1828	1620	0	0	1722	0	0
Q Serve(g_s), s	2.0	0.0	24.8	5.7	0.0	15.8	4.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	24.8	5.7	0.0	15.8	9.1	0.0	0.0	4.7	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.11	0.39		0.26	0.28		0.14
Lane Grp Cap(c), veh/h	68	0	903	197	0	1046	409	0	0	424	0	0
V/C Ratio(X)	0.79	0.00	0.87	0.80	0.00	0.63	0.61	0.00	0.00	0.36	0.00	0.00
Avail Cap(c_a), veh/h	123	0	958	204	0	1054	588	0	0	611	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.0	0.0	14.3	28.2	0.0	9.3	24.0	0.0	0.0	22.4	0.0	0.0
Incr Delay (d2), s/veh	18.4	0.0	8.2	19.7	0.0	1.3	1.8	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	14.2	3.8	0.0	8.3	4.4	0.0	0.0	2.4	0.0	0.0
LnGrp Delay(d),s/veh	49.5	0.0	22.5	47.9	0.0	10.7	25.7	0.0	0.0	23.1	0.0	0.0
LnGrp LOS	D		C	D		B	C			C		
Approach Vol, veh/h		835			820			249			152	
Approach Delay, s/veh		24.3			17.8			25.7			23.1	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.7	37.0		17.3	6.0	41.7		17.3
Change Period (Y+Rc), s	3.5	4.5		4.0	3.5	4.5		4.0
Max Green Setting (Gmax), s	7.5	34.5		21.0	4.5	37.5		21.0
Max Q Clear Time (g_c+I1), s	7.7	26.8		6.7	4.0	17.8		11.1
Green Ext Time (p_c), s	0.0	5.7		2.5	0.0	11.8		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	19.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	261	548	532	137	94	177
Future Vol, veh/h	261	548	532	137	94	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	284	596	578	149	102	192

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	727	0	-	0	1816	653
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	1163	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	876	-	-	-	~ 86	467
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	297	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	~ 58	467
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	201	-

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	117.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	876	-	-	-	273
HCM Lane V/C Ratio	0.324	-	-	-	1.079
HCM Control Delay (s)	11.1	-	-	-	117.9
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.4	-	-	-	11.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	517	100	225	504	5	70	10	180	10	10	10
Future Volume (veh/h)	15	517	100	225	504	5	70	10	180	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	16	562	109	245	548	5	76	11	158	11	11	11
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	556	976	189	468	1186	11	163	34	195	163	149	110
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	852	1516	294	763	1843	17	374	175	998	366	765	566
Grp Volume(v), veh/h	16	0	671	245	0	553	245	0	0	33	0	0
Grp Sat Flow(s),veh/h/ln	852	0	1811	763	0	1860	1547	0	0	1697	0	0
Q Serve(g_s), s	0.5	0.0	11.1	14.1	0.0	8.0	5.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	11.1	25.2	0.0	8.0	7.9	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		0.16	1.00		0.01	0.31		0.64	0.33		0.33
Lane Grp Cap(c), veh/h	556	0	1165	468	0	1197	391	0	0	422	0	0
V/C Ratio(X)	0.03	0.00	0.58	0.52	0.00	0.46	0.63	0.00	0.00	0.08	0.00	0.00
Avail Cap(c_a), veh/h	574	0	1202	483	0	1235	570	0	0	599	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	0.0	5.3	12.4	0.0	4.8	20.2	0.0	0.0	17.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	2.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	5.8	3.2	0.0	4.2	3.5	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d),s/veh	7.0	0.0	6.4	14.4	0.0	5.4	20.8	0.0	0.0	17.4	0.0	0.0
LnGrp LOS	A		A	B		A	C			B		
Approach Vol, veh/h		687			798			245			33	
Approach Delay, s/veh		6.4			8.1			20.8			17.4	
Approach LOS		A			A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		38.9		13.8		38.9		13.8
Change Period (Y+Rc), s		5.0		3.5		5.0		3.5
Max Green Setting (Gmax), s		35.0		16.5		35.0		16.5
Max Q Clear Time (g_c+I1), s		13.1		2.8		27.2		9.9
Green Ext Time (p_c), s		16.6		0.9		6.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	583	229	182	1059	979	687
Future Volume (veh/h)	583	229	182	1059	979	687
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	634	249	198	1151	1064	747
Adj No. of Lanes	2	1	1	3	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	942	434	123	2829	1531	1119
Arrive On Green	0.27	0.27	0.07	0.56	0.43	0.43
Sat Flow, veh/h	3442	1583	1774	5253	3632	1583
Grp Volume(v), veh/h	634	249	198	1151	1064	747
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1695	1770	1583
Q Serve(g_s), s	10.6	8.8	4.5	8.4	15.8	17.0
Cycle Q Clear(g_c), s	10.6	8.8	4.5	8.4	15.8	17.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	942	434	123	2829	1531	1119
V/C Ratio(X)	0.67	0.57	1.61	0.41	0.69	0.67
Avail Cap(c_a), veh/h	1754	807	123	2829	1569	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	20.3	30.1	8.2	14.9	5.3
Incr Delay (d2), s/veh	1.2	1.7	306.9	0.1	1.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	7.9	12.7	3.9	8.0	13.6
LnGrp Delay(d),s/veh	22.1	22.0	337.0	8.4	16.3	6.9
LnGrp LOS	C	C	F	A	B	A
Approach Vol, veh/h	883			1349	1811	
Approach Delay, s/veh	22.1			56.6	12.4	
Approach LOS	C			E	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.0		22.7	8.0	34.0		
Change Period (Y+Rc), s		6.0		5.0	3.5	* 6		
Max Green Setting (Gmax), s		36.0		33.0	4.5	* 29		
Max Q Clear Time (g_c+I1), s		10.4		12.6	6.5	19.0		
Green Ext Time (p_c), s		21.9		5.1	0.0	9.0		

