

Appendix A
Option Two (I-3)

Option Number Two (I-5)

Relocate rail right-of-way to I-5 Corridor from Sorrento Valley to Palomar Airport Road in Carlsbad.

Project Description

Relocate the rail corridor from the coastline to an area adjacent to the I-5 corridor and extending from Palomar Airport Road in Carlsbad to Sorrento Valley where it would connect with the existing right of way. Consideration would be given to the need for longer curves and for the need to maintain less than a 2% grade.

Roughly paralleling the I-5 this new rail line would require 3.3 miles of cut and fill, 8.3 miles of tunnels and 7.2 miles of bridges for a total of 18.8 miles. Along this particular route there are twelve (12) on/off ramps.

Preliminary Cost Estimate

- Tunnels:
 - Double Track and signal
 - \$119 million per mile
 - Total: \$987.7 million.
- Bridges over lagoons and valleys:
 - Double track and signal
 - \$ 70 million per mile
 - Total: \$504 million.
- Cut and Fill:
 - Double track and signal
 - \$ 5.9 million per mile
 - Total: \$19.47 million.
- Rail infrastructure designed to avoid interference with the on/off ramps on I-5:
 - twelve on/off ramps
 - \$ 25 million each
 - Total: \$ 300 million.
- Total project cost estimate (infrastructure only): \$1.82 billion
- Preliminary cost estimate does not include:
 - Land acquisition
 - Relocation of businesses and residences
 - Diversions to avoid institutional structures (Scripps Hospital and the water treatment plant in Carlsbad).
 - Construction cost of building rail and other mass transit stations and parking facilities.

Benefits

- Relocates rail line and rail traffic away from coastal region.
- Contributes to a reduction in the vibrations to the coastal bluffs from the rail.

- Allows for the consolidation of all *through* transportation for North San Diego County into one corridor.
- Represents a reduced amount of environmental impact along the coastline.
- May represent an opportunity for greater access for the *potential* rail passenger.
- The project may qualify for State/Federal funds as a truck/rail corridor (goods movement).
- Will provide the project sponsors with the ability to reallocate certain portions of the coastal rail right of way to pedestrian and bike path use.
- Presents an opportunity for a significant public works project and the cost/benefits that are normally associated with such projects.

Negative Impact

- Requires 19 - 20 miles of right-of-way acquisition: Current real estate prices are obviously on the upswing in the County.
- Relocation of businesses/industry.
- This could have serious ramifications since not only will land price be a factor but also loss of business, loss of staff, and other factors are likely to make this very costly and disruptive.
- Relocation of residences.
- Diversions to avoid institutional structures (Scripps Hospital and the water treatment plant in Carlsbad are just two examples).
- May represent a reduction in public transportation for the downtown businesses.
- Involves a significant public works project with all the attendant difficulties usually associated with such a project.

DEPARTMENT OF TRANSPORTATION

DISTRICT 11
P.O. BOX 85406
San Diego, CA 92186-5406
PHONE (619) 688-6668
FAX (619) 688-3122



January 30, 2001

11-SD-5
PM 30.0-47.5

Mr. Jeffrey Amos
Senior Associate
Don Breazeale & Associates
533 Summer View Circle
Encinitas, CA 92024

RE: Encinitas Rail Study
Option Number Two - I-5 Rail

Dear Mr. Amos:

At your request, we have reviewed the estimate presented in the Encinitas Rail Project Study, Option No. 2 by your company. We have the following comments:

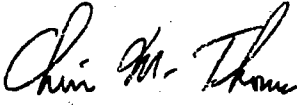
1. The mileage you show is 18.8 miles. The postmile difference between Sorrento Valley and Palomar Airport Rd is 16.7 miles. We are assuming that you added a mile on each end to transition from Interstate 5 (I-5) to the existing rail lines.
2. Assuming a 48-foot wide typical section, the tunnel cost you are using is \$470/ sq. ft. This tunnel cost seems reasonable, as long as extremely soft or caveable strata or extremely hard plutonic rock is not encountered. The latter is not likely in the coastal area.
3. Assuming a 48-foot wide structure, the elevated structure costs that you are using is \$275/ sq. ft. This compares to \$185 to \$230/sq.ft. that we used on the I-5 elevated express lane structure. Considering the extra loading requirements of rail, this cost seems reasonable.
4. The at-grade (cut/fill) sections estimate of \$6 million/mile seems reasonable.
5. The need to avoid interference at the interchanges may not be required for tunnel and elevated structure options. The \$25 million cost seems reasonable per interchange.
6. The above comments only refer to construction costs. We have been adding support costs to our estimates. We recommend adding 25% for support costs.

Mr. Jeffrey Arnos
January 30, 2001
Page Two

7. It should be noted that the above estimates do not reflect environmental mitigation and right-of-way costs.

Thank you for the opportunity to review this estimate. If you have any questions, please call me at (619) 688-6668 or Bob Hoglen at (619) 220-5384.

Sincerely,

For 
GARY L. GALLEGOS
District Director

Appendix B
Option Seven (7)

Option Number Seven

Double track, trench, and cover the Encinitas Rail Corridor.

Project Description

Double track, trench, and cover for a distance of 5.1 miles from the south side of San Elijo Lagoon to the south side of Batiquitos Lagoon and construct a new rail bridge.

Preliminary Cost Estimates

- Double track with trench and cover:
 - 5.1 miles
 - \$ 33.55 million per mile
 - Total: \$ 171.105 million
- Construct new rail bridge:
 - One (1) mile
 - \$ 66 million per mile
 - Total: \$ 66 million
- Total estimated cost: \$237.105 million

Benefits

- Scheduling: a more customer friendly schedule could be developed for the Coaster and Amtrak passenger trains and the freight trains would be better served as well.
- Horn/whistle blowing: Eliminated
- Pedestrian/bike access: greatly improved between the east and west sides of the tracks in downtown.
- The pedestrian/bike access would not be at-grade through Leucadia, Encinitas and Cardiff (safer).
- Ground water diversion: could possibly contribute to ground water diversion that may slow the erosion of the bluffs (speculation and not backed by facts).
- Automobile and pedestrian traffic circulation: would be greatly enhanced especially in the downtown area and businesses on both sides of the right of way will benefit.
- The City of Encinitas could use covered portion of trench for pedestrian/bike/vehicle crossings plus additional parking or green belt, or a linear park.

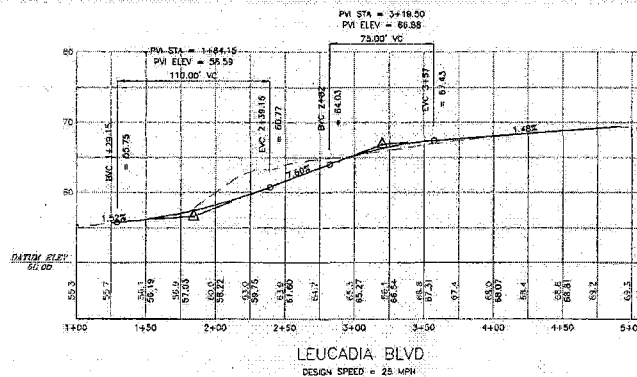
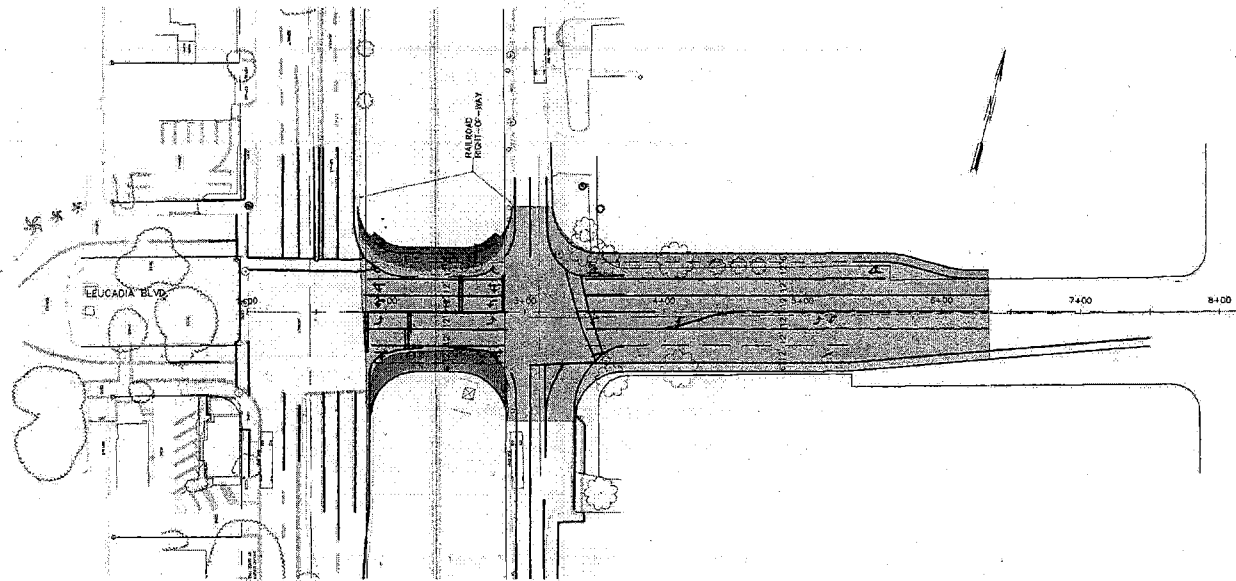
Negative Impact

- Disruption for approximately two years during construction.

Appendix C

Rail Funding and Spread Sheet Supporting Funding Issues

Attachment B



WILLDAN Serving Public Agencies 5500 Cornerstone Court West, Suite 300, San Diego, California 92121 619/467-6000 fax 619/467-6046			
REVISIONS	APPROVED	DATE	REFERENCES

BENCH MARK

SCALE
HORIZONTAL 1"=40'
VERTICAL 1"=8'



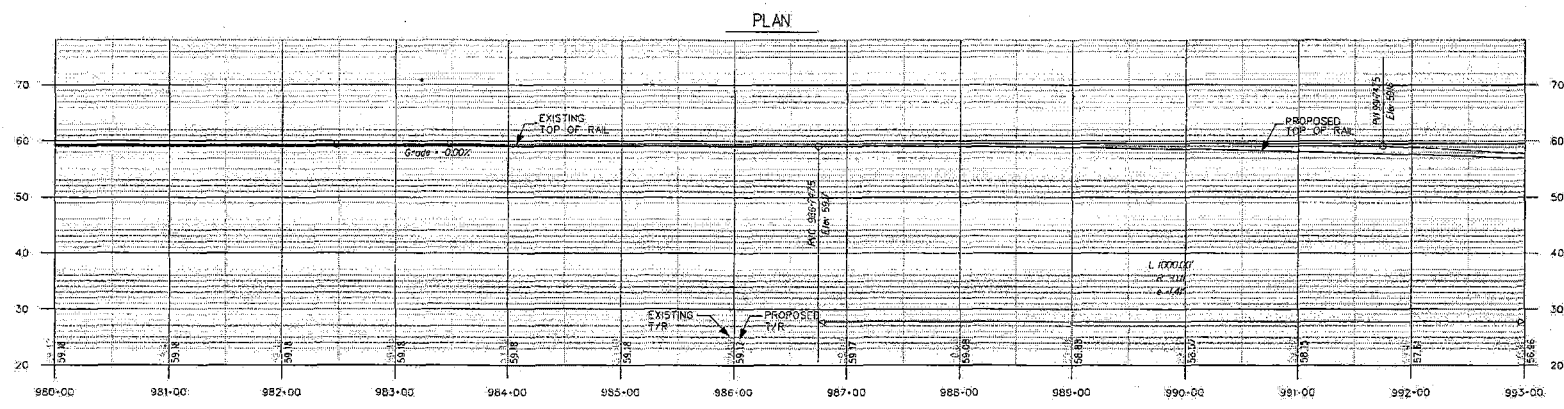
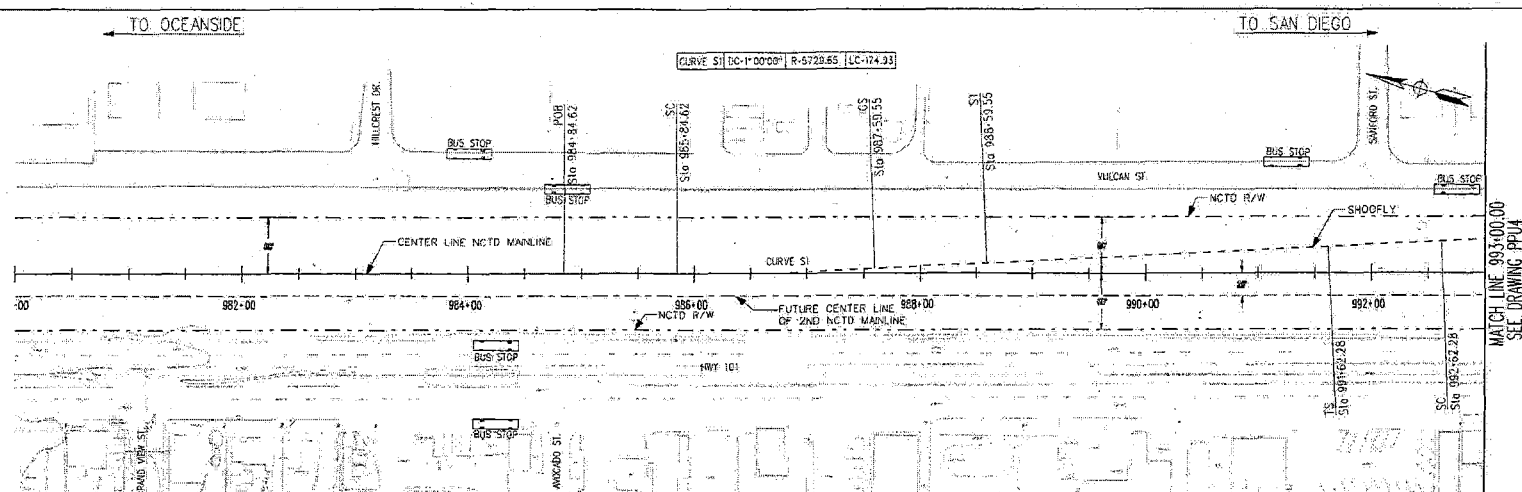
DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	BY
R.C.E. NO.	EXP.	DATE

APPROVALS	
RECOMMENDED	APPROVED
DATE	DATE

CITY OF ENCINITAS ENGINEERING DEPARTMENT LEUCADIA BLVD AND RAIL CORRIDOR GRADE SEPARATION STUDY - ALTERNATIVE 1 LEUCADIA BLVD OVER RAILROAD TRENCH PLAN & PROFILE WORK PROJECT NO.
--

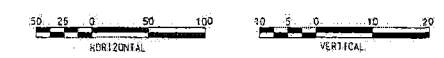
DRAWING NO.
SHEET 1 OF 1

ENGINEER'S NAME
ADDRESS
PHONE NO.



PROFILE

PRELIMINARY



REVISIONS	APPROVER	DATE	REFERENCES	DATE	BENCH MARK	SCALE

HORIZONTAL AS SHOWN
VERTICAL AS SHOWN



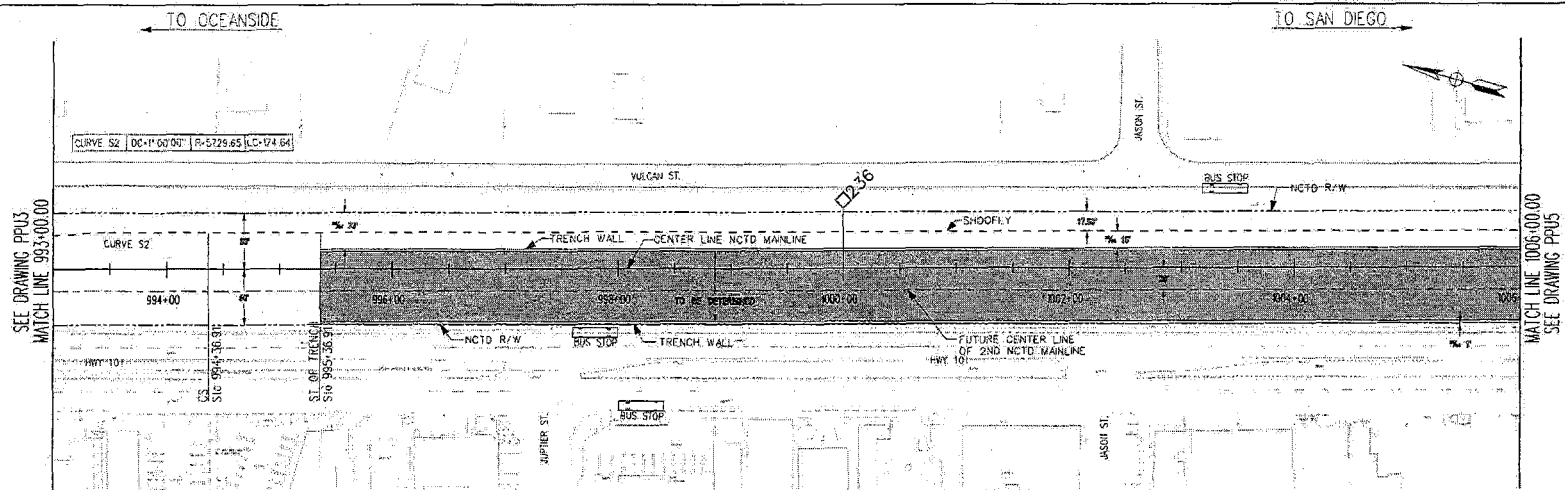
DESIGN BY: DRAWN BY: CHECKED BY:
PLANS PREPARED UNDER SUPERVISION OF: DATE: R.E.T. NO. 1: ENGINEER: EXP:

APPROVALS
RECOMMENDED BY: DATE: APPROVED BY: DATE:

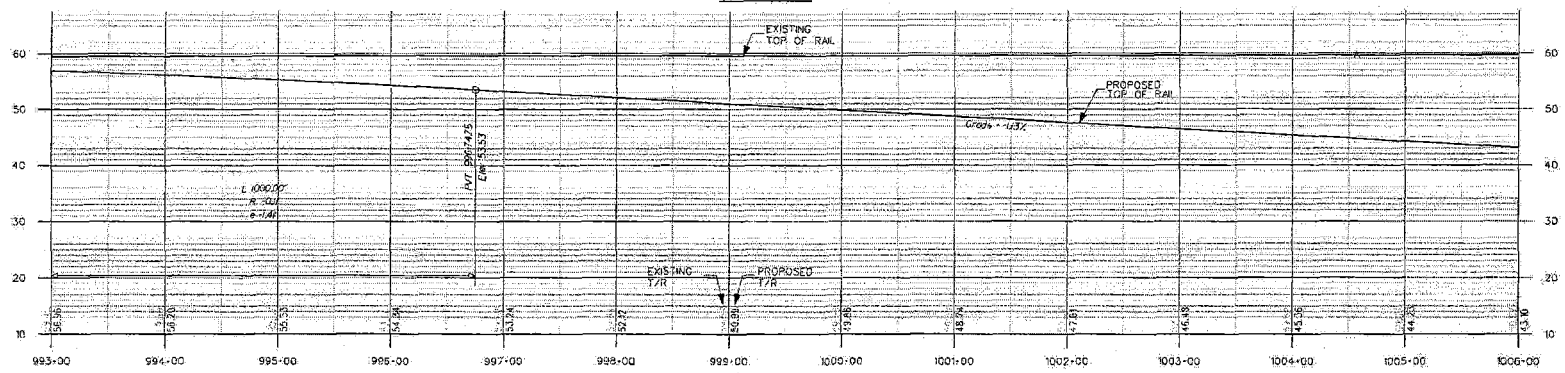
CITY OF ENCINITAS ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
ALTERNATIVE 1 - RAILROAD UNDERPASS LEUCADIA BLVD.
PLAN AND PROFILE
980+00 TO 993+00
WORK PROJECT NO. K4-610-206

DRAWING NO. SHEET 1 OF 8

ENGINEER'S NAME: HANSON, WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO: 909-806-8000



PLAN



PROFILE

PRELIMINARY



PLAN: 11/11/03 10:00 AM 11/11/03 10:00 AM 11/11/03 10:00 AM

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE
	HORIZONTAL AS SHOWN
	VERTICAL AS SHOWN



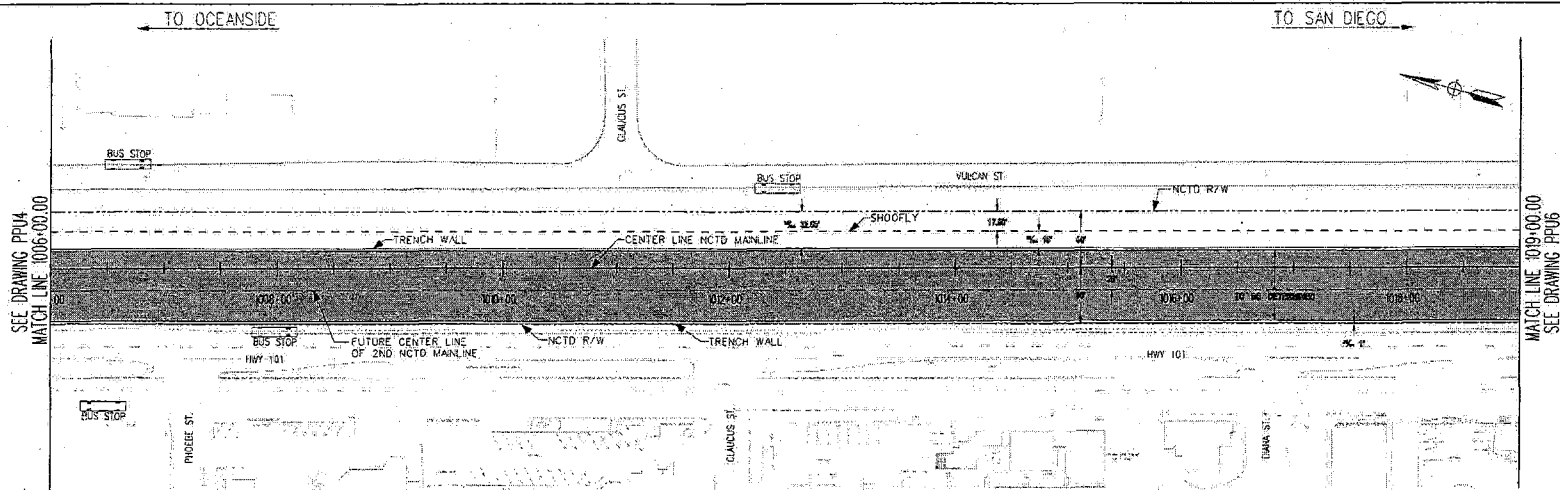
DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	BY
ENGINEER	EXP.	DATE

APPROVALS
RECOMMENDED
APPROVED
DATE

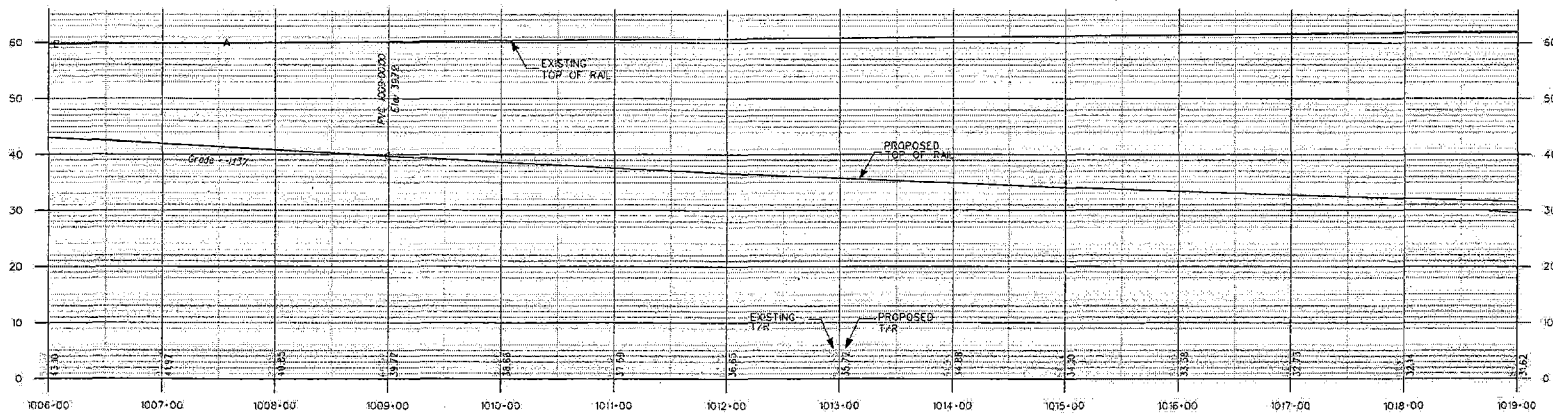
CITY OF ENCINITAS	ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY	DRAWING NO.
ALTERNATIVE 1 - RAILROAD UNDERPASS LEUCADIA BLVD.	
PLAN AND PROFILE	
993+00 TO 1006+00	
WORK PROJECT NO. K4-S10-206	

SHEET 2 OF 3

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO: 619-595-806-8000



PLAN



PROFILE

PRELIMINARY



HANSON
WILSON
INCORPORATED
1720 UNIVERSITY LANE, SUITE 100
SAN MARINO, CALIFORNIA 91766
PHONE (909) 881-0000
FAX (909) 881-0000

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE
	HORIZONTAL AS SHOWN
	VERTICAL AS SHOWN



SANDAG
San Diego Area Regional Planning Agency

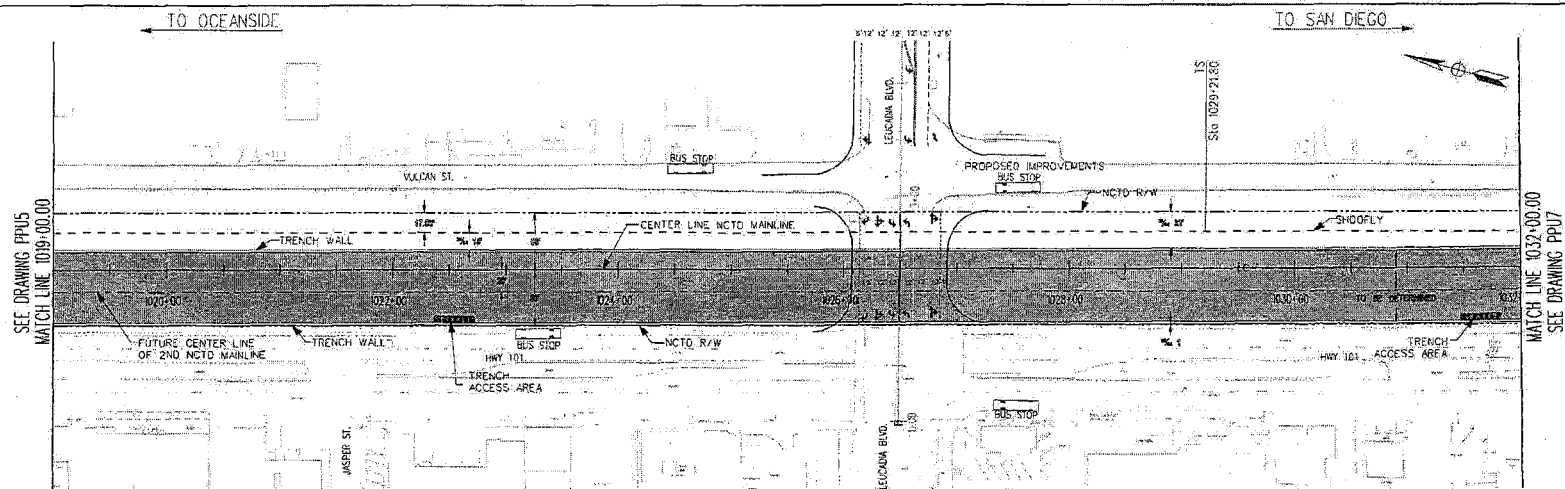
DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	R.C.E. NO.
ENGINEER	DATE	EXP.

RECOMMENDED	APPROVED
BY	BY
DATE	DATE

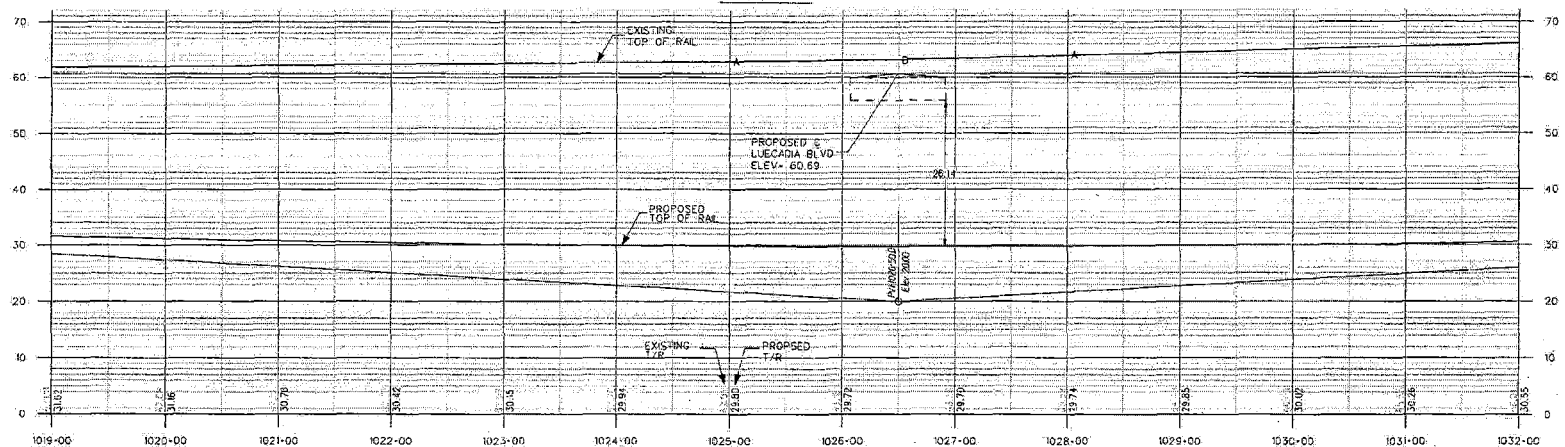
CITY OF ENCINITAS
ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
ALTERNATIVE 1-RAILROAD UNDERPASS LEUCADIA BLVD.
PLAN AND PROFILE
1006+00 TO 1019+00
WORK PROJECT NO. 24-510-206

DRAWING NO.
24-510-206
SHEET 3 OF 8

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 1720 UNIVERSITY LANE, SUITE 100
PHONE: (909) 881-0000



PLAN



PROFILE

PRELIMINARY



HANSON WILSON
270 N. HOSPITALITY, SUITE 100
SAN ENCINITAS, CALIFORNIA 92061
PHONE (619) 450-8000
FAX (619) 450-8001

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE
	HORIZONTAL AS SHOWN
	VERTICAL AS SHOWN



SANDAG
San Diego Regional Planning Agency

DESIGNED BY	REVIEW BY	CHECKED BY

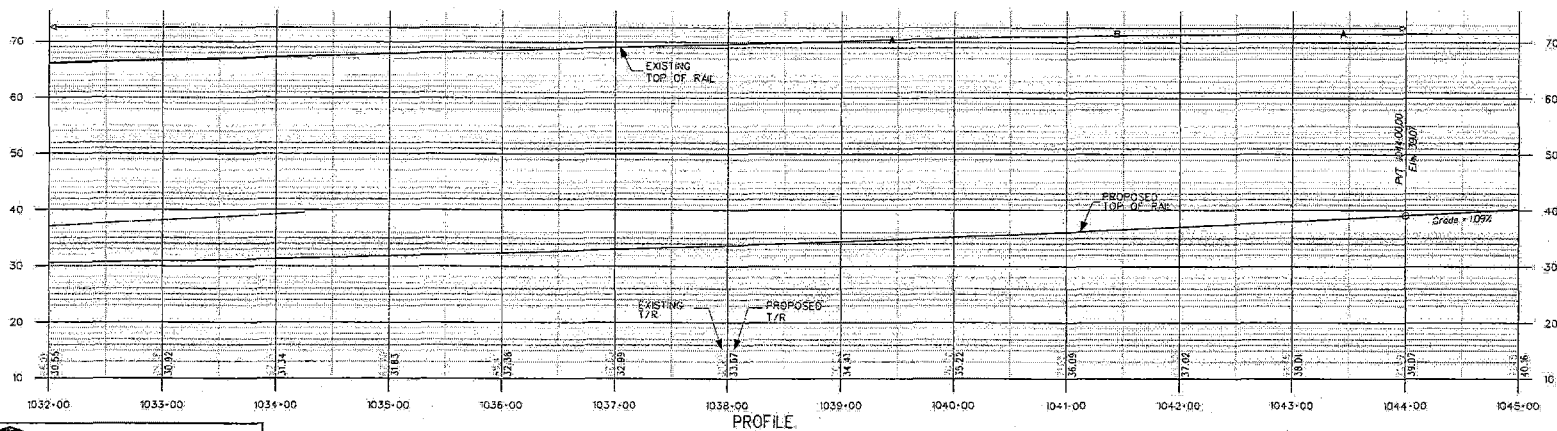
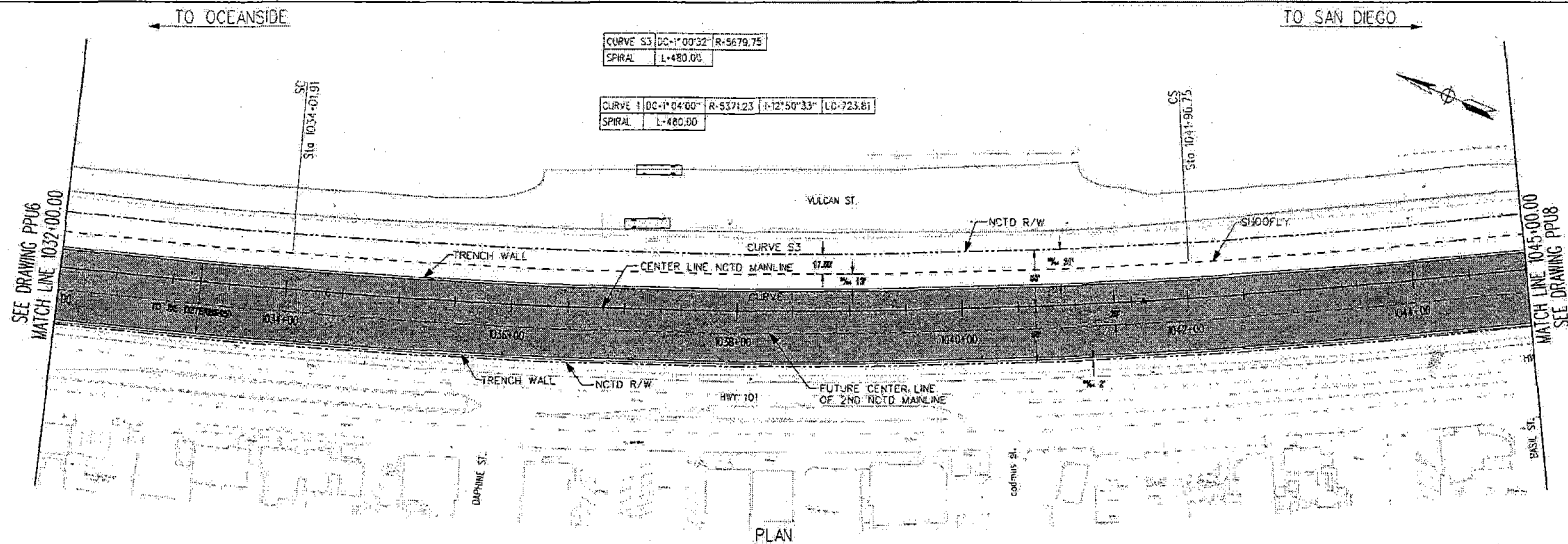
PLANS PREPARED UNDER SUPERVISION OF	RECOMMENDED	APPROVED
BY: _____	BY: _____	BY: _____
DATE: _____	DATE: _____	DATE: _____
RCE NO. _____		
ENGINEER		

CITY OF ENCINITAS ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
ALTERNATIVE 1 - RAILROAD UNDERPASS LEUCADIA BLVD.
PLAN AND PROFILE
1019+00 TO 1032+00
VORX PROJECT NO. K4-S10-205

DRAWING NO.