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	200	100	545	345	110	250
Future Volume (veh/h)	200	100	545	345	110	250
Number	7	14	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	217	109	592	375	120	272
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	262	234	653	414	150	1382
Arrive On Green	0.15	0.15	0.61	0.61	0.08	0.74
Sat Flow, veh/h	1774	1583	1067	676	1774	1863
Grp Volume(v), veh/h	217	109	0	967	120	272
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1743	1774	1863
Q Serve(g_s), s	9.2	4.9	0.0	37.2	5.1	3.4
Cycle Q Clear(g_c), s	9.2	4.9	0.0	37.2	5.1	3.4
Prop In Lane	1.00	1.00		0.39	1.00	
Lane Grp Cap(c), veh/h	262	234	0	1067	150	1382
V/C Ratio(X)	0.83	0.47	0.00	0.91	0.80	0.20
Avail Cap(c_a), veh/h	368	329	0	1256	150	1583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	30.0	0.0	13.0	34.6	3.0
Incr Delay (d2), s/veh	7.3	0.5	0.0	8.4	26.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	2.2	0.0	19.9	3.6	1.8
LnGrp Delay(d),s/veh	39.2	30.6	0.0	21.4	61.2	3.1
LnGrp LOS	D	C		C	E	A
Approach Vol, veh/h	326		967			392
Approach Delay, s/veh	36.3		21.4			20.9
Approach LOS	D		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.0	51.7		15.4		61.7		
Change Period (Y+Rc), s	3.5	4.5		4.0		4.5		
Max Green Setting (Gmax), s	6.5	55.5		16.0		65.5		
Max Q Clear Time (g_c+I1), s	11.2	39.2		11.2		5.4		
Green Ext Time (p_c), s	0.0	7.9		0.3		12.3		

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	13.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↰					↖		↱
Traffic Vol, veh/h	0	560	200	140	370	0	0	0	0	120	5	280
Future Vol, veh/h	0	560	200	140	370	0	0	0	0	120	5	280
Conflicting Peds, #/hr	0	0	4	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	609	217	152	402	0	0	0	0	130	5	304

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	-	609	0	0	1316	1316	402
Stage 1	-	-	-	-	-	-	707	707	-
Stage 2	-	-	-	-	-	-	609	609	-
Critical Hdwy	-	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	0	970	-	0	174	158	648
Stage 1	0	-	0	-	-	0	489	438	-
Stage 2	0	-	0	-	-	0	543	485	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	-	-	-	970	-	-	139	0	648
Mov Cap-2 Maneuver	-	-	-	-	-	-	139	0	-
Stage 1	-	-	-	-	-	-	390	0	-
Stage 2	-	-	-	-	-	-	543	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.6	47.5
HCM LOS			E

Minor Lane/Major Mvmt	EBT	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	970	-	139	648
HCM Lane V/C Ratio	-	0.157	-	0.938	0.47
HCM Control Delay (s)	-	9.4	0	122.5	15.4
HCM Lane LOS	-	A	A	F	C
HCM 95th %tile Q(veh)	-	0.6	-	6.5	2.5

Intersection	
Intersection Delay, s/veh	115.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	440	0	0	300	110	210	5	390	0	0	0
Future Vol, veh/h	240	440	0	0	300	110	210	5	390	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	261	478	0	0	326	120	228	5	424	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	250.7	22.1	27.6
HCM LOS	F	C	D

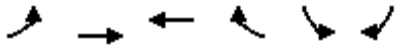
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2
Vol Left, %	98%	0%	35%	0%	0%
Vol Thru, %	2%	0%	65%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	390	680	300	110
LT Vol	210	0	240	0	0
Through Vol	5	0	440	300	0
RT Vol	0	390	0	0	110
Lane Flow Rate	234	424	739	326	120
Geometry Grp	7	7	6	7	7
Degree of Util (X)	0.507	0.781	1.489	0.671	0.223
Departure Headway (Hd)	8.655	7.425	7.253	8.055	7.327
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	418	492	503	453	493
Service Time	6.355	5.125	5.292	5.755	5.027
HCM Lane V/C Ratio	0.56	0.862	1.469	0.72	0.243
HCM Control Delay	19.9	31.8	250.7	25.7	12.1
HCM Lane LOS	C	D	F	D	B
HCM 95th-tile Q	2.8	7	37.5	4.8	0.8

Intersection	
Intersection Delay, s/veh	84.3
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	150	191	475	920	41	40
Future Vol, veh/h	150	191	475	920	41	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	208	516	1000	45	43
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	12.9	106	11.3
HCM LOS	B	F	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	191	475	920	41	40
LT Vol	150	0	0	0	41	0
Through Vol	0	191	475	0	0	0
RT Vol	0	0	0	920	0	40
Lane Flow Rate	163	208	516	1000	45	43
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.302	0.356	0.758	1.273	0.099	0.082
Departure Headway (Hd)	7.08	6.574	5.288	4.583	8.361	7.136
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	510	550	682	790	431	505
Service Time	4.78	4.274	3.051	2.346	6.061	4.836
HCM Lane V/C Ratio	0.32	0.378	0.757	1.266	0.104	0.085
HCM Control Delay	12.8	12.9	22.8	149	12	10.5
HCM Lane LOS	B	B	C	F	B	B
HCM 95th-tile Q	1.3	1.6	7	36.6	0.3	0.3



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	212	1045	228	1540	450
Future Volume (veh/h)	50	212	1045	228	1540	450
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	230	1136	248	1674	489
Adj No. of Lanes	1	1	2	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	69	775	1182	517	1667	767
Arrive On Green	0.04	0.42	0.33	0.33	0.48	0.48
Sat Flow, veh/h	1774	1863	3632	1548	3442	1583
Grp Volume(v), veh/h	54	230	1136	248	1674	489
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1548	1721	1583
Q Serve(g_s), s	3.3	9.0	34.4	13.9	52.9	25.2
Cycle Q Clear(g_c), s	3.3	9.0	34.4	13.9	52.9	25.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	69	775	1182	517	1667	767
V/C Ratio(X)	0.78	0.30	0.96	0.48	1.00	0.64
Avail Cap(c_a), veh/h	81	788	1183	517	1667	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	21.3	35.7	28.9	28.2	21.0
Incr Delay (d2), s/veh	27.6	0.1	17.5	0.3	23.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	4.6	19.6	6.0	30.3	22.8
LnGrp Delay(d),s/veh	79.6	21.3	53.2	29.1	51.3	22.4
LnGrp LOS	E	C	D	C	F	C
Approach Vol, veh/h		284	1384		2163	
Approach Delay, s/veh		32.4	48.9		44.7	
Approach LOS		C	D		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		51.2		58.0	9.0	42.3		
Change Period (Y+Rc), s		5.8		5.1	* 4.7	5.8		
Max Green Setting (Gmax), s		46.2		52.9	* 5	36.5		
Max Q Clear Time (g_c+I1), s		11.0		54.9	5.3	36.4		
Green Ext Time (p_c), s		7.5		0.0	0.0	0.1		