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
PHONE: (619) 450-8000

SHEET 4 OF 8



PRELIMINARY

REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCH MARK	SCALE

REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCH MARK	SCALE



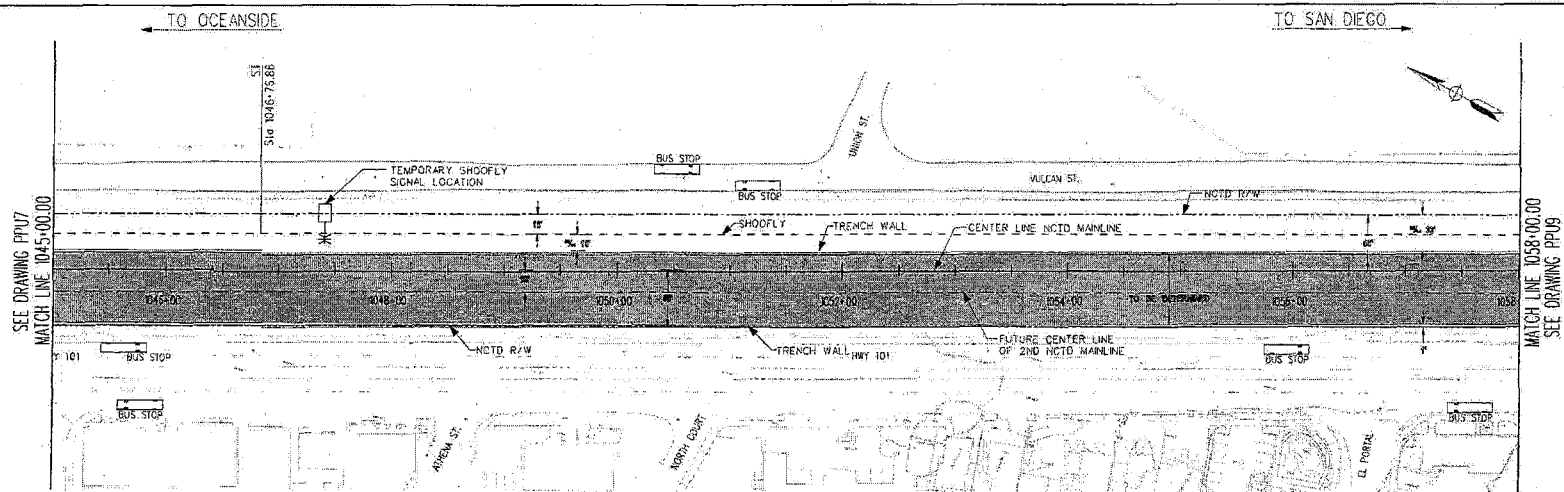
DESIGNED BY	MAINTAINED BY	CHANGED BY

RECOMMENDED	APPROVED

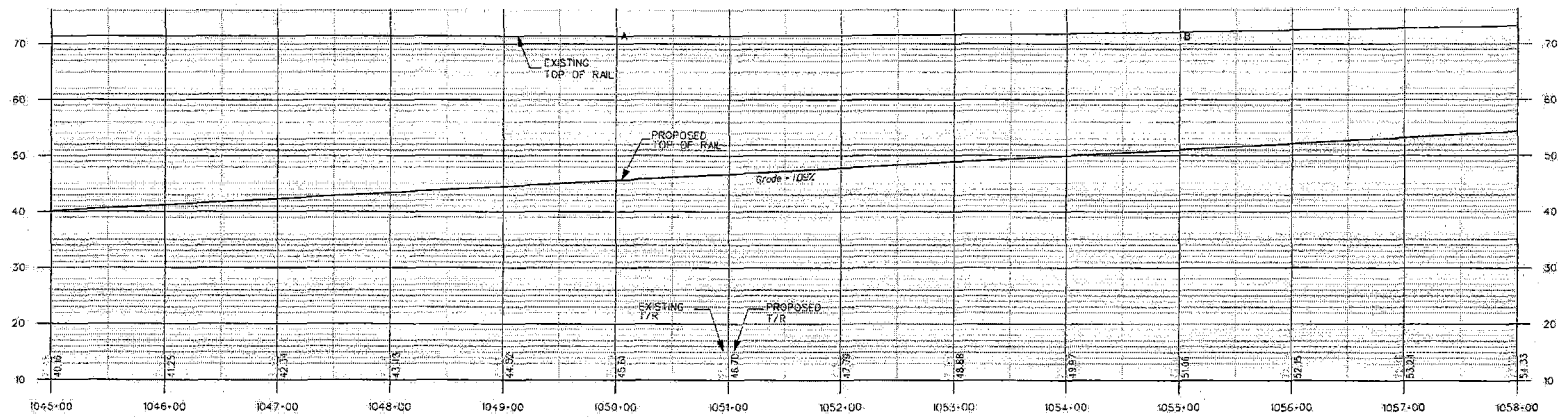
CITY OF ENCINITAS	ENGINEERING DEPARTMENT

DRAWING NO.

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE: (619) 909-8066

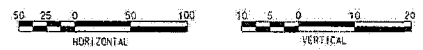


PLAN



PROFILE

PRELIMINARY



HANSON WILSON
370 W. HOSPITALITY LANE, STE. 300
ENCINITAS, CALIFORNIA 92025
PHONE (619) 441-1000
FAX (619) 441-1099

REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCH MARK	SCALE



SANDAG
San Diego Regional Planning Agency

DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	ST.
ENGINEER	P.C.E. NO.	DATE

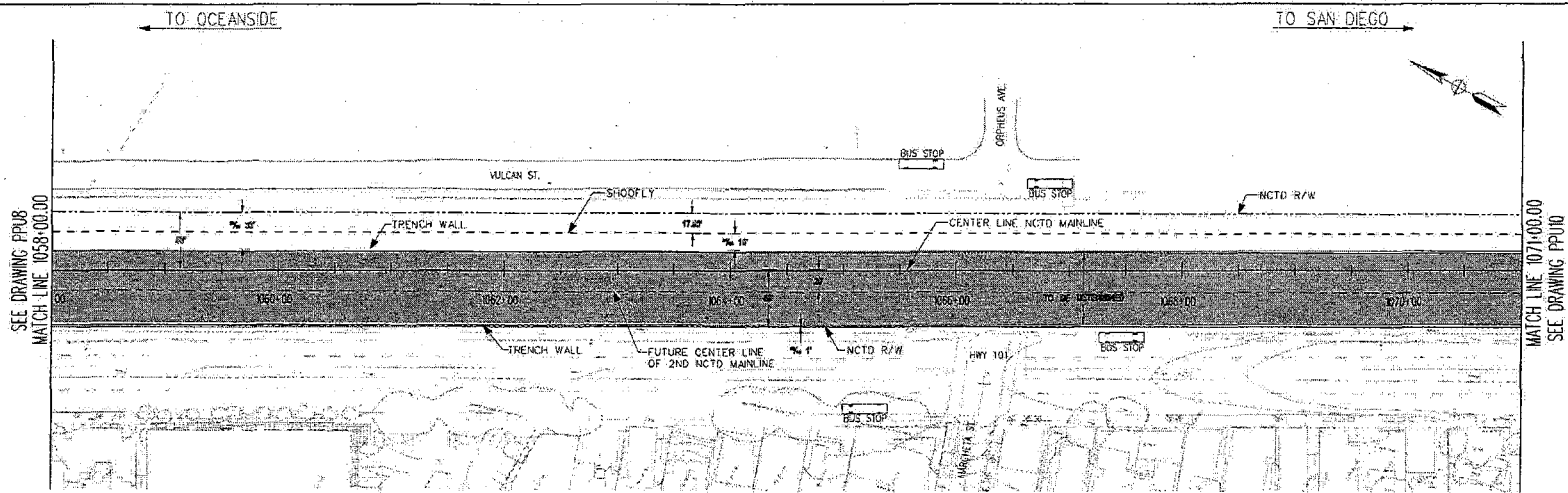
APPROVALS	
RECOMMENDED	APPROVED
ST.	ST.
DATE	DATE

CITY OF ENCINITAS ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
ALTERNATIVE 1 - RAILROAD UNDERPASS LEUCADIA BLVD.
PLAN AND PROFILE
1045+00 TO 1058+00
WORK PROJECT NO. 44-510-206

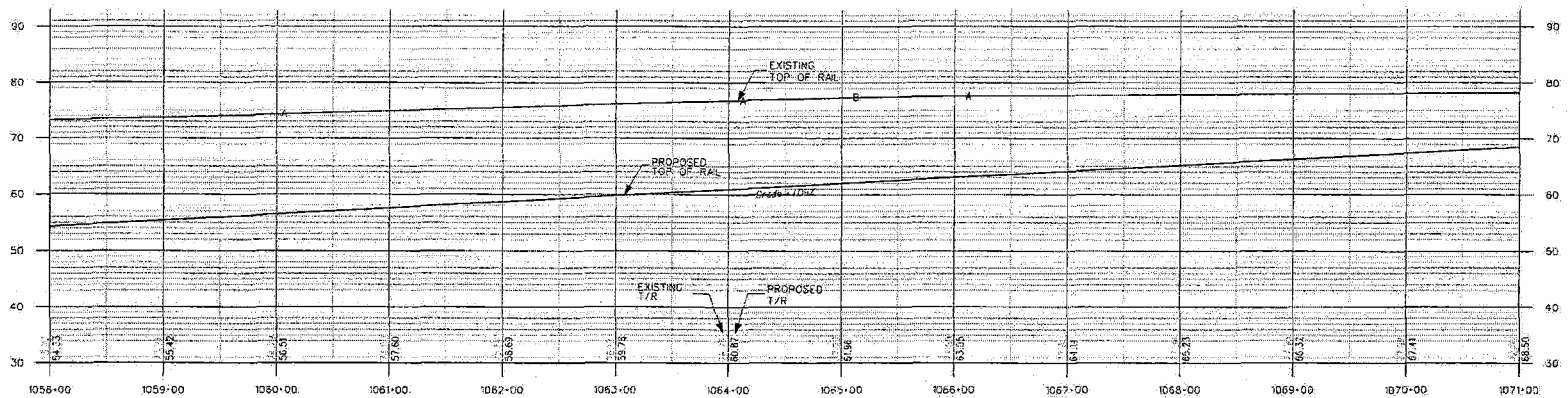
DRAWING NO.
1045-00 TO 1058+00
SHEET 6 OF 8

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE: (619) 441-1000

PATH: X:\PROJECTS\ENCINITAS\44-510-206\44-510-206.dwg

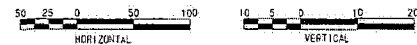


PLAN



PROFILE

PRELIMINARY



REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCH MARK	SCALE



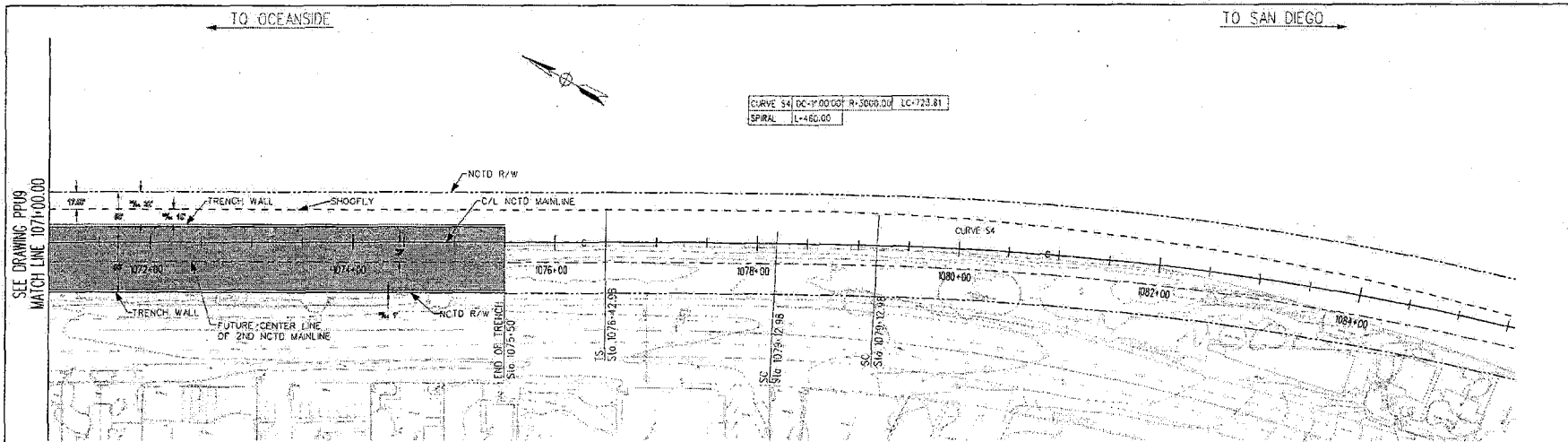
DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	P.C.E. NO.
ENGINEER	DATE	EXP.

RECOMMENDED BY	DATE	APPROVED BY	DATE

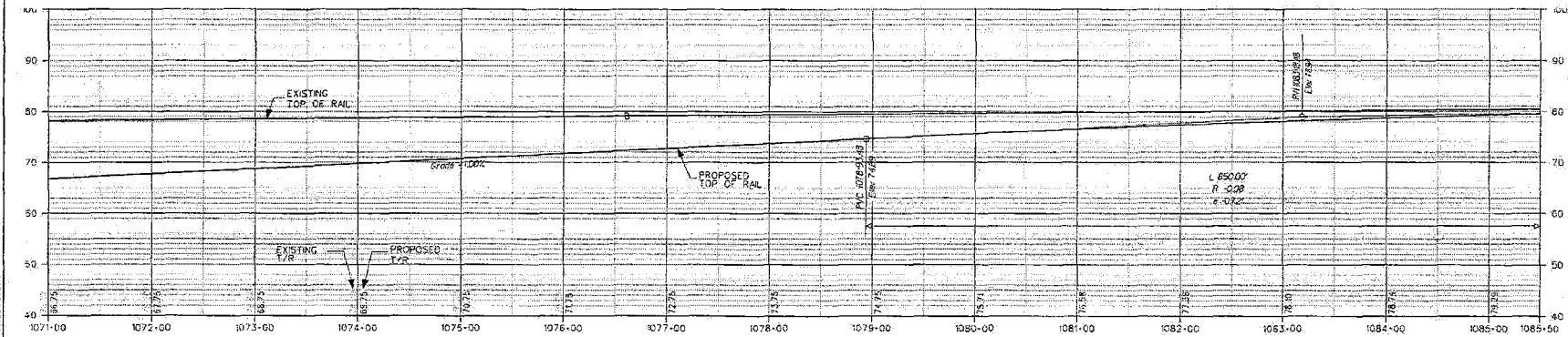
CITY OF ENCINITAS
 LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
 ALTERNATIVE 1 - RAILROAD UNDERPASS LEUCADIA BLVD.
 PLAN AND PROFILE
 1056+00 TO 1071+00
 2006 PROJECT NO. X4-510-206

DRAWING NO.	
SHEET	7 OF 8

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE STE. 300
 PHONE: (909) 806-8000

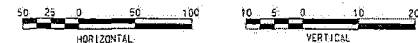


PLAN



PROFILE

PRELIMINARY



REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCH MARK	SCALE
						HORIZONTAL AS SHOWN
						VERTICAL AS SHOWN



DESIGNED BY	DRAWN BY	CHECKED BY

PLANS PREPARED UNDER SUPERVISION OF

DATE: _____ BY: _____

P.C.E. NO.: _____

ENGINEER: _____

RECOMMENDED	APPROVED
BY: _____	BY: _____
DATE: _____	DATE: _____

CITY OF ENCINITAS ENGINEERING DEPARTMENT

LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY

ALTERNATIVE 1 - RAILROAD UNDERPASS LEUCADIA BLVD.

PLAN AND PROFILE

1071+00 TO 1085+50

WORK PROJECT NO. X4-510-206

DRAWING NO.
1071+00 TO 1085+50
SHEET 8 OF 8

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 V. HOSPITALITY LANE STE. 300
PHONE: NO. (619) 806-8000

CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

Attachment C

PROJECT DESCRIPTION: Leucadia Boulevard and Railroad Corridor Grade Separation Study PSR
Proposed Improvement (Scope): Alternative 1 - Trench Alternative at Leucadia Boulevard

ALTERNATIVE 1
SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	\$98,783,730
TOTAL STRUCTURE ITEMS	\$10,000,000
SUBTOTAL CONSTRUCTION COSTS	\$108,783,730
TOTAL RIGHT-OF-WAY ITEMS	\$2,000,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$110,783,730
SUPPORT COSTS (35% OF CONSTRUCTION COST)	38,774,305
TOTAL PROJECT COSTS	\$149,558,035
USE	<u>\$150,000,000</u>

CONCEPTUAL PROJECT COST ESTIMATE FOR LEUCADIA GRADE SEPARATION

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	1,100,000	CY	\$5.5	\$6,050,000	
Clearing and Grubbing	1	LS	\$100,000	\$100,000	
Fill		CY		\$0	

Subtotal Earthwork \$6,150,000

<u>Section 2 Structural Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Asphalt Concrete	450	TON	\$70	\$31,500	
Aggregate Base	150	CY	\$85	\$12,750	

Subtotal Pavement Structural Section \$44,250

<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Inlets	40	EA	\$6,000	\$240,000	
Remove Inlets	10	EA	\$500	\$5,000	
RCP -	9,000	LF	\$2,000	\$18,000,000	
Bridge Drains	300	LF	\$60	\$18,000	
Other Drainage Improvements (Filters)	40	EA	\$500	\$20,000	
Interceptor Channel	7,000	LF	\$60	\$420,000	
Pump Station	1	EA	\$3,000,000	\$3,000,000	

Subtotal Drainage \$21,703,000

I. ROADWAY ITEMS (Continued)

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Curb and Gutter	900	LF	\$20	\$18,000	
Retaining Walls	1	LS	\$41,408,200	\$41,408,200	
Pump Station Structure	1	LS	\$150,000	\$150,000	
SWPPP	1	LS	\$250,000	\$250,000	
Architectural Treatment		LS		\$0	

Total Specialty Items \$41,826,200

I. ROADWAY ITEMS (Continued)

<u>Section 5 Traffic</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Traffic Signals and Lighting	1	LS	\$150,000	\$150,000	
Overhead Sign Structures				\$0	
Signing and Striping	1	LS	\$20,000	\$20,000	
Traffic Control System	1	LS	\$500,000	\$500,000	
Traffic Management Plan	1	LS		\$	

Subtotal Traffic \$670,000

TOTAL SECTIONS 1-5 \$70,393,450

I. ROADWAY ITEMS (Continued)

<u>Section 6 Minor Items (excludes retaining walls)</u>			<u>Item Cost</u>	<u>Section Cost</u>
	\$28,985,250	X (5%)	1,449,263	
(Subtotal Sections 1-5 minus retaining walls)				

Total Minor Items \$1,449,263

Section 7 Roadway Mobilization (includes ret walls)

	\$71,842,713	X (10%)	7,184,271	
(Subtotal Sections 1-6)				

Total Roadway Mobilization \$7,184,271

Section 8 Roadway Additions

Supplemental Work	\$71,842,713	X (0)	0	
(Subtotal Sections 1-6)				

Contingencies

	\$79,026,984	X (25%)	\$19,756,746	
(Subtotal Sections 1-7)				

TOTAL ROADWAY ADDITIONS \$28,390,280

TOTAL ROADWAY ITEMS \$98,783,730

(Subtotal for Sections 1-8)

ESTIMATE PREPARED BY: Sunnie House
DATE: Sept 2005

PHONE (858) 450-4700

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

II. STRUCTURES ITEMS

Structure

(1)

Bridge Name: Leucadia Blvd. Overhead

Structure Type: CIP Box Girder and Tunnel

Width (out to out) - (LF) 97.30
Span Lengths - (LF) 61.00
Total Area - (SF) 5,935.30

Footing Type (pile/spread)

Sub Total Cost for Structure #####

SUBTOTAL STRUCTURES ITEMS \$1,289,378
(Sum of Total Cost for Structures)

Railroad Related Costs: 5,919,324 \$5,919,324

TOTAL RAILROAD AND STRUCTURE ITEMS \$7,208,702

10% Mobilization \$720,870
25% Contingency \$1,982,392.96

TOTAL STRUCTURES ITEMS \$9,911,965
For Budget Purpose \$10,000,000

ESTIMATE PREPARED BY: Jim Frost
DATE: September 2005

PHONE (858) 566-3113

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

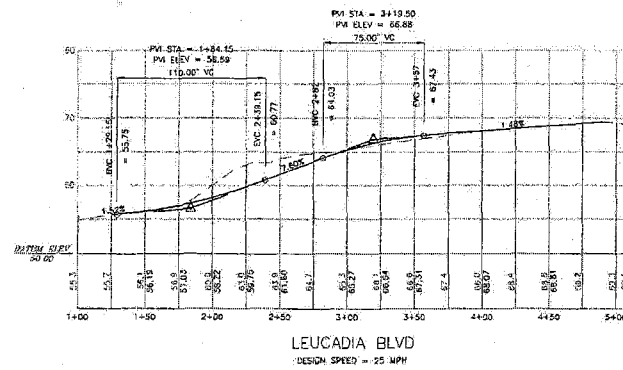
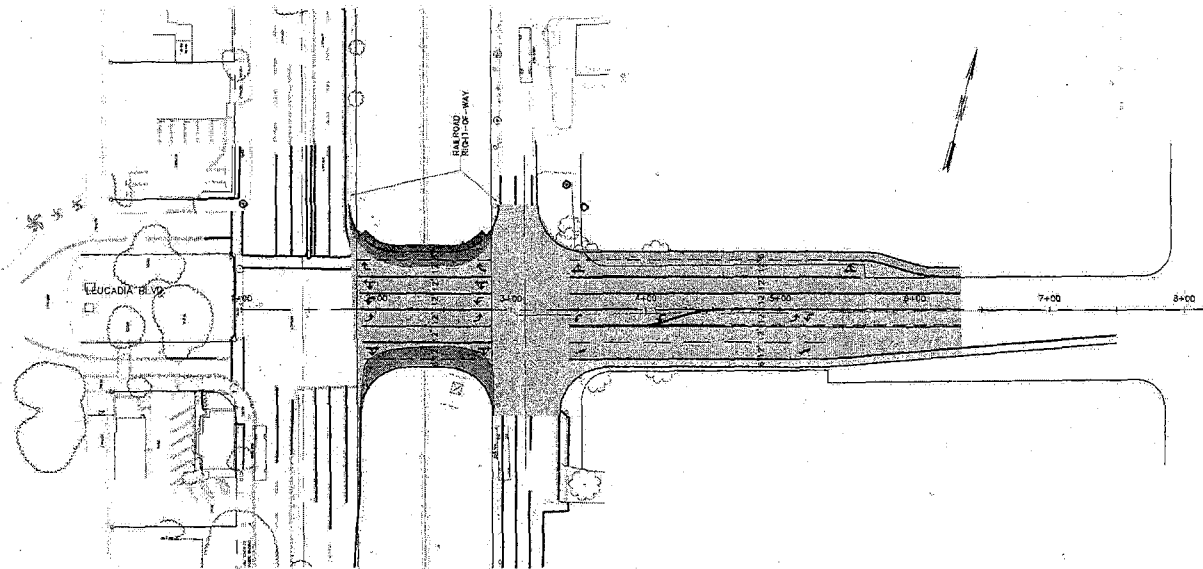
III. RIGHT OF WAY ITEMS

	VALUE	
A. Acquisition, including excess lands, damages to remainder (s) and goodwill		
B. Utility Relocation	\$2,000,000	
C. Relocation Assistance	\$0	
D. Clearance/Demolition	\$0	
E. Title and Escrow Fees	\$0	
TOTAL RIGHT OF WAY ITEMS (Escalated Value)		\$2,000,000
Anticipated Date of Right-of-Way Certification (Date to which Values are Escalated)		2005

ESTIMATE PREPARED BY: Sunnie House
DATE: September 2005

PHONE (858) 450-4700

Attachment D



 WILLDAN Serving Public Agencies 9000 Cornerstone Court West, Suite 200, San Diego, California 92121 619-457-8820 fax 619-457-8148				
REVISIONS	APPROVED	DATE	REFERENCES	DATE

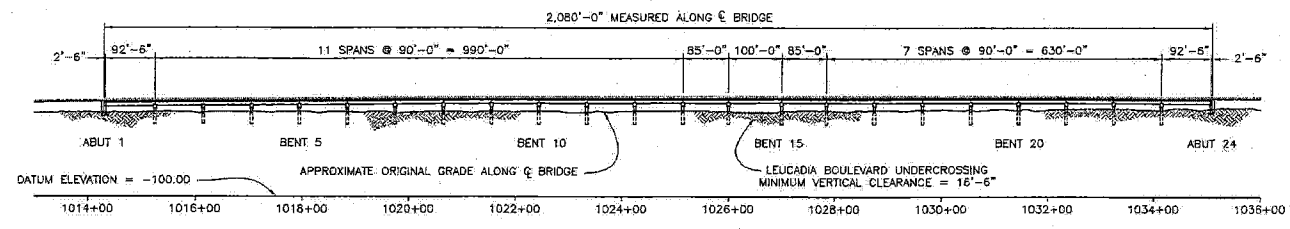
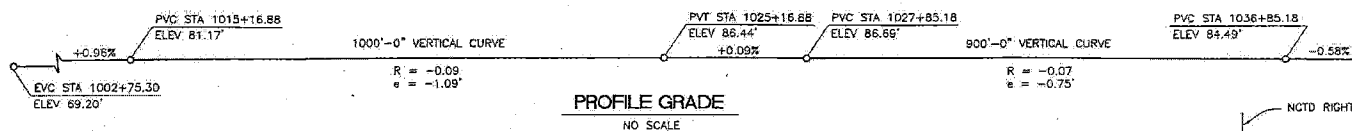
BENCH MARK	SCALE
	HORIZONTAL 1"=40'
	VERTICAL 1"=8'



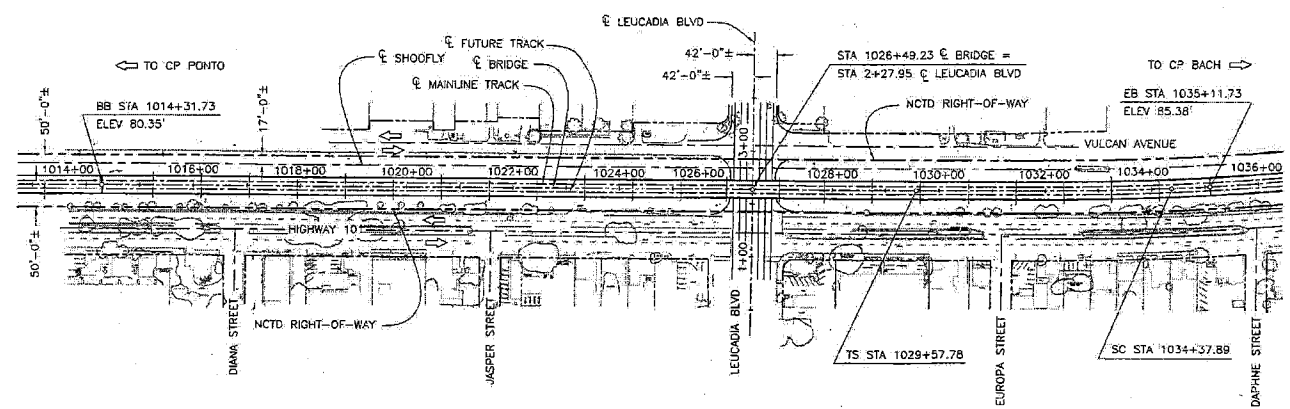
DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	DATE
ENGINEER	RCE NO. 1	EXP.

APPROVALS	
RECOMMENDED BY	APPROVED BY
DATE	DATE

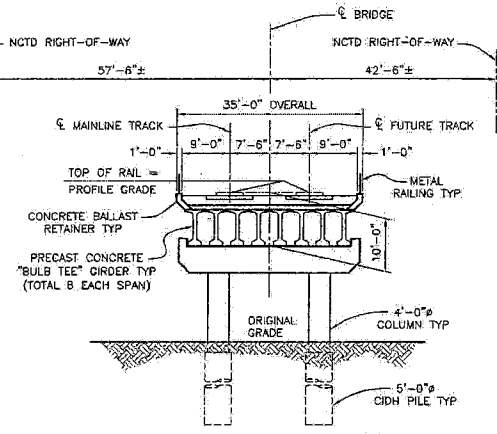
CITY OF ENCINITAS ENGINEERING DEPARTMENT		DRAWING NO.
LEUCADIA BLVD GRADE SEPARATION, AND RAIL CORRIDOR ENHANCEMENT STUDY - ALTERNATIVE 2		
RAILROAD BRIDGE OVER LEUCADIA BLVD PLAN & PROFILE		
WORK PROJECT NO.		SHEET 1 OF 1



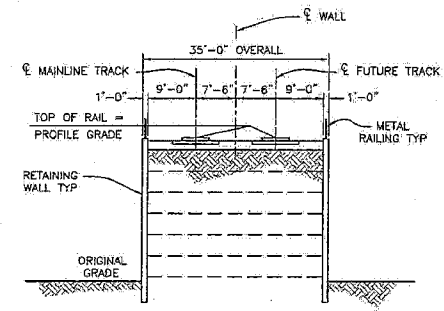
ELEVATION
1" = 100'-0"



PLAN
1" = 100'-0"



TYPICAL SECTION AT BRIDGE
1" = 10'-0"



TYPICAL SECTION AT MSE WALL
1" = 10'-0"

SIMON WONG ENGINEERING
9808 Robert Street, Suite 202
San Diego, CA 92131
(619) 552-5113

ADVANCE PLANNING STUDY - FEBRUARY 10, 2006

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE



DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	R.C.E. NO.
ENGINEER	EXP	

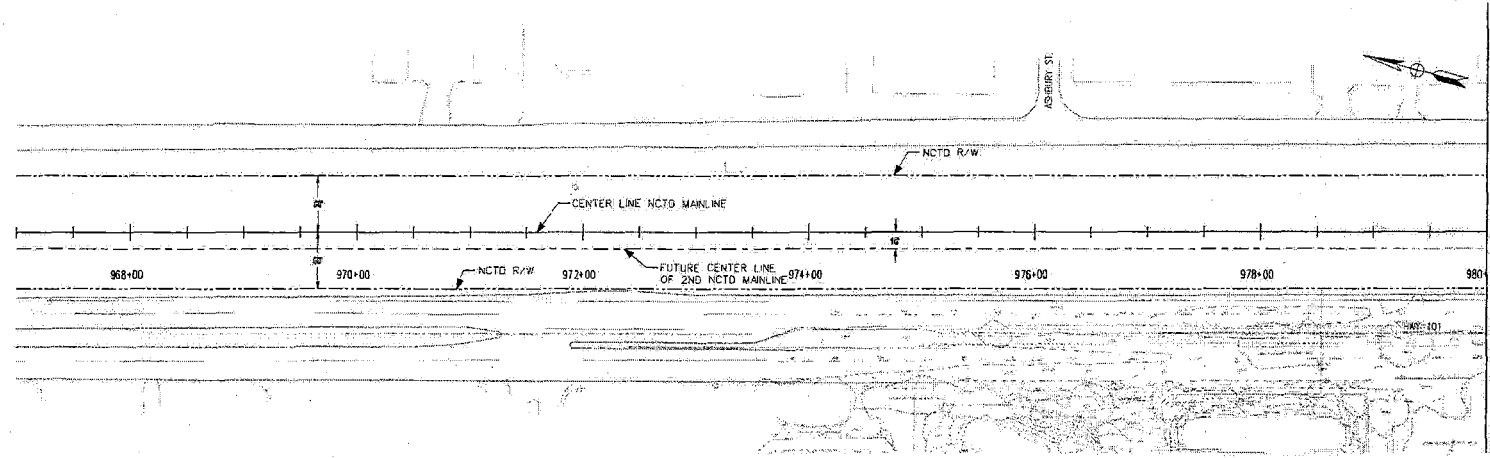
APPROVALS
RECOMMENDED BY: DATE: DATE:
APPROVED BY: DATE: DATE:

CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.
LEUCADIA BOULEVARD AND RAIL CORRIDOR GRADE SEPARATION STUDY		
ALTERNATIVE 2 - RAILROAD OVER LEUCADIA BLVD.		
PRELIMINARY GENERAL PLAN - LEUCADIA BOULEVARD UP		
WORK PROJECT NO. 44-510-206		

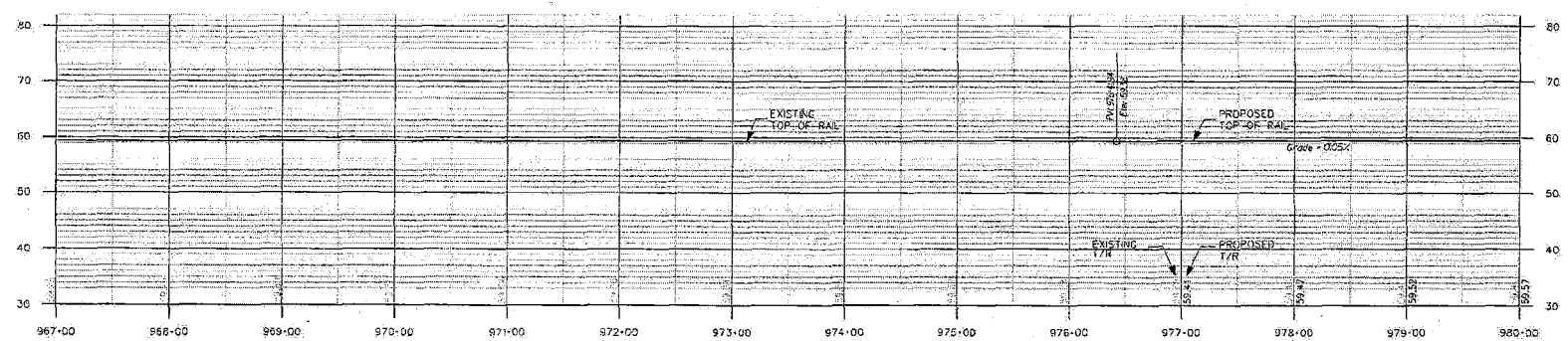
ENGINEER'S NAME: SIMON WONG ENGINEERING
ADDRESS: 9808 ROBERT ST., SUITE 202
PHONE NO.: 619-552-5113

TO OCEANSIDE

TO SAN DIEGO

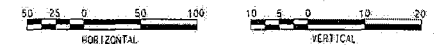


PLAN



PROFILE

PRELIMINARY



REVISIONS	APPROVED	DATE	REFERENCES	DATE

HANSON WILSON
INCORPORATED
1770 N. HOSPITALITY LANE, STE. 300
SAN ANTONIO, TEXAS 78208
PHONE (214) 343-8000
FAX (214) 343-8000

BENCH MARK	SCALE



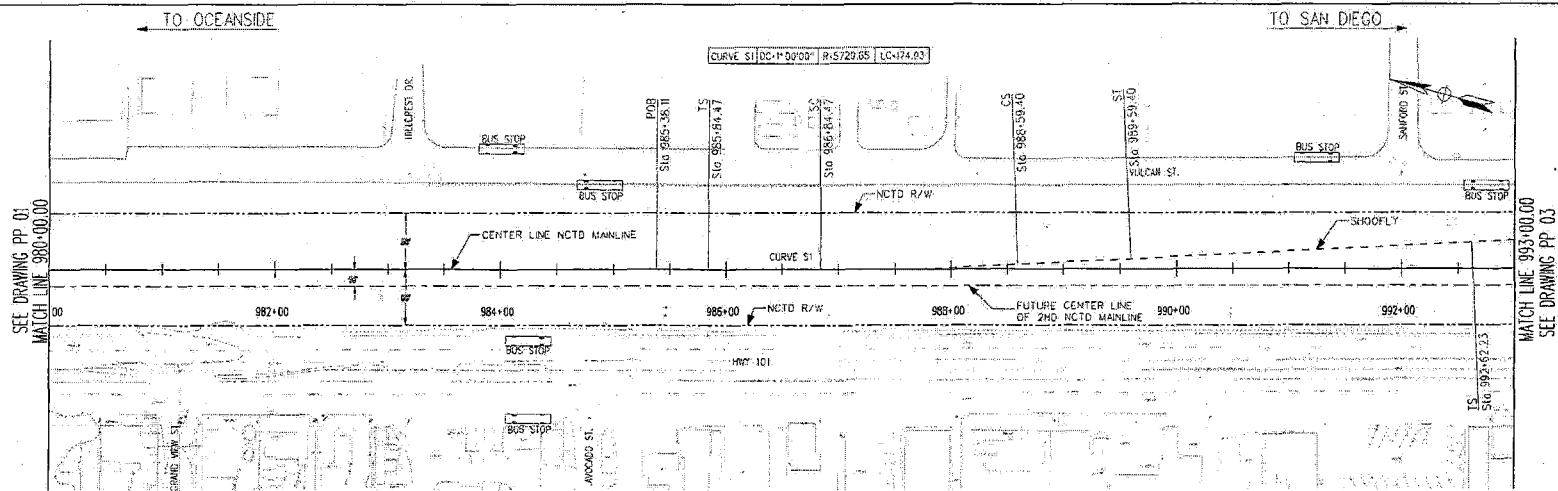
DESIGNED BY	APPROVED BY

PLANS PREPARED UNDER SUPERVISION OF	RECOMMENDED	APPROVED

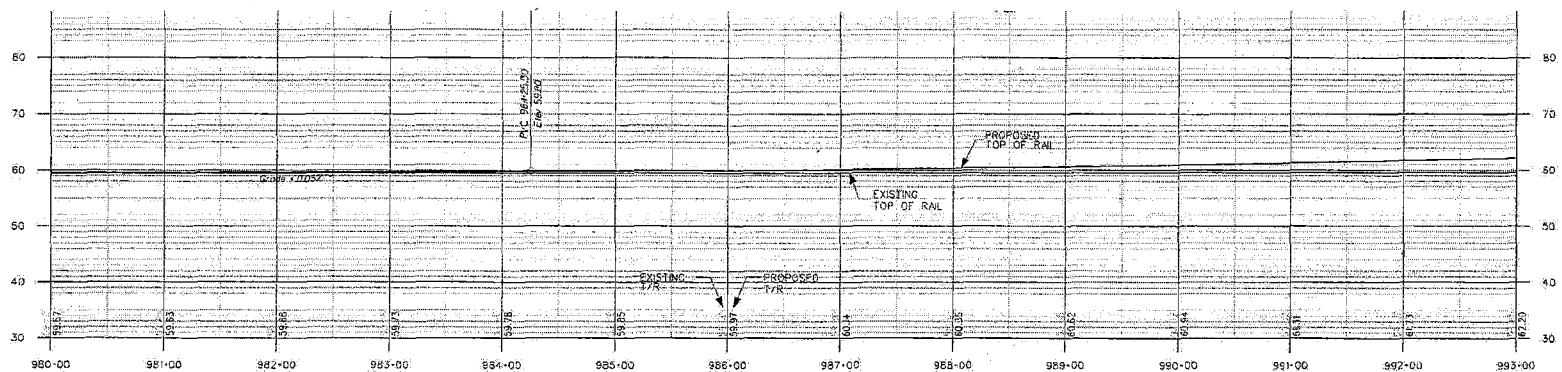
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.

LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
PHONE NO.: (909) 806-8000

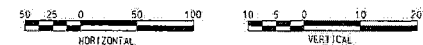


PLAN



PROFILE

PRELIMINARY



REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE



DESIGNED BY	DRAWN BY	CHECKED BY

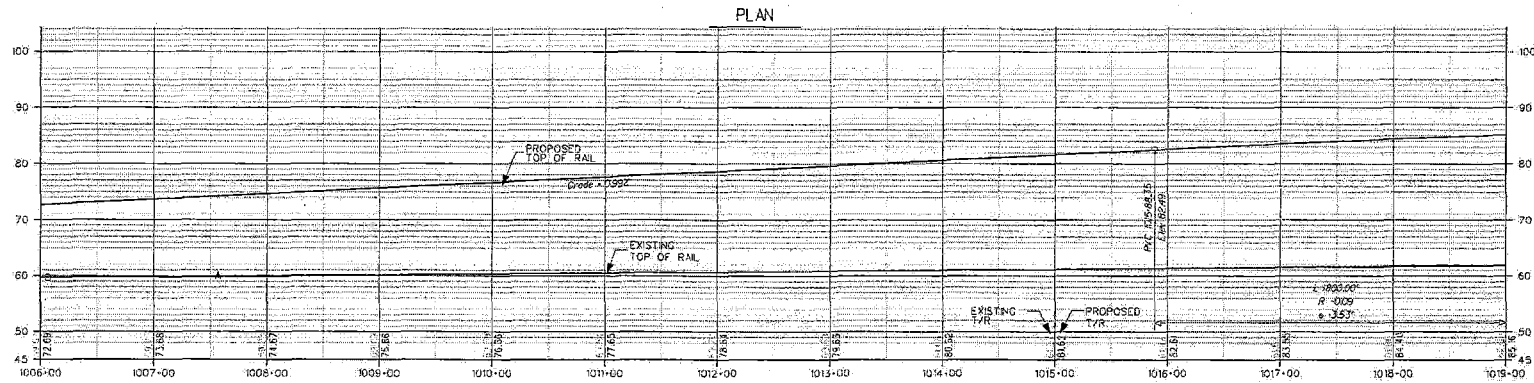
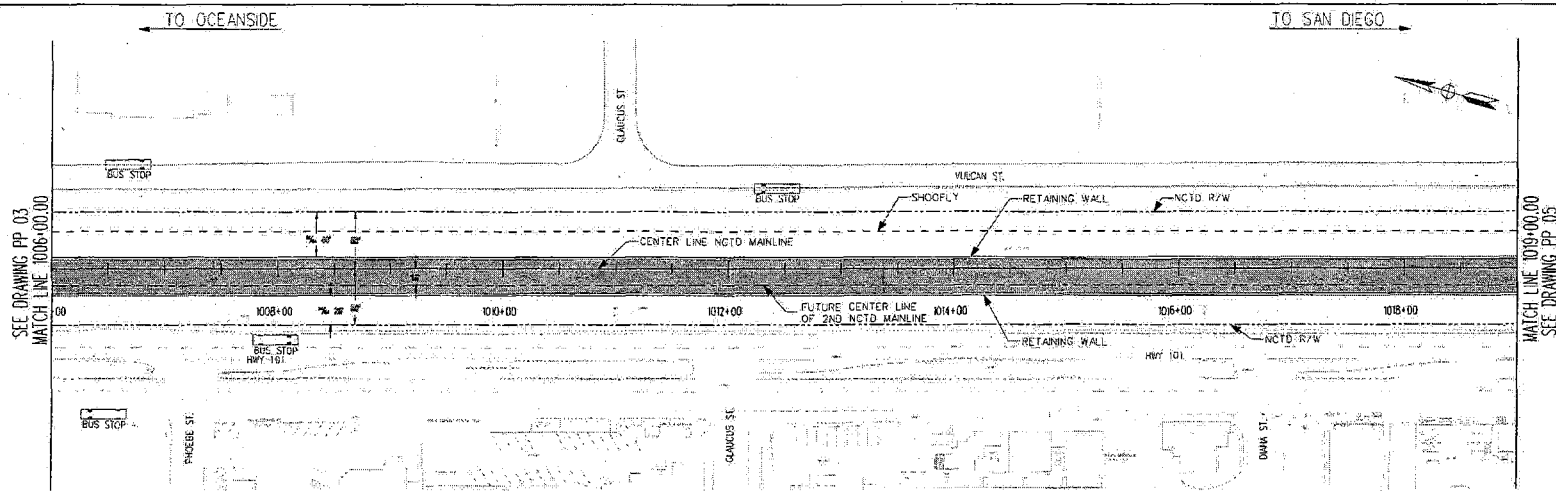
PLANS PREPARED UNDER SUPERVISION OF	RECOMMENDED	APPROVED
	BY	BY
	DATE	DATE

CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.

LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY	ALTERNATIVE 2-RAILROAD OVER LEUCADIA BLVD.

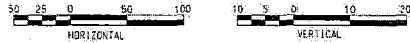
ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE: (909) 806-8000

SHEET 2 OF 10



PROFILE

PRELIMINARY



**HANSON
WILSON**
INCORPORATED
270 W. HOSPITALITY LANE, SUITE 300
SAN ANTONIO, TEXAS 78204
PHONE: (214) 343-1100
FAX: (214) 343-1101

REVISIONS	APPROVED	DATE	REFERENCE	DATE

BENCH MARK	SCALE



SANDAG
San Diego Regional Planning Agency

DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	
ENGINEER	EXP.	

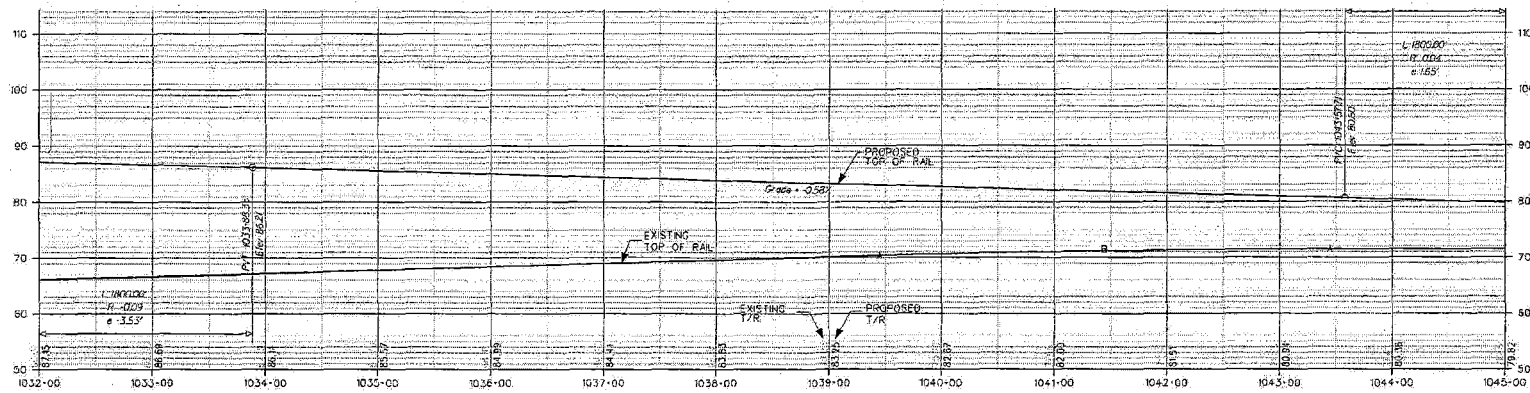
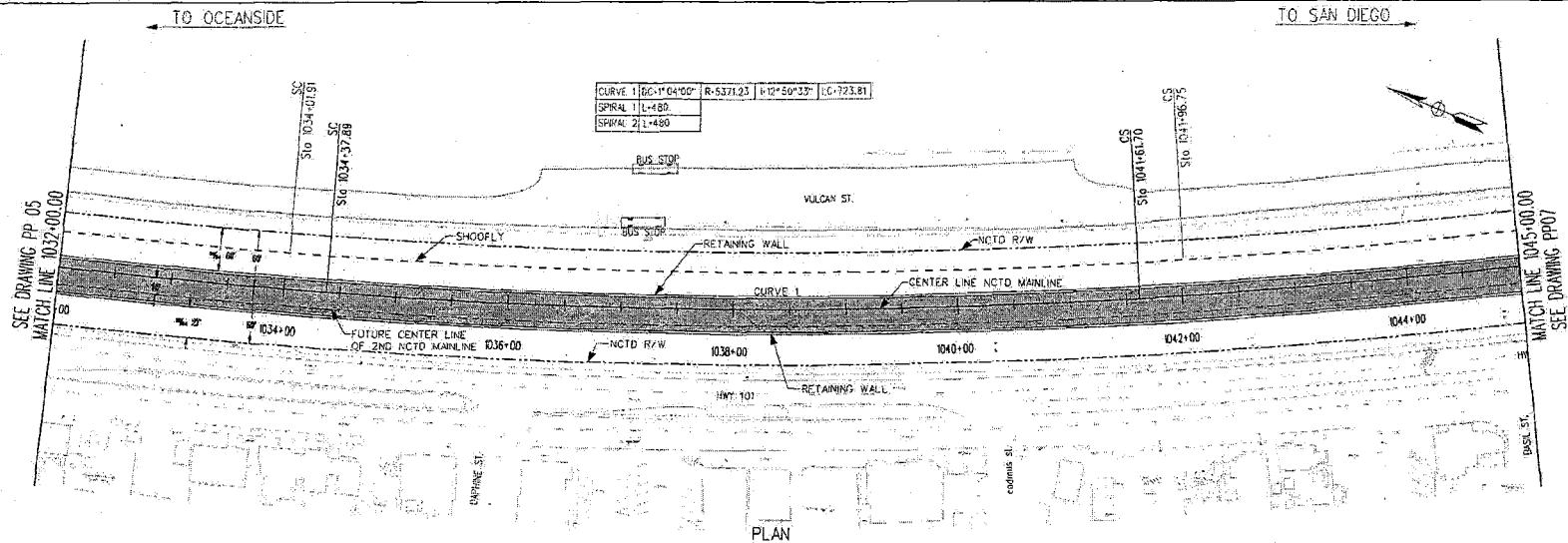
RECOMMENDED	APPROVED
BY	BY
DATE	DATE

CITY OF ENCINITAS
ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
ALTERNATIVE 2 - RAILROAD OVER LEUCADIA BLVD.
PLAN AND PROFILE
1006+00 TO 1019+00
WDM PROJECT NO. 14-SIG-206

DRAWING NO.

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
PHONE: (909) 806-8003

PATH: X:\PROJECTS\10206\10206-01\10206-01.dwg



HANSON
WILSON
ENGINEERS

210 W. UNIVERSITY LINE, SUITE 200
SAN ANTONIO, TEXAS 78207
PHONE (512) 341-1111
FAX (512) 341-1112

REVISIONS	APPROVED	DATE	REFERENCES	DATE	BENCH MARK	SCALE

HORIZONTAL AS SHOWN
VERTICAL AS SHOWN



DESIGNED BY: _____ CHECKED BY: _____
PLANS PREPARED UNDER SUPERVISION OF: _____
DATE: _____ R.E.E. NO.: _____
ENGINEER: _____ EXP.: _____

APPROVALS
RECOMMENDED BY: _____ DATE: _____
APPROVED BY: _____ DATE: _____

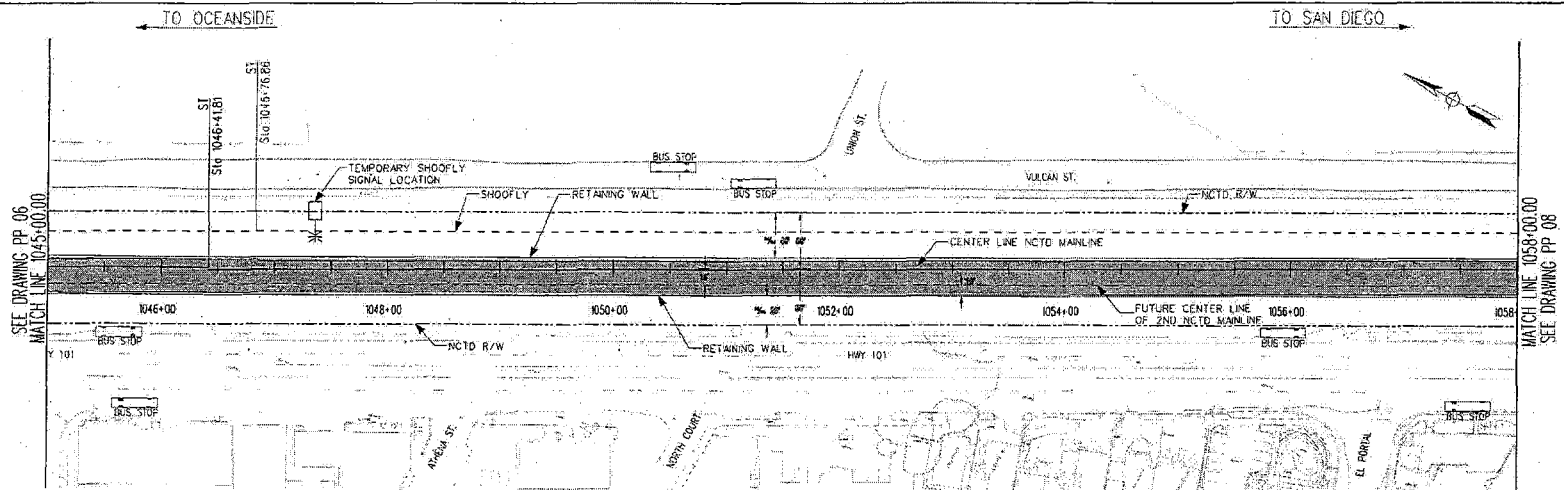
CITY OF ENCINITAS
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
ALTERNATIVE 2-RAILROAD OVER LEUCADIA BLVD.
PLAN AND PROFILE
1032+00 TO 1045+00
WORK PROJECT NO. K4-610-206

ENGINEERING DEPARTMENT
DRAWING NO.
22-0000
SHEET 6 OF 10

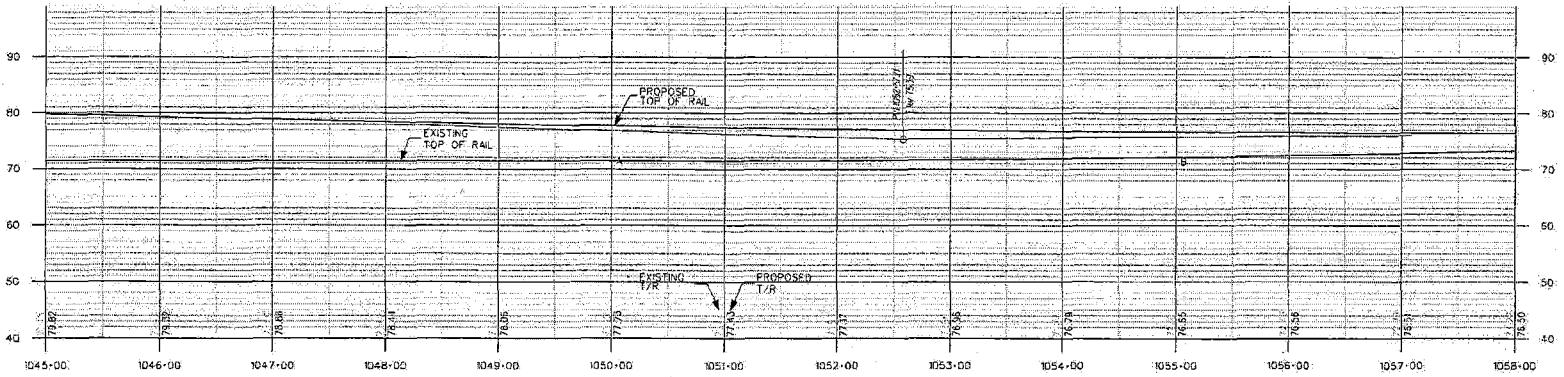


PRELIMINARY

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO: (909) 806-8000

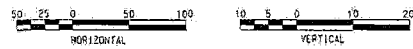


PLAN



PROFILE

PRELIMINARY



Path: \\project\1510206\ACAD\EP107.dwg

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE
	HORIZONTAL AS SHOWN
	VERTICAL AS SHOWN



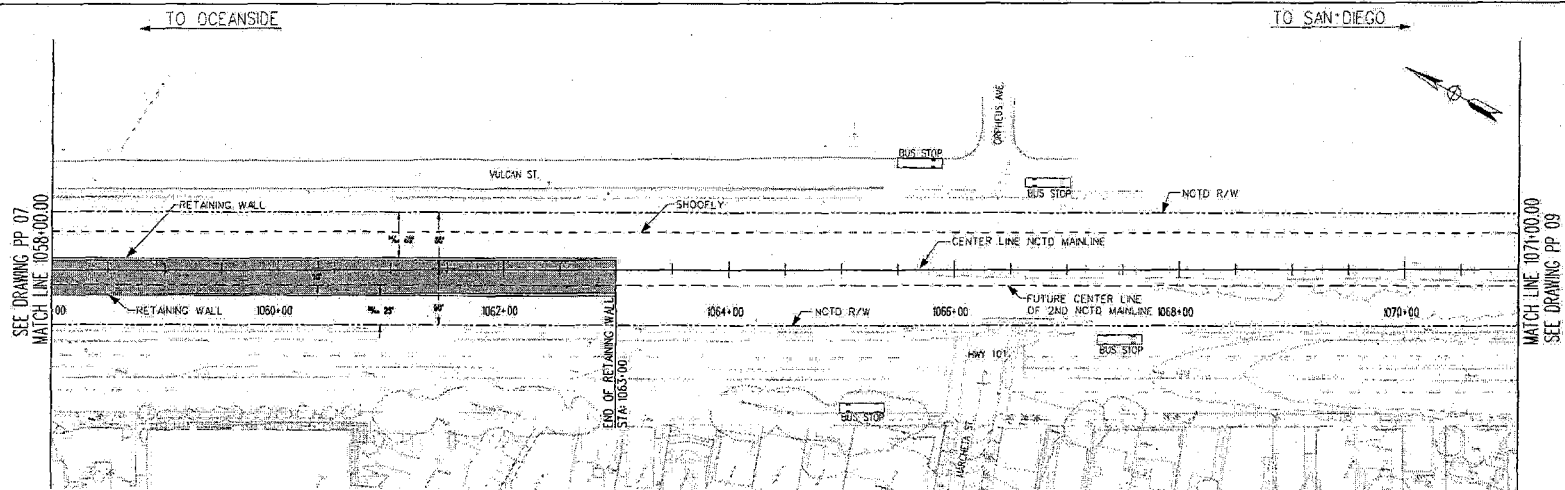
DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	DATE
ENGINEER	DATE	DATE

APPROVALS	
RECOMMENDED	APPROVED
BY: _____	BY: _____
DATE: _____	DATE: _____

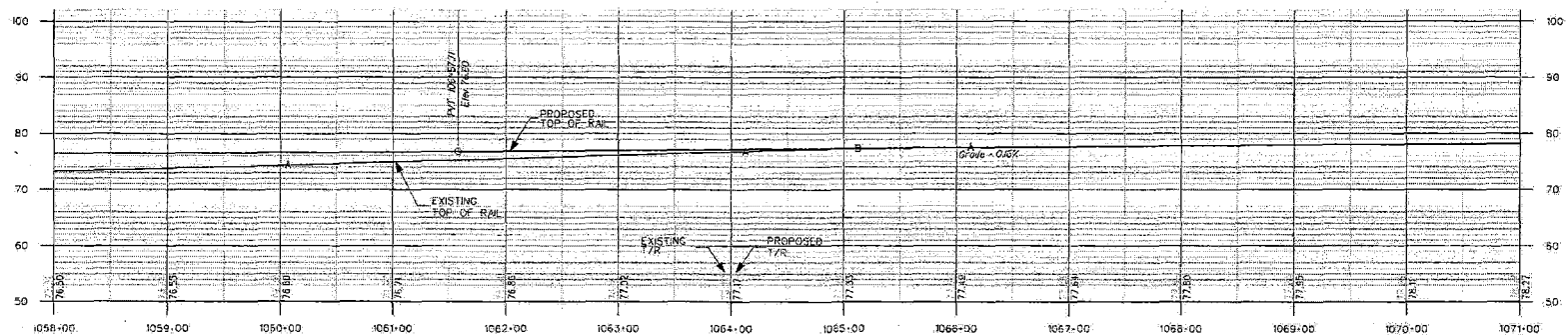
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY	ALTERNATIVE 2 - RAILROAD OVER LEUCADIA BLD.	
PLAN AND PROFILE	1045+00 TO 1058+00	
WORK PROJECT NO. X4-510-206		

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 V. HOSPITALITY LANE STE. 300
PHONE: NIK9097-806-8000

SHEET 7 OF 10

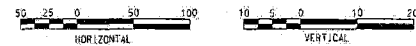


PLAN



PROFILE

PRELIMINARY



PATH: \\C:\Users\jcs\Documents\1020842\1020842.dwg

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE
	HORIZONTAL AS SHOWN
	VERTICAL AS SHOWN



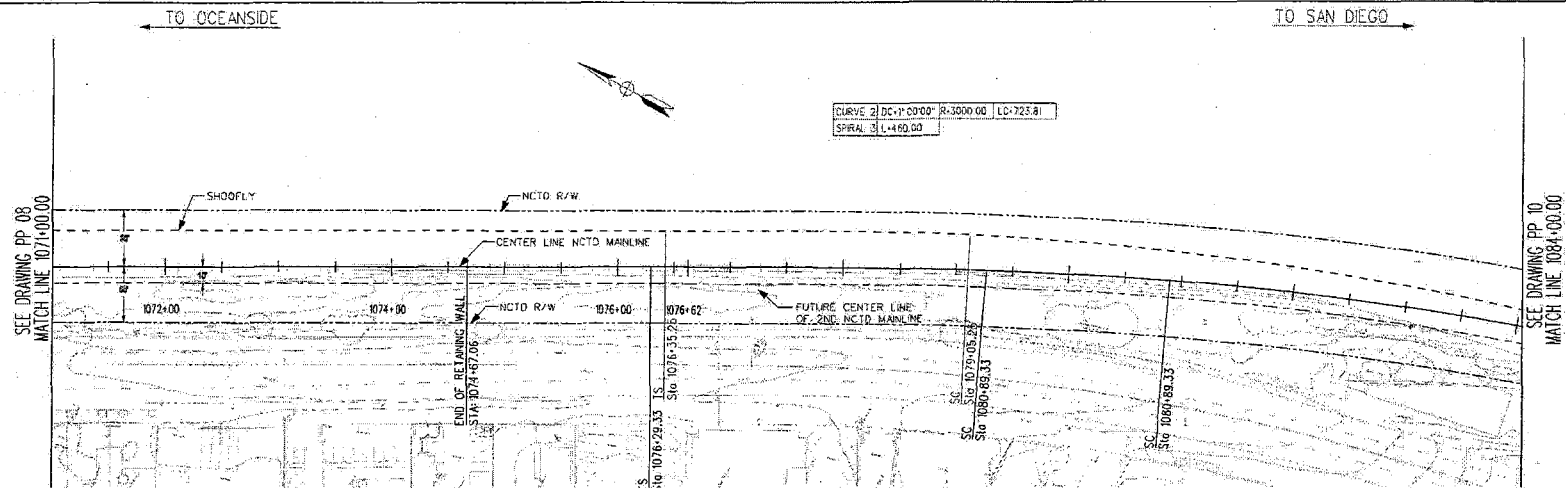
DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	DATE
ENGINEER	R.C.E. NO.	EXP.