Intersection Summary	
HCM 2010 Ctrl Delay	45.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	10	385	5	224	5	1481	434	142	810	5
Future Volume (veh/h)	10	5	10	385	5	224	5	1481	434	142	810	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	5	11	333	124	243	5	1610	0	154	880	5
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	11	31	410	130	255	9	1715	767	179	2024	882
Arrive On Green	0.02	0.02	0.02	0.23	0.23	0.23	0.01	0.48	0.00	0.10	0.57	0.57
Sat Flow, veh/h	1238	563	1583	1774	564	1104	1774	3539	1583	1774	3539	1542
Grp Volume(v), veh/h	16	0	11	333	0	367	5	1610	0	154	880	5
Grp Sat Flow(s),veh/h/ln	1801	0	1583	1774	0	1668	1774	1770	1583	1774	1770	1542
Q Serve(g_s), s	1.0	0.0	0.8	21.2	0.0	25.8	0.3	51.2	0.0	10.2	16.9	0.2
Cycle Q Clear(g_c), s	1.0	0.0	0.8	21.2	0.0	25.8	0.3	51.2	0.0	10.2	16.9	0.2
Prop In Lane	0.69		1.00	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	0	31	410	0	385	9	1715	767	179	2024	882
V/C Ratio(X)	0.45	0.00	0.35	0.81	0.00	0.95	0.55	0.94	0.00	0.86	0.43	0.01
Avail Cap(c_a), veh/h	242	0	213	410	0	385	238	1792	802	179	2024	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	0.0	57.6	43.4	0.0	45.2	59.1	29.0	0.0	52.7	14.5	10.9
Incr Delay (d2), s/veh	3.2	0.0	2.5	11.1	0.0	33.5	17.9	10.0	0.0	31.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.4	11.6	0.0	15.5	0.2	27.2	0.0	6.5	8.3	0.1
LnGrp Delay(d),s/veh	61.0	0.0	60.1	54.4	0.0	78.6	77.0	39.0	0.0	83.8	15.1	11.0
LnGrp LOS	E		E	D		E	E	D		F	B	B
Approach Vol, veh/h		27			700			1615			1039	
Approach Delay, s/veh		60.6			67.1			39.1			25.2	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	64.2		6.9	5.6	74.6		32.0
Change Period (Y+Rc), s	4.0	* 6.5		4.5	5.0	6.5		4.5
Max Green Setting (Gmax), s	12.0	* 60		16.0	16.0	55.0		27.5
Max Q Clear Time (g_c+I1), s	12.2	53.2		3.0	2.3	18.9		27.8
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0	31.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	5253	0	3442	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	1721	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3092	9165	3421	7288	9618	4752	5062	5248	4689	4736	4736	4488
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	9165	3421	7288	9618	4752	5062	5248	4689	4736	4736	4488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	0	9999	9999	0	9999	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3539	1583	1774	3632	0	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	0	1774	1863	0	1774	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h												0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h												0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	4.534	2.8	4.534	4.534	4.534	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	2.234	0.5	2.234	2.234	2.234	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	7.2	5.5	7.2	7.2	7.2	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	2	0	0	2	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0	0	0
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0	0	0	0	0	0	0
Departure Headway (Hd)	4.534	2.8	4.534	2.8	4.534	2.8	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0	0	0
Service Time	2.234	0.5	2.234	0.5	2.234	0.5	2.234	0.5
HCM Lane V/C Ratio	0	0	0	0	0	0	0	0
HCM Control Delay	7.2	5.5	7.2	5.5	7.2	5.5	7.2	5.5
HCM Lane LOS	N	N	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0	0	0

HCM 2010 methodology does not support more than 4 approaches.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3092	6453	0	3092	6453	0	3092	6453	2814	3092	6453	2814
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	6453	0	3092	6453	0	3092	6453	2814	3092	6453	2814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1863	0	1774	1863	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	1863	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	80923764530124292608		80923764530124292608			0	800042926 08		0	800042926 08		0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	1833146 2801868655513 6		1833146 2801868655513 6			12	2800686555136		12	2800686555136		0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		0.0
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	0	9999	9999	0	0	9999	0	0	9999	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3632	0	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	0	0	1863	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	3092	3764	5210	3092	3764	5210	2814	6944	0	8000	4292608	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3092	3764	5210	3092	3764	5210	2814	6944	0	8000	4292608	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		0.0		0.0		0.0		0.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Appendix H