APPROVALS	
RECOMMENDED	APPROVED
BY	BY
DATE	DATE

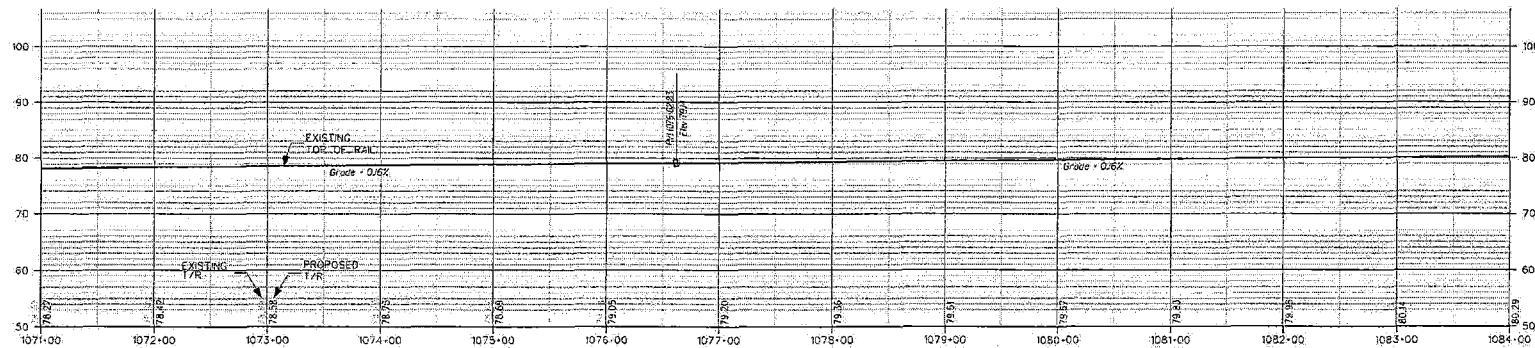
CITY OF ENCINITAS
 LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
 ALTERNATIVE 2 - RAILROAD OVER LEUCADIA BLVD.
 PLAN AND PROFILE
 1058+00 TO 1071+00
 WORK PROJECT NO. K4-S10-205

DRAWING NO.
1020842
SHEET 8 OF 10

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE STE. 300
 PHONE: (609) 806-8000



PLAN



PROFILE

PRELIMINARY



PATH:Z:\PROJECTS\158\05102064\000\PP1 09.dwt

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE



SANDAG
San Diego Area Regional Transit Authority

DESIGNED BY	DRAWN BY	CHECKED BY

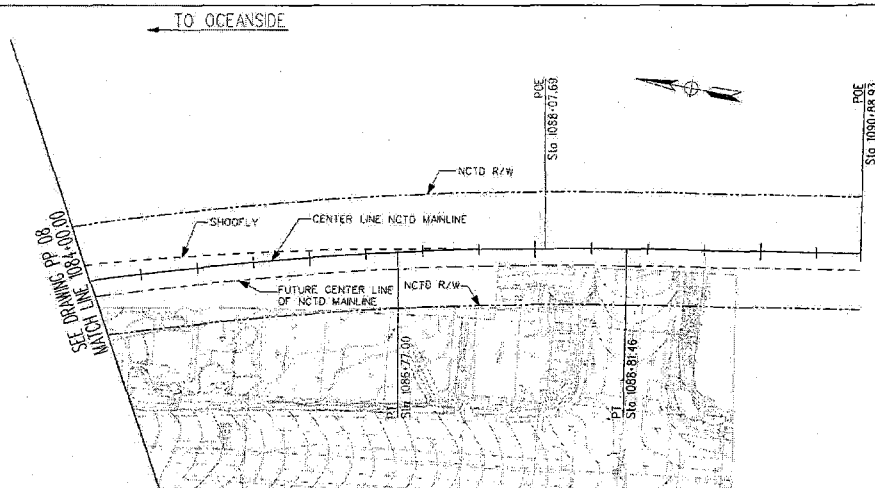
PLANS PREPARED UNDER SUPERVISION OF	RECOMMENDED	APPROVED

CITY OF ENCINITAS	ENGINEERING DEPARTMENT

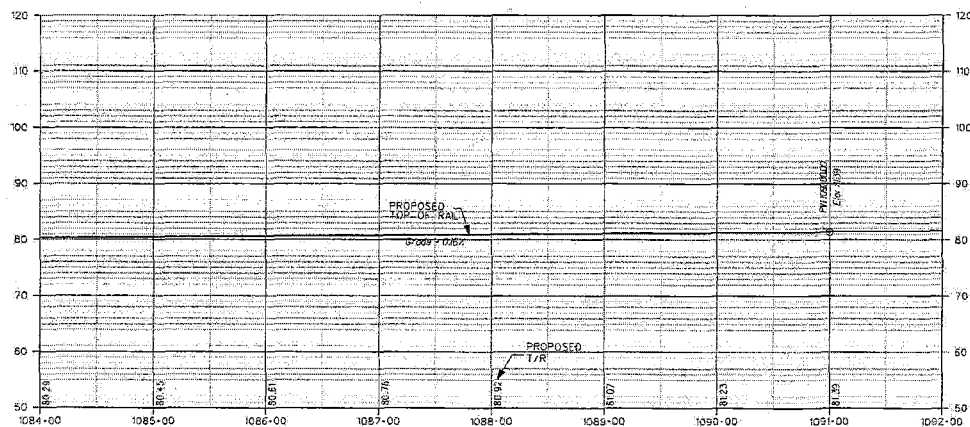
DRAWING NO.

DATE	SHEET

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE: (909) 806-8000

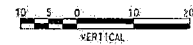


PLAN:



PROFILE

PRELIMINARY

[illegible]

DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF		
DATE -		
RCE NO. /		
ENGINEER	EXP.	

APPROVALS	
RECOMMENDED	APPROVED
BY: _____	BY: _____
DATE: _____	DATE: _____

CITY OF ENCINITAS	ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY: ALTERNATIVE 2-RAILROAD OVER LEUCADIA BLVD. PLAN AND PROFILE 1084+00 TO 1091+00 WORK PROJECT NO. X4-510-206	

DRAWING NO.
SHEET 10 OF 10

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO. (909)-806-8000

CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

PROJECT DESCRIPTION: Leucadia Boulevard and Railroad Corridor Grade Separation Study PSR
Proposed Improvement (Scope): Alternative 2 - Berm and Bridge at Leucadia Boulevard

ALTERNATIVE 2
SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	\$41,509,171
TOTAL STRUCTURE ITEMS	\$23,300,000
SUBTOTAL CONSTRUCTION COSTS	\$64,809,171
TOTAL RIGHT-OF-WAY ITEMS	\$250,000
 TOTAL PROJECT CAPITAL OUTLAY COSTS	 \$65,059,171
SUPPORT COSTS (35% OF CONSTRUCTION COST)	22,770,710
 TOTAL PROJECT COSTS	 \$87,829,881
USE	<u>\$88,000,000</u>

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	0	CY	\$6	\$0	
Clearing and Grubbing	1	LS	\$75,000	\$75,000	
Fill	8,100	CY	\$45	\$364,500	
				Subtotal Earthwork	\$439,500
<u>Section 2 Structural Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Asphalt Concrete	900	TON	\$70	\$63,000	
Aggregate Base	600	CY	\$85	\$51,000	
				Subtotal Pavement Structural Section	\$114,000
<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Inlets	40	EA	\$6,000	\$240,000	
RCP -	9,000	LF	\$2,000	\$18,000,000	
Other Drainage Improvements (Filters)	40	EA	\$500	\$20,000	
Pump Station		EA	-	\$0	
				Subtotal Drainage	\$18,260,000

I. ROADWAY ITEMS (Continued)

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Curb and Gutter	1,173	LF	\$20	\$23,460	
Construct PCC Sidewalk	5	CY	\$1,000	\$5,000	
Retaining Walls	1	LS	\$9,700,930	\$9,700,930	
Pump Station Structure	1	LS		\$0	
Pump Station Equipment					
Erosion Control		LS		\$0	
SWPPP	1	LS	\$250,000	\$250,000	
Architectural Treatment		LS		\$0	
				Total Specialty Items	\$9,979,390

I. ROADWAY ITEMS (Continued)

<u>Section 5 Traffic</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Traffic Signals and Lighting	1	LS	\$150,000	\$150,000	
Overhead Sign Structures				\$0	
Signing and Striping	1	LS	\$20,000	\$20,000	
Traffic Control System	1	LS	\$250,000	\$250,000	
Traffic Management Plan	1	LS	\$	-	
				Subtotal Traffic	\$420,000
				TOTAL SECTIONS 1-5	\$29,212,890

I. ROADWAY ITEMS (Continued)

<u>Section 6 Minor Items (excludes retaining walls)</u>			<u>Item Cost</u>	<u>Section Cost</u>
	\$19,511,960	X (5%)	975,598	
(Subtotal Sections 1-5 minus retaining walls)				
			Total Minor Items	\$975,598
<u>Section 7 Roadway Mobilization (includes ret walls)</u>				
	\$30,188,488	X (10%)	3,018,849	
(Subtotal Sections 1-6)				
			Total Roadway Mobilization	\$3,018,849
<u>Section 8 Roadway Additions</u>				
Supplemental Work	\$30,188,488	X (0%)	0	
(Subtotal Sections 1-6)				
Contingencies	\$33,207,337	X (25%)	\$8,301,834	
(Subtotal Sections 1-7)				
			TOTAL ROADWAY ADDITIONS	\$12,296,281
			TOTAL ROADWAY ITEMS	\$41,509,171
			(Subtotal for Sections 1-8)	

ESTIMATE PREPARED BY: Sunnie House
DATE: September 2005

PHONE (858) 467-6950

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

II. STRUCTURES ITEMS

Structure:

(1)

Bridge Name: Leucadia Blvd. Overhead

Structure Type: CIP Box Girder and Tunnel

Width (out to out) - (LF) 35.00
Span Lengths - (LF) 2,080.00
Total Area - (SF) 72,800.00

Footing Type (pile/spread)

Sub Total Cost for Structure \$11,798,156

SUBTOTAL STRUCTURES ITEMS \$11,798,156
(Sum of Total Cost for Structures)

Railroad Related Costs: 5,134,778 \$5,134,778

TOTAL RAILROAD AND STRUCTURE ITEMS \$16,932,934

10% Mobilization \$1,693,293
25% Contingency \$4,656,557
Cost per m2
(incl. 10% mobilization and
20% contingency)

TOTAL STRUCTURES ITEMS \$23,282,784
For Budget Purpose \$23,300,000

ESTIMATE PREPARED BY: Jim Frost
DATE: September 2005

PHONE (858) 566-3113

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

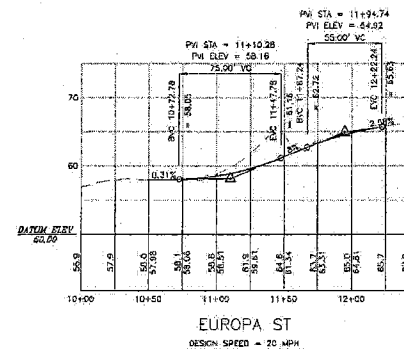
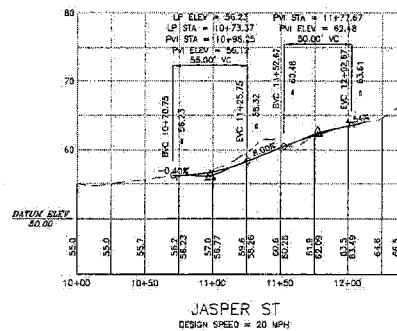
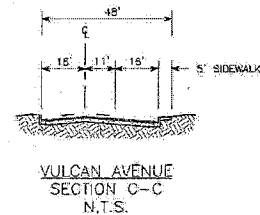
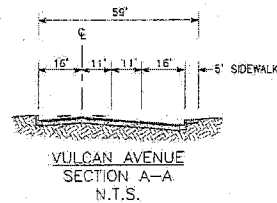
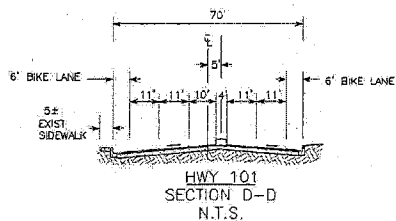
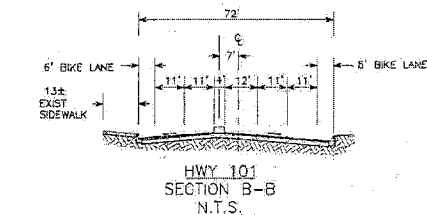
III. RIGHT OF WAY ITEMS

	VALUE	
A. Acquisition, including excess lands, damages to remainder (s) and goodwill		
B. Utility Relocation	\$250,000	
C. Relocation Assistance	\$0	
D. Clearance/Demolition	\$0	
E. Title and Escrow Fees	\$0	
TOTAL RIGHT OF WAY ITEMS (Escalated Value)		\$250,000
Anticipated Date of Right-of-Way Certification (Date to which Values are Escalated)		2004

ESTIMATE PREPARED BY: Sunnie House
DATE: September 2005

PHONE (858) 450-4700

Attachment F



REVISIONS	APPROVED	DATE	REFERENCES	DATE

WILLDAN

Serving Public Agencies
8800 Cornerstone Court West, Suite 400, San Diego, California 92121
(619) 441-1200 or (619) 441-1201

BENCH MARK

SCALE

HORIZONTAL 1"=40'

VERTICAL 1"=5'



SANDAN

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

PLANS PREPARED UNDER SUPERVISION OF

DATE: _____

R.C.E. NO. _____

ENGINEER: _____ EXP. _____

APPROVALS

RECOMMENDED BY: _____

DATE: _____

DATE: _____

DATE: _____

CITY OF ENCINITAS ENGINEERING DEPARTMENT

LEUCADIA BLVD AND RAIL CORRIDOR GRADE SEPARATION

STUDY: ALTERNATIVE 3

RAILROAD: TRENCH WITH ONE WAY COUPLET

WORK PROJECT NO. _____

DRAWING NO.

ENCINITAS

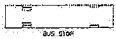
ENCINITAS

ENCINITAS

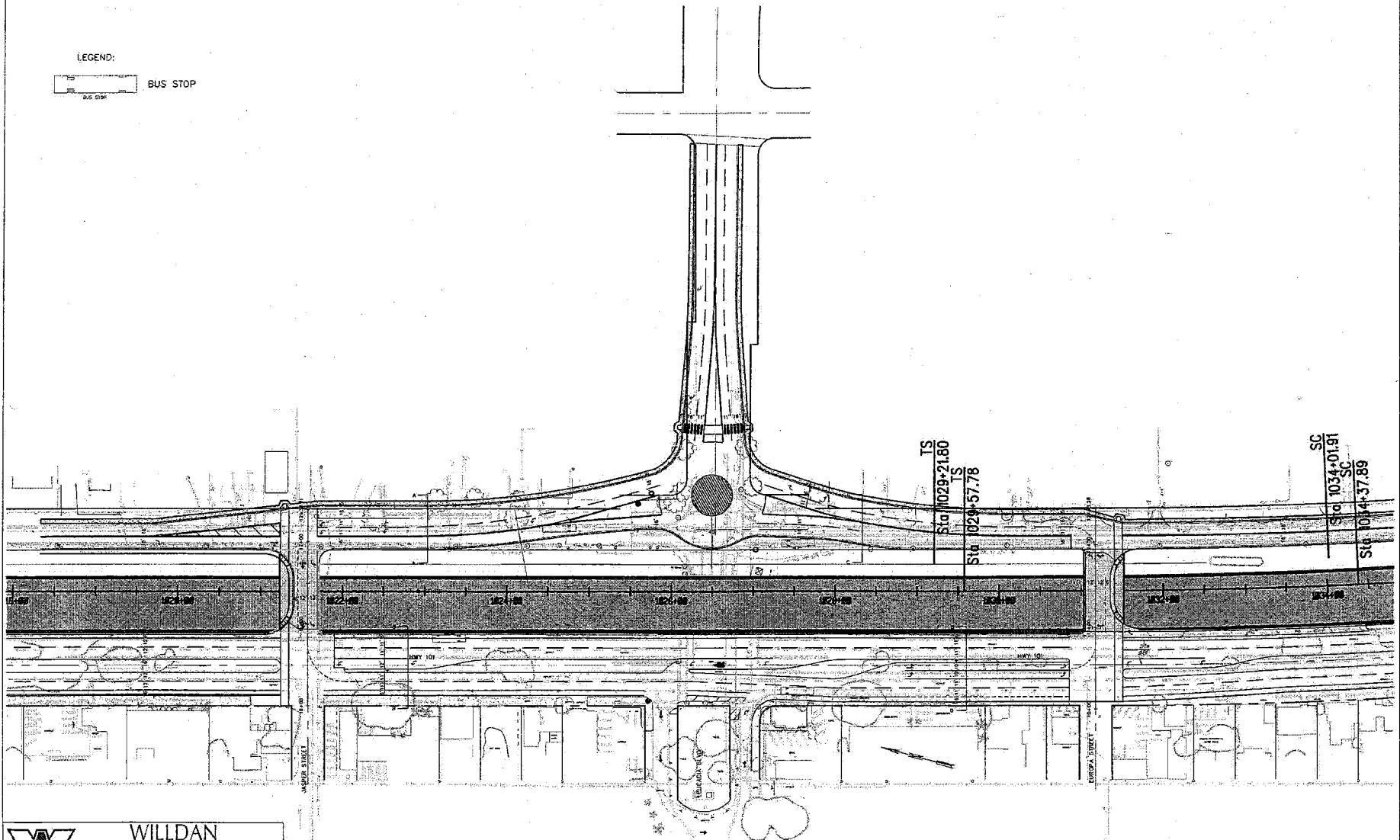
ENCINITAS

SHEET 1 OF 2

LEGEND:



BUS STOP



WILLDAN

Serving Public Agencies
5600 Cornerstone Court West, Suite 300, San Diego, California 92121
(619) 451-1500 fax (619) 457-5145

REVISIONS	APPROVED	DATE	REFERENCE	DATE

BENCH MARK

SCALE

HORIZONTAL 1"=50'

VERTICAL



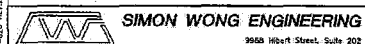
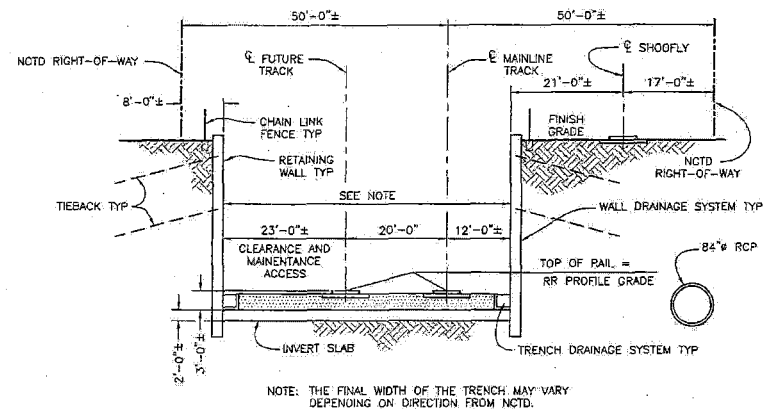
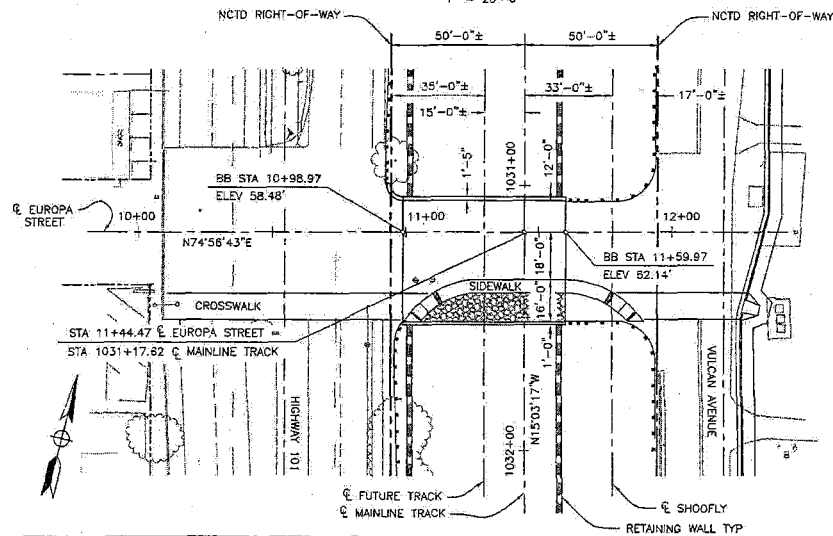
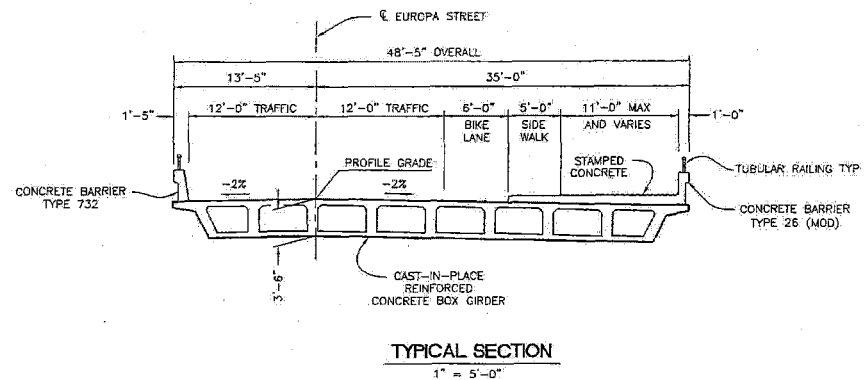
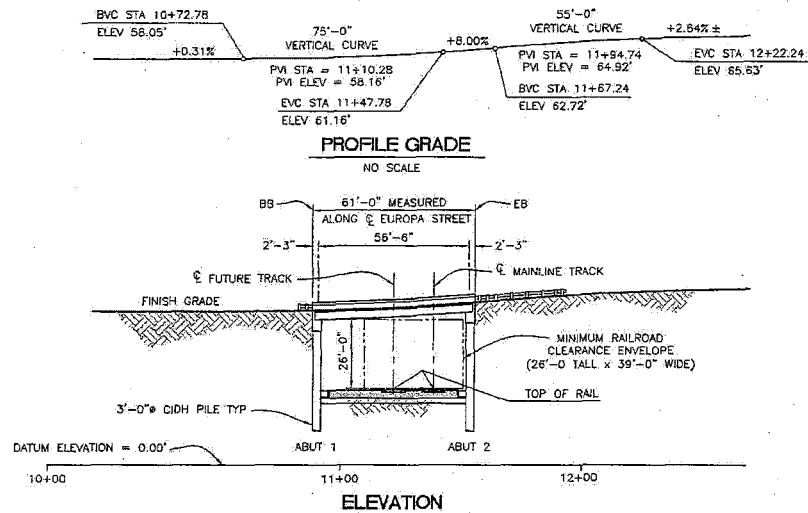
DESIGNED BY: DRAWN BY: CHECKED BY:
PLANS PREPARED UNDER SUPERVISION OF:
DATE: DATE: DATE:
R.C.E. NO.:
ENGINEER: EXP:

RECOMMENDED: BY: DATE:
APPROVED: BY: DATE:

CITY OF ENCINITAS ENGINEERING DEPARTMENT
LEUCADIA BLVD AND RAIL CORRIDOR GRADE SEPARATION
STUDY - ALTERNATIVE 3
RAILROAD TRENCH WITH ONE WAY COUPLET PLAN
WORK PROJECT NO.

DRAWING NO.
SHEET 2 OF 2

ENGINEER'S NAME:
ADDRESS:
PHONE NO.:



REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE



ADVANCE PLANNING STUDY - FEBRUARY 10, 2006

DESIGNED BY	DRAWN BY	CHECKED BY

PLANS PREPARED UNDER SUPERVISION OF	DATE

APPROVALS	RECOMMENDED	APPROVED

CITY OF ENCINITAS ENGINEERING DEPARTMENT	DRAWING NO.

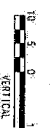
ENGINEER'S NAME: SIMON WONG ENGINEERING
ADDRESS: 9968 HIBERT ST., SUITE 202
PHONE NO.: 858-566-3113

SHEET 1 OF 1

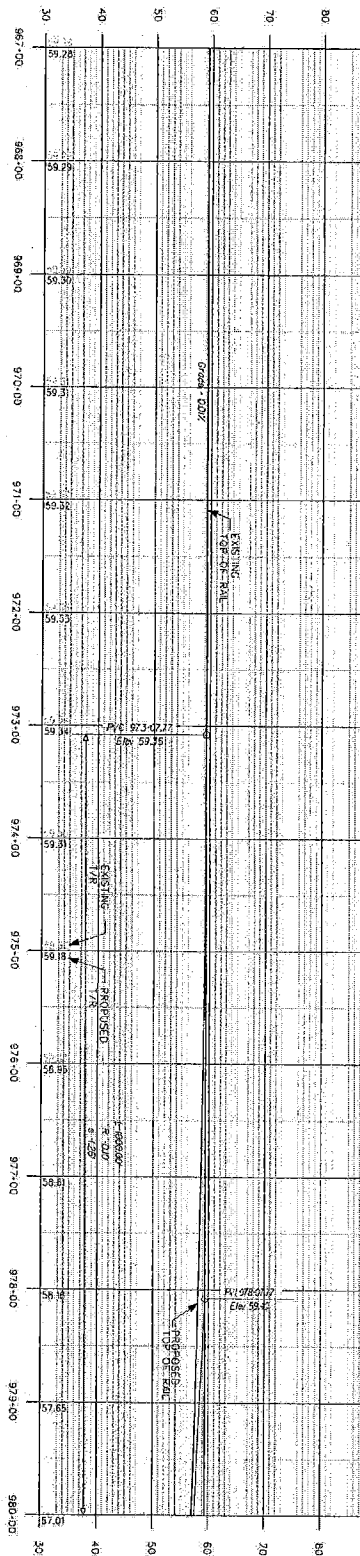
 HANSON WILSON 275 W. HOSPITALITY LANE, STE. 300 SAN DIEGO, CA 92108 (619) 594-8000	
REVISED	DATE
NOTED	DATE
INVT	DATE
BENCH MARK	SCALE
ADDITIONAL SHEETS	VERTICAL SCALE

 SANDAG SAN AGATE DEVELOPMENT	
DESIGNED BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	RECOMMENDED
DATE	DATE
BY	BY
DATE	DATE

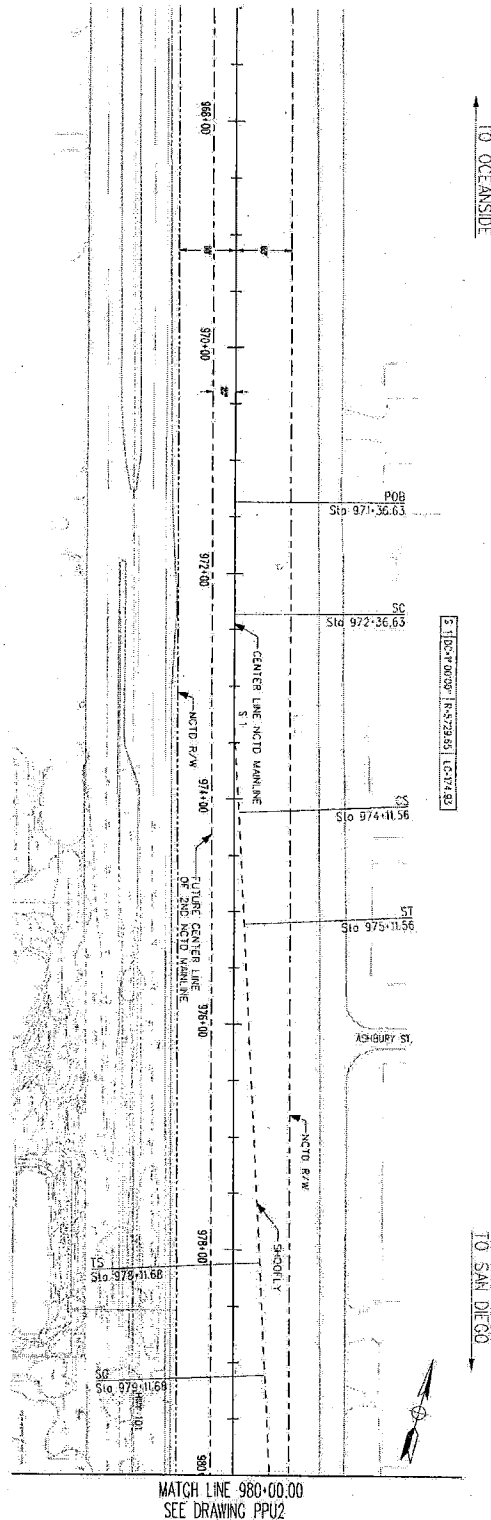
PRELIMINARY	
CITY OF ENCINITAS	ENGINEERING DEPARTMENT
LEUCADA BLVD. & SAL CORRIDOR GRADE SEPARATION STUDY	ALTERNATIVE 2 - 3' TRENCH
SECTION 300 TO 301+00	300 TO 301+00
DATE: 11-10-08	DATE: 11-10-08
BY: [Signature]	BY: [Signature]
DATE: 11-10-08	DATE: 11-10-08

 0 25 50 75 100	 0 5 10 15 20
SHEET 1 OF 18	

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE STE. 300
 PHONE NO: (619) 594-8000