Candidate Sites Table - “Alternative Candidate Sites” Alterntaive

ENCINITAS HOUSING ELEMENT UPDATE - ENVIRONMENTAL ASSESSMENT
"ALTERNATIVE SITES" ALTERNATIVE MAXIMUM REALISTIC YIELD (MRY)

KEY:
"TEXT" = Measure T 2016 PEIR Site & Current Project Site
"TEXT" = Measure T 2016 PEIR Site & Alternative Site (not Current Project Site)
"TEXT" = Alternative Site, Added (not Current Project Site)
"TEXT" = Alternative Site & Current Project Site

SITE KEY	SITE #	COM-MUNITY # (1-5)	ADDRESS	COMMUNITY AREA	SITE ID NAME	APN	GROSS PARCEL (AC)	NET PARCEL (AC)	VACANT OR NON-VACANT SITE	OTG EXISTING RES (DU)	OTG EXISTING NON-RES (SF)	GP EXISTING	GP EXISTING DENSITY RES (DU/AC)	GP EXISTING MRY RES (DU)	GP EXISTING INTENSITY NON-RES (FAR)	GP EXISTING MRY NON-RES (SF)	GP PROPOSED	GP PROPOSED DENSITY RES (DU/AC)	GP PROPOSED MRY RES (DU)	GP PROPOSED INTENSITY NON-RES (FAR)	GP PROPOSED MRY NON-RES (SF)	ZONING EXISTING	ZONING EXISTING DENSITY RES (DU/AC)	ZONING EXISTING MRY RES (DU)	ZONING EXISTING INTENSITY NON-RES (FAR)	ZONING EXISTING MRY NON-RES (SF)	ZONING PROPOSED	ZONING PROPOSED DENSITY RES (DU/AC)	ZONING PROPOSED MRY RES (DU)	ZONING PROPOSED INTENSITY NON-RES (FAR)	ZONING PROPOSED MRY NON-RES (SF)
506400	01	3	3459 Manchester Ave	Cardiff	2016 PEIR Site C-6 (@ 4.6 AC); Greek Church Site	2611506400	2.5	2.00	Vacant	0	0	RR-1	1	2	--	--	RR-1, R-30 OL	30	60	--	--	RR-1	1	2	--	--	RR-1, R-30 OL	30	60	--	--
C1-S02	02	1	Piraeus St	Leucadia	Cannon Property (Piraeus Site)	2541440100	6.9	6.93	Vacant	0	0	RR-2	2	14	--	--	RR-2, R-30 OL	30	208	--	--	RR-2	2	14	--	--	RR-2, R-30 OL	30	208	--	--
C1-S03	03	1	634 Quail Gardens Lane	Leucadia	2016 PEIR Site L-7	2570111700	**9.5**	**8.55**	Vacant	0	0	RR-1	1	9	--	--	**RR-3**	**3**	26	--	--	RR-1	1	9	--	--	**RR-3**	**3**	26	--	--
C2-S05	05	2	Encinitas Blvd	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581111600	2.2	2.22	Vacant	0	0	OP	--	--	0.75	72,527	OP, R-30 OL	30	67	0.75	72,527	OP	--	--	0.75	72,527	OP, R-30 OL	30	67	0.75	72,527
	05	2	Quail Gardens Dr	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581304500	0.4	0.23	Vacant	0	0	OP	--	--	0.75	7,514	OP, R-30 OL	30	7	0.75	7,514	OP	--	--	0.75	7,514	OP, R-30 OL	30	7	0.75	7,514
	05	2	550 Encinitas Blvd	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581308100	1.3	1.31	Vacant	0	0	OP	--	--	0.75	42,798	OP, R-30 OL	30	39	0.75	42,798	OP	--	--	0.75	42,798	OP, R-30 OL	30	39	0.75	42,798
	05	2	696 Encinitas Blvd	Old Encinitas	2016 PEIR Site OE-7; Encinitas Blvd & Quail Gardens Sites	2581303400	1.0	1.02	Vacant	1	0	OP	--	--	0.75	33,323	OP, R-30 OL	30	31	0.75	33,323	OP	--	--	0.75	33,323	OP, R-30 OL	30	31	0.75	33,323