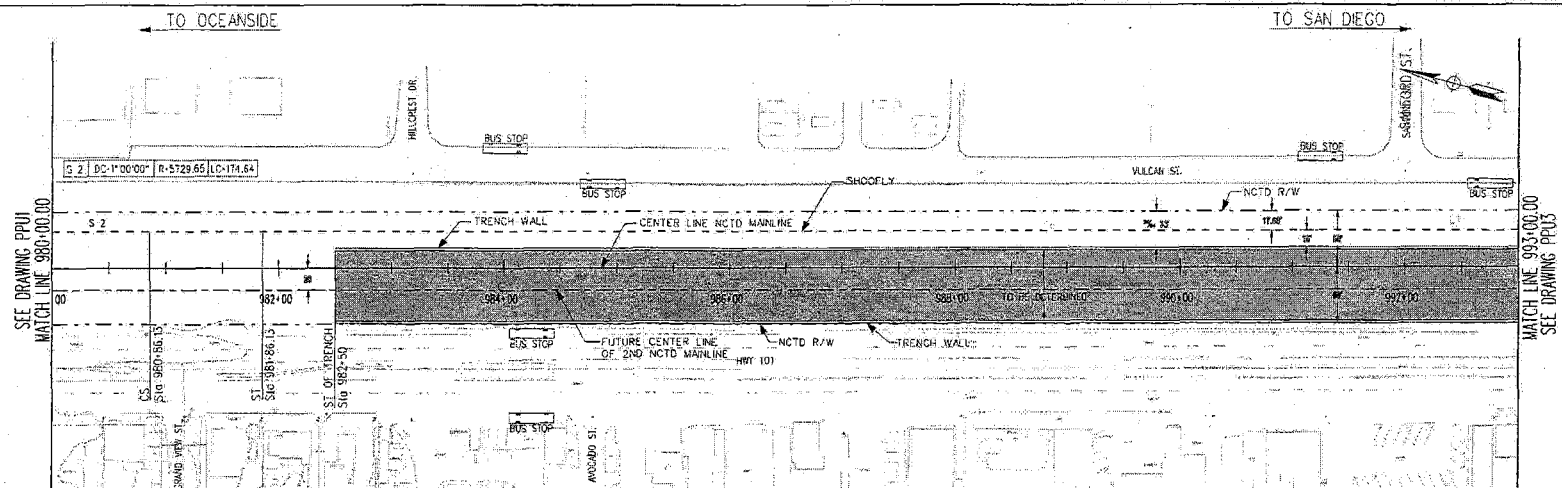


PLAN

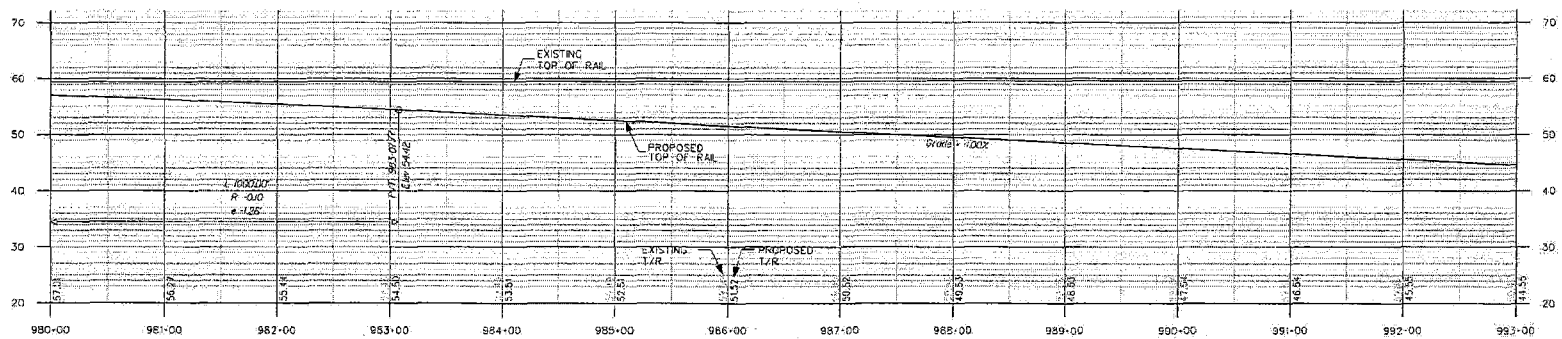


TO OCEANSIDE

TO SAN DIEGO

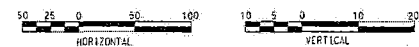


PLAN



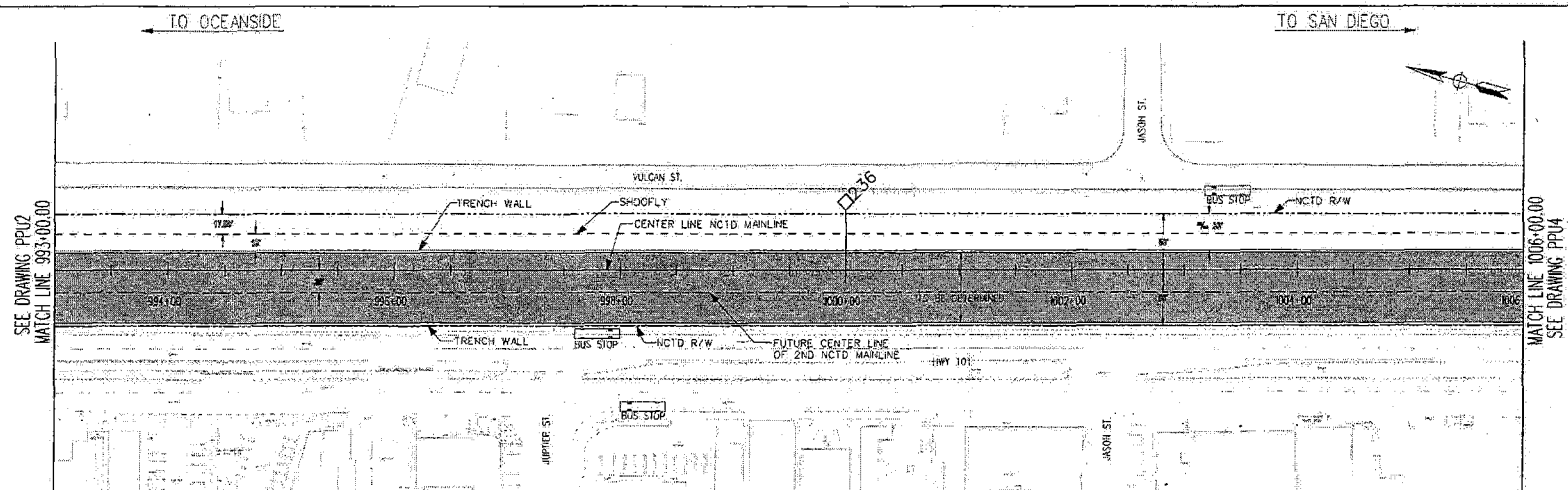
PROFILE

PRELIMINARY

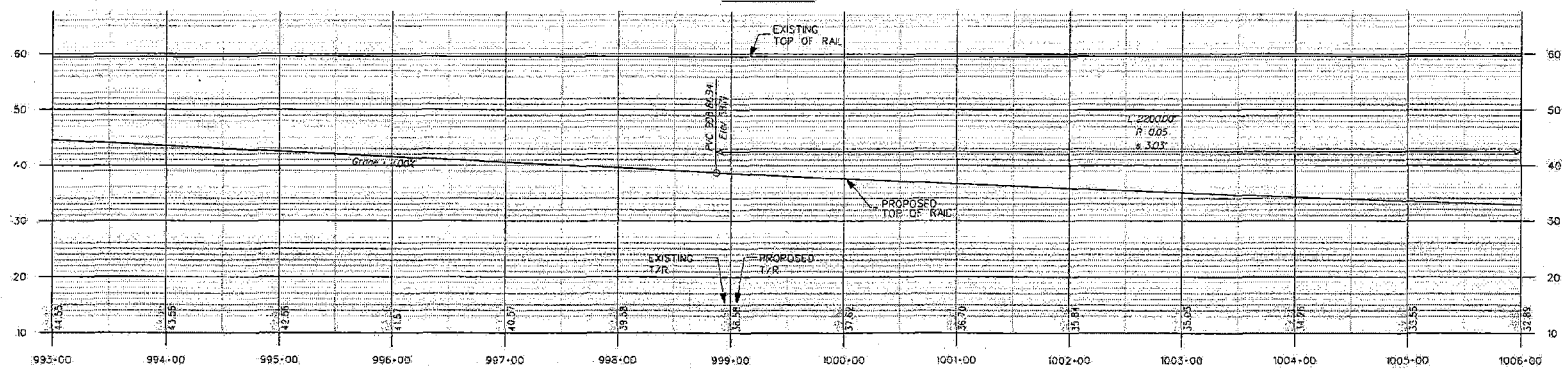


HANSON WILSON 235 ALBERTA/UTAH LINK SITE, BOX 240 240 BARNHARTT, PALM SPRINGS 92259 PHONE: (909) 830-9000 FAX: (909) 830-9001					PROFILE 					PRELIMINARY																																																		
REVISIONS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">NO.</th> <th style="width: 40%;">DESCRIPTION</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		NO.	DESCRIPTION	DATE	BY	CHECKED BY																					APPROVED <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>		DATE	BY	CHECKED BY													ENGINEERING DEPARTMENT <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">CITY OF ENCINITAS</th> <th style="width: 10%;">ENGINEERING DEPARTMENT</th> <th style="width: 10%;">DRAWING NO.</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>		CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.												
NO.	DESCRIPTION	DATE	BY	CHECKED BY																																																								
DATE	BY	CHECKED BY																																																										
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.																																																										
BENCH MARK <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">BENCH MARK</th> <th style="width: 10%;">SCALE</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>					BENCH MARK	SCALE	DATE	BY	CHECKED BY																										PLANS PREPARED UNDER SUPERVISION OF <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">ENGINEER</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					ENGINEER	DATE	CHECKED BY																		
BENCH MARK	SCALE	DATE	BY	CHECKED BY																																																								
ENGINEER	DATE	CHECKED BY																																																										
RECOMMENDED <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					DATE	BY	CHECKED BY													APPROVED <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					DATE	BY	CHECKED BY													CITY OF ENCINITAS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">CITY OF ENCINITAS</th> <th style="width: 10%;">ENGINEERING DEPARTMENT</th> <th style="width: 10%;">DRAWING NO.</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.													
DATE	BY	CHECKED BY																																																										
DATE	BY	CHECKED BY																																																										
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.																																																										
PLANS PREPARED UNDER SUPERVISION OF <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">ENGINEER</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					ENGINEER	DATE	CHECKED BY													APPROVED <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					DATE	BY	CHECKED BY													CITY OF ENCINITAS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">CITY OF ENCINITAS</th> <th style="width: 10%;">ENGINEERING DEPARTMENT</th> <th style="width: 10%;">DRAWING NO.</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.													
ENGINEER	DATE	CHECKED BY																																																										
DATE	BY	CHECKED BY																																																										
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.																																																										
PLANS PREPARED UNDER SUPERVISION OF <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">ENGINEER</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					ENGINEER	DATE	CHECKED BY													APPROVED <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					DATE	BY	CHECKED BY													CITY OF ENCINITAS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">CITY OF ENCINITAS</th> <th style="width: 10%;">ENGINEERING DEPARTMENT</th> <th style="width: 10%;">DRAWING NO.</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.													
ENGINEER	DATE	CHECKED BY																																																										
DATE	BY	CHECKED BY																																																										
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.																																																										
PLANS PREPARED UNDER SUPERVISION OF <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">ENGINEER</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					ENGINEER	DATE	CHECKED BY													APPROVED <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">DATE</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					DATE	BY	CHECKED BY													CITY OF ENCINITAS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">CITY OF ENCINITAS</th> <th style="width: 10%;">ENGINEERING DEPARTMENT</th> <th style="width: 10%;">DRAWING NO.</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.													
ENGINEER	DATE	CHECKED BY																																																										
DATE	BY	CHECKED BY																																																										
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.																																																										
PLANS PREPARED UNDER SUPERVISION OF <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">ENGINEER</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">CHECKED BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>					ENGINEER	DATE	CHECKED BY																																																					
ENGINEER	DATE	CHECKED BY																																																										

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO.: (909) 806-8000.

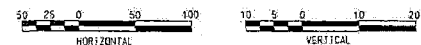


PLAN



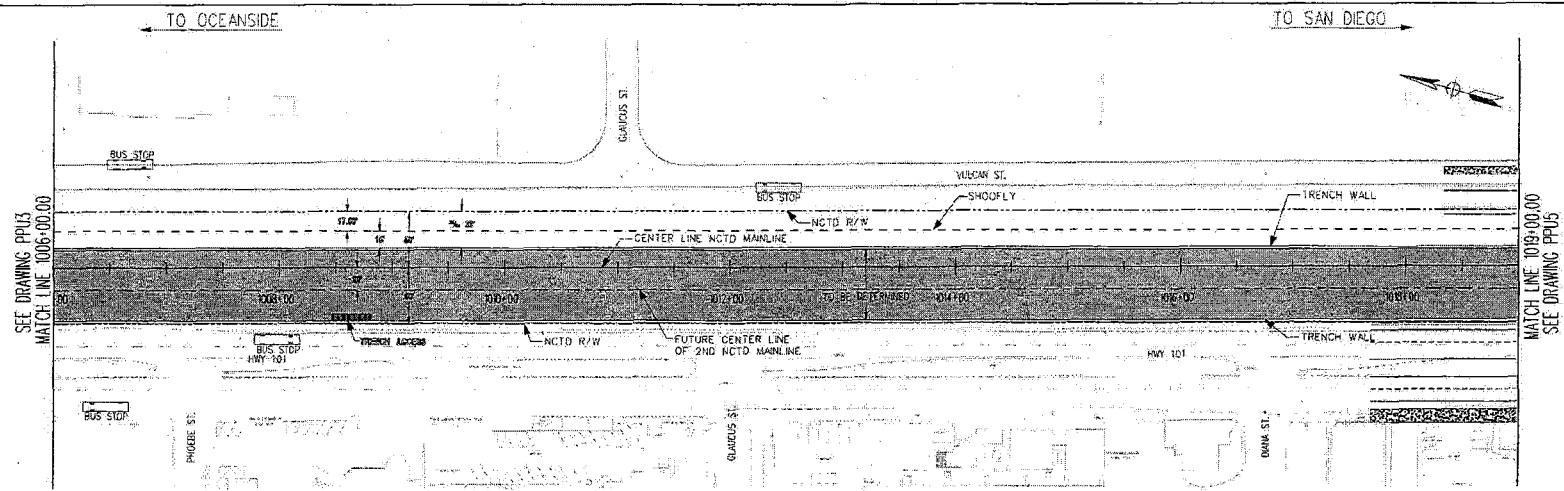
PROFILE

PRELIMINARY

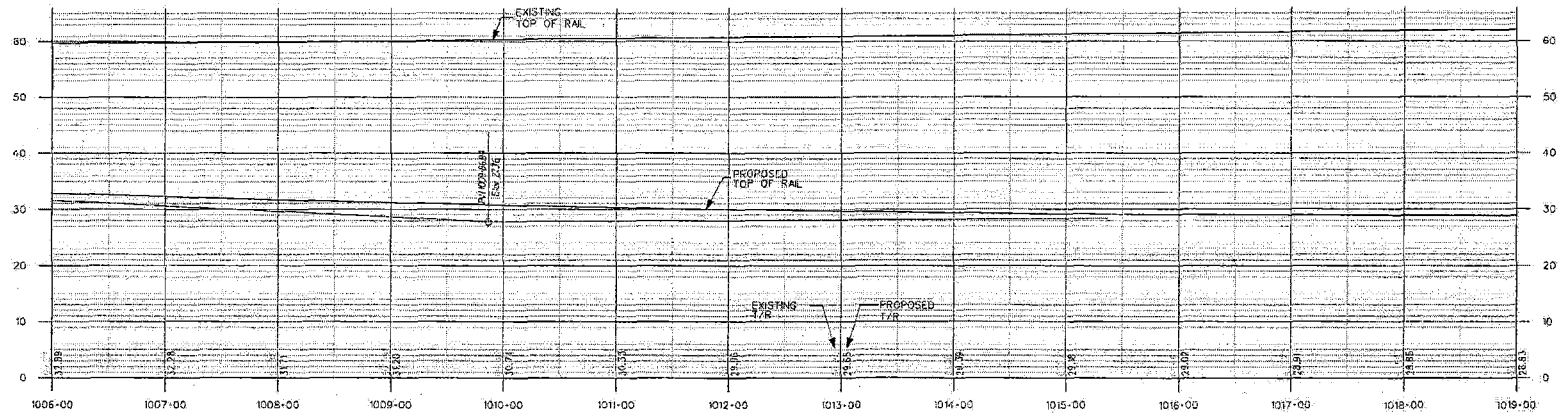


HANSON WILSON 275 W. HENRIEVILLE J. AVE. LEE, MO 64086 540 W. HENRIEVILLE J. AVE. LEE, MO 64086 PHONE (816) 456-3000 FAX (816) 456-3000					PROFILE 										PRELIMINARY																																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REVISIONS</th> <th>APPROVED</th> <th>DATE</th> <th>REFERENCE</th> <th>DATE</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>					REVISIONS	APPROVED	DATE	REFERENCE	DATE																					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>BENCH MARK</th> <th>SCALE</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>					BENCH MARK	SCALE									<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="5" style="text-align: center;"> </td> <td colspan="10"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">DESIGNED BY</td> <td colspan="2">DRAWN BY</td> <td colspan="2">CHECKED BY</td> </tr> <tr> <td colspan="6">PLANS PREPARED UNDER SUPERVISION OF</td> </tr> <tr> <td colspan="2">DATE</td> <td colspan="2">DATE</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2">ENGINEER</td> <td colspan="2">EXP. MGR.</td> <td colspan="2">DATE</td> </tr> </table> </td> <td colspan="5"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">APPROVALS</th> </tr> <tr> <td>RECOMMENDED BY</td> <td>APPROVED</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table> </td> <td colspan="5"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>CITY OF ENCINITAS</th> <th>ENGINEERING DEPARTMENT</th> <th>DRAWING NO.</th> </tr> <tr> <td>LEUCADIA BLVD. & RAIL CORRIDOR ALTERNATIVE 3-RAILROAD TRENCH</td> <td>GRADE SEPARATION STUDY W/ONE WAY CULVERT</td> <td> </td> </tr> <tr> <td>PLAN AND PROFILE</td> <td>8554-00 TO 1006+00</td> <td> </td> </tr> <tr> <td>WORK PROJECT NO.</td> <td>10-208</td> <td> </td> </tr> </table> </td> </tr> </table>																				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">DESIGNED BY</td> <td colspan="2">DRAWN BY</td> <td colspan="2">CHECKED BY</td> </tr> <tr> <td colspan="6">PLANS PREPARED UNDER SUPERVISION OF</td> </tr> <tr> <td colspan="2">DATE</td> <td colspan="2">DATE</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2">ENGINEER</td> <td colspan="2">EXP. MGR.</td> <td colspan="2">DATE</td> </tr> </table>										DESIGNED BY		DRAWN BY		CHECKED BY		PLANS PREPARED UNDER SUPERVISION OF						DATE		DATE		DATE		ENGINEER		EXP. MGR.		DATE		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">APPROVALS</th> </tr> <tr> <td>RECOMMENDED BY</td> <td>APPROVED</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>					APPROVALS		RECOMMENDED BY	APPROVED							<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>CITY OF ENCINITAS</th> <th>ENGINEERING DEPARTMENT</th> <th>DRAWING NO.</th> </tr> <tr> <td>LEUCADIA BLVD. & RAIL CORRIDOR ALTERNATIVE 3-RAILROAD TRENCH</td> <td>GRADE SEPARATION STUDY W/ONE WAY CULVERT</td> <td> </td> </tr> <tr> <td>PLAN AND PROFILE</td> <td>8554-00 TO 1006+00</td> <td> </td> </tr> <tr> <td>WORK PROJECT NO.</td> <td>10-208</td> <td> </td> </tr> </table>					CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.	LEUCADIA BLVD. & RAIL CORRIDOR ALTERNATIVE 3-RAILROAD TRENCH	GRADE SEPARATION STUDY W/ONE WAY CULVERT		PLAN AND PROFILE	8554-00 TO 1006+00		WORK PROJECT NO.	10-208	
REVISIONS	APPROVED	DATE	REFERENCE	DATE																																																																																																																														
BENCH MARK	SCALE																																																																																																																																	
					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">DESIGNED BY</td> <td colspan="2">DRAWN BY</td> <td colspan="2">CHECKED BY</td> </tr> <tr> <td colspan="6">PLANS PREPARED UNDER SUPERVISION OF</td> </tr> <tr> <td colspan="2">DATE</td> <td colspan="2">DATE</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2">ENGINEER</td> <td colspan="2">EXP. MGR.</td> <td colspan="2">DATE</td> </tr> </table>										DESIGNED BY		DRAWN BY		CHECKED BY		PLANS PREPARED UNDER SUPERVISION OF						DATE		DATE		DATE		ENGINEER		EXP. MGR.		DATE		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">APPROVALS</th> </tr> <tr> <td>RECOMMENDED BY</td> <td>APPROVED</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>					APPROVALS		RECOMMENDED BY	APPROVED							<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>CITY OF ENCINITAS</th> <th>ENGINEERING DEPARTMENT</th> <th>DRAWING NO.</th> </tr> <tr> <td>LEUCADIA BLVD. & RAIL CORRIDOR ALTERNATIVE 3-RAILROAD TRENCH</td> <td>GRADE SEPARATION STUDY W/ONE WAY CULVERT</td> <td> </td> </tr> <tr> <td>PLAN AND PROFILE</td> <td>8554-00 TO 1006+00</td> <td> </td> </tr> <tr> <td>WORK PROJECT NO.</td> <td>10-208</td> <td> </td> </tr> </table>					CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.	LEUCADIA BLVD. & RAIL CORRIDOR ALTERNATIVE 3-RAILROAD TRENCH	GRADE SEPARATION STUDY W/ONE WAY CULVERT		PLAN AND PROFILE	8554-00 TO 1006+00		WORK PROJECT NO.	10-208																																																													
DESIGNED BY		DRAWN BY		CHECKED BY																																																																																																																														
PLANS PREPARED UNDER SUPERVISION OF																																																																																																																																		
DATE		DATE		DATE																																																																																																																														
ENGINEER		EXP. MGR.		DATE																																																																																																																														
APPROVALS																																																																																																																																		
RECOMMENDED BY	APPROVED																																																																																																																																	
CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.																																																																																																																																
LEUCADIA BLVD. & RAIL CORRIDOR ALTERNATIVE 3-RAILROAD TRENCH	GRADE SEPARATION STUDY W/ONE WAY CULVERT																																																																																																																																	
PLAN AND PROFILE	8554-00 TO 1006+00																																																																																																																																	
WORK PROJECT NO.	10-208																																																																																																																																	

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO.: (909)-806-8000



PLAN



PROFILE

PRELIMINARY



HANSON WILSON
271 W. GARDEN CITY BLVD. SUITE 200
GARDEN CITY, CALIFORNIA 92025
PHONE (619) 434-8000
FAX (619) 434-8001

REVISIONS	APPROVEE	DATE	REFERENCE	DATE	BENCH MARK	SCALE

SCALE
HORIZONTAL AS SHOWN
VERTICAL AS SHOWN



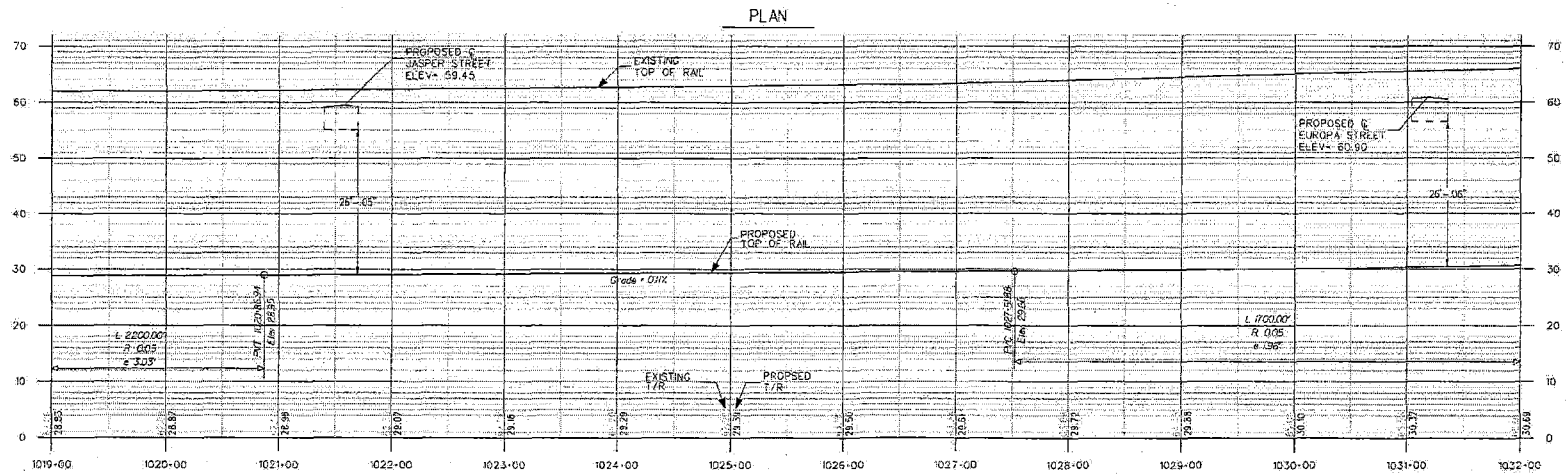