C1-S07	07	1	1950 Highway 101	Leucadia	Jackel Property	2160412000	1.9	1.91	Vacant	0	0	VSC	--	--	1	83,200	VSC, R-30 OL	30	57	1	83,200	N-LVSC	--	--	1	83,200	N-LVSC, R-30 OL	30	57	1	83,200
	07	1	N/A	Leucadia	Jackel Property	2160412100	1.1	1.06	Vacant	0	0	VSC	--	--	1	46,174	VSC, R-30 OL	30	32	1	46,174	N-LVSC	--	--	1	46,174	N-LVSC, R-30 OL	30	32	1	46,174
C4-SAD01	AD01	4	Sage Canyon Dr	New Encinitas	Sage Canyon Parcel	2620618500	5.2	2.40	Vacant	0	0	R-3	3	7	--	--	R-3, R-30 OL	30	72	--	--	R-3	3	7	--	--	R-3, R-30 OL	30	72	--	--
C2-SAD02	AD02	2	195 Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581308000	1.0	1.00	Vacant	0	0	R-5	5	5	--	--	R-5, R-30 OL	30	30	--	--	R-5	5	5	--	--	R-5, R-30 OL	30	30	--	--
	AD02	2	Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581308200	1.3	1.28	Vacant	0	0	R-5	5	6	--	--	R-5, R-30 OL	30	38	--	--	R-5	5	6	--	--	R-5, R-30 OL	30	38	--	--
	AD02	2	185 Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581308600	2.2	2.24	Vacant	0	0	R-5	5	11	--	--	R-5, R-30 OL	30	67	--	--	R-5	5	11	--	--	R-5, R-30 OL	30	67	--	--
	AD02	2	Mays Hollow Ln	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581309100	0.5	0.51	Vacant	0	0	R-5	5	3	--	--	R-5, R-30 OL	30	15	--	--	R-5	5	3	--	--	R-5, R-30 OL	30	15	--	--
	AD02	2	Encinitas Blvd	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581309300	3.2	0.61	Vacant	0	0	R-5	5	3	--	--	R-5, R-30 OL	30	18	--	--	R-5	5	3	--	--	R-5, R-30 OL	30	18	--	--
	AD02	2	Encinitas Blvd	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2581309400	0.3	0.27	Vacant	0	0	R-5	5	1	--	--	R-5, R-30 OL	30	8	--	--	R-5	5	1	--	--	R-5, R-30 OL	30	8	--	--
	AD02	2	Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2570203600	1.9	1.87	Vacant	0	0	R-3	3	6	--	--	R-3, R-30 OL	30	56	--	--	R-3	3	6	--	--	R-3, R-30 OL	30	56	--	--
	AD02	2	225 Quail Gardens Dr	Old Encinitas	2016 PEIR Site ALT-5; Baldwin & Sons Properties	2570203700	1.3	1.27	Vacant	0	0	R-3	3	4	--	--	R-3, R-30 OL	30	38	--	--	R-3	3	4	--	--	R-3, R-30 OL	30	38	--	--
C1-S09	09	1	1150 Quail Gardens Dr	Leucadia	Echter Property	2546121200	21.5	9.85	Non-Vacant	1	606,076	SP-3	3	30	--	--	SP-3, R-30 OL	30	296	--	--	ER-AG	0.1	1	--	--	ER-AG, R-30 OL	30	296	--	--
C4-S11	11	4	El Camino Real	New Encinitas	El Camino Real South Parcel	2621601400	2.3	1.92	Non-Vacant	0	43,765	R-3	3	6	--	--	R-3, R-30 OL	30	58	--	--	R-3	3	6	--	--	R-3, R-30 OL	30	58	--	--
C2-S12	12	2	630 Encinitas Blvd	Old Encinitas	Sunshine Gardens Parcel	2581309700	2.0	2.04	Non-Vacant	0	2,536	OP	--	--	0.75	66,647	OP, R-30 OL	30	61	0.75	66,647	OP	--	--	0.75	66,647	OP, R-30 OL	30	61	0.75	66,647
	12	2	Encinitas Blvd	Old Encinitas	Sunshine Gardens Parcel	2581309800	1.4	1.35	Non-Vacant	0	4,313	OP	--	--	0.75	44,105	OP, R-30 OL	30	41	0.75	44,105	OP	--	--	0.75	44,105	OP, R-30 OL	30	41	0.75	44,105
C4-S06	06	4	El Camino Real	New Encinitas	Armstrong Parcels (Armstrong)	2574702400	1.9	1.06	Vacant	0	0	GC	--	--	1	46,174	GC, R-30 OL	30	32	1	46,174	GC	--	--	1	46,174	GC, R-30 OL	30	32	1	46,174
	06	4	El Camino Real	New Encinitas	Armstrong Parcels (Armstrong Nursery II Parcel)	2574702300	1.9	1.87	Non-Vacant	0	5,421	GC	--	--	1	81,457	GC, R-30 OL	30	56	1	81,457	GC	--	--	1	81,457	GC, R-30 OL	30	56	1	81,457
C5-S08	08	5	2220 Encinitas Blvd	Olivenhain	Rancho Santa Fe Sites (Gaffney/Goodsen)	2592312800	3.9	3.57	Non-Vacant	1	8,061	RR-2	2	7	--	--	RR-2, R-30 OL	30	107	--	--	RR-2	2	7	--	--	RR-2, R-30 OL	30	107	--	--
	08	5	2230 Encinitas Blvd	Olivenhain	Rancho Santa Fe Sites (Gaffney/Goodsen)	2592313000	0.5	0.54	Non-Vacant	1	3,082	RR-2	2	1	--	--	RR-2, R-30 OL	30	16	--	--	RR-2	2	1	--	--	RR-2, R-30 OL	30	16	--	--
	08	5	2228 Encinitas Blvd	Olivenhain	Rancho Santa Fe Sites (Gaffney/Goodsen)	2592313100	0.5	0.46	Non-Vacant	1	3,297	RR-2	2	1	--	--	RR-2, R-30 OL	30	14	--	--	RR-2	2	1	--	--	RR-2, R-30 OL	30	14	--	--
	08	5	Rancho Santa Fe Dr	Olivenhain	2016 PEIR Site O-6 (excluded other 3 Site 08 parcels); Rancho Santa Fe Sites (Gaffney/Goodsen)	2592313200	1.8	1.45	Vacant	0	0	RR-2	2	3	--	--	RR-2, R-30 OL	30	44	--	--	RR-2	2	3	--	--	RR-2, R-30 OL	30	44	--	--
C2-SAD09	AD09	2	1050 Regal Road	Old Encinitas	Seacoast Church	2582411000	4.5	**1.36**	Non-Vacant	0	22,930	R-11	11	15	0.6	--	**R-11, R-30 OL**	**30**	41	0.6	--	R-11	11	15	--	--	**R-11, R-30 OL**	**30**	41	--	--
C1-SAD07	AD07	1	1900 N Highway 101	Leucadia	Dewitt Property	2160410600	0.8	0.80	Non-Vacant	0	4,574	GC	--	--	1	34,848	GC, R-30 OL	30	24	1	34,848	N-CRM-1 (N101SP)	25	20	1	34,848	N-CRM-1 (N101SP), R-30 OL	30	24	1	34,848
C3-SAD11	AD11	3	2951 Manchester Ave	Cardiff	Manchester Avenue West Sites	2612003700	0.5	0.43	Non-Vacant	1	0	R-11	11	5	--	--	RR-11, R-30 OL	30	13	--	--	R-11	11	5	--	--	RR-11, R-30 OL	30	13	--	--
			2951 Manchester Ave			2612003800	0.5	0.39	Vacant	0	0	R-11	11	4	--	--	RR-11, R-30 OL	30	12	--	--	R-11	11	4	--	--	RR-11, R-30 OL	30	12	--	--
			2955 Manchester Ave			2612003900	0.6	0.45	Non-Vacant	1	0	R-11	11	5	--	--	RR-11, R-30 OL	30	13	--	--	R-11	11	5	--	--	RR-11, R-30 OL	30	13	--	--
C5-SAD12	AD12	5	Rancho Santa Fe Rd	Olivenhain	2016 PEIR Site O-2; Rancho Santa Fe East	2592215700	4.7	4.60	Vacant	0	0	RR-2	2	9	--	--	RR-2, R-30 OL	30	138	--	--	RR-2	2	9	--	--	RR-2, R-30 OL	30	138	--	--
C2-SAD14	AD14	2	364 2nd St	Old Encinitas	2016 PEIR Site OE-1; Harrison Sites	2580521200	0.6	0.51	Non-Vacant	0	15,700	DESP-VSC	--	--	1	22,303	DESP-VSC, R-30 OL	30	15	1	22,303	DESP-VSC	--	--	1	22,303	DESP-VSC, R-30 OL	30	15	1	22,303
			371 2nd St			2580350700	1.3	1.00	Non-Vacant	0	7,500	DESP-VSC	--	--	1	43,560	DESP-VSC, R-30 OL	30	30	1	43,560	DESP-VSC	--	--	1	43,560	DESP-VSC, R-30 OL	30	30	1	43,560
C1-SAD31	AD31	1	682 Clark Ave	Leucadia	Meyer Property	2561711300	0.8	0.75	Non-Vacant	1	0	R-5	5	4	--	--	RR-5, R-30 OL	30	23	--	--	R-5	5	4	--	--	RR-5, R-30 OL	30	23	--	--
			672 Clark Ave			2561711400	0.6	0.63	Non-Vacant	1	0	R-5	5	3	--	--	RR-5, R-30 OL	30	19	--	--	R-5	5	3	--	--	RR-5, R-30 OL	30	19	--	--
			662 Clark Ave			2561711500	1.4	1.43	Non-Vacant	0	0	R-5	5	7	--	--	RR-5, R-30 OL	30	43	--	--	R-5	5	7	--	--	RR-5, R-30 OL	30	43	--	--
			556 Union St			2561712000	0.5	0.53	Non-Vacant	0	0	R-3	3	2	--	--	RR-3, R-30 OL	30	16	--	--	R-3	3	2	--	--	RR-3, R-30 OL	30	16	--	--
			556 Union St			2561712100	0.3	0.33	Non-Vacant	0	0	R-3	3	1	--	--	RR-3, R-30 OL	30	10	--	--	R-3	3	1	--	--	RR-3, R-30 OL	30	10	--	--
			556 Union St			2561712400	2.8	2.81	Non-Vacant	0	400	R-3	3	8	--	--	RR-3, R-30 OL	30	84	--	--	R-3	3	8	--	--	RR-3, R-30 OL	30	84	--	--
C4-SAD32	AD32	4	780 Garden View Ct	New Encinitas	Garden View Court (previously Frog's Gym)	2574702500	1.9	1.02	Non-Vacant	0	14,500	OP	--	--	0.75	33,343	OP, R-30 OL	30	31	0.75	33,343	OP	--	--	0.75	33,343	OP, R-30 OL	30	31	0.75	33,343
			780 Garden View Ct			2574700900	1.3	0.69	Non-Vacant	0	0	OP	--	--	0.75	22,405	OP, R-30 OL	30	21	0.75	22,405	OP	--	--	0.75	22,405	OP, R-30 OL	30	21	0.75	22,405
			780 Garden View Ct			2574701000	1.0	0.52	Non-Vacant	0	0	OP	--	--	0.75	17,113	OP, R-30 OL	30	16	0.75	17,113	OP	--	--	0.75	17,113	OP, R-30 OL	30	16	0.75	17,113
C1-SAD08	AD08	1	1967 N Vulcan Ave	Leucadia	Vulcan & La Costa Site	2160520100	2.0	2.00	Non-Vacant	1	8,650	R-3	3	6	--	--	R-3, R-30 OL	30	60	--	--	N-R3 (N101SP)	3	6	--	--	N-R3 (N101SP), R-30 OL	30	60	--	--
20					***46***	***107.3***	***81.0***		***10***	***750,805***		***187***		***697,489***			***2,201***		***697,489***			***179***			***697,489***			***2,201***		***697,489***	

2,013	-53,316
GP PROP : GP EXIS DELTA	
2,191	-750,805
GP PROP : EXIS OTG DELTA	

2,201
CEQA ALTERNATIVE

2,022	0
ZONING PROP : ZONING EXIS DELTA	
2,191	-750,805
ZONING PROP : EXIS OTG DELTA	

Proposed Project	
2,494	
ZONING PROPOSED:2016 PEIR DELTA	
-293	0
-12%	0%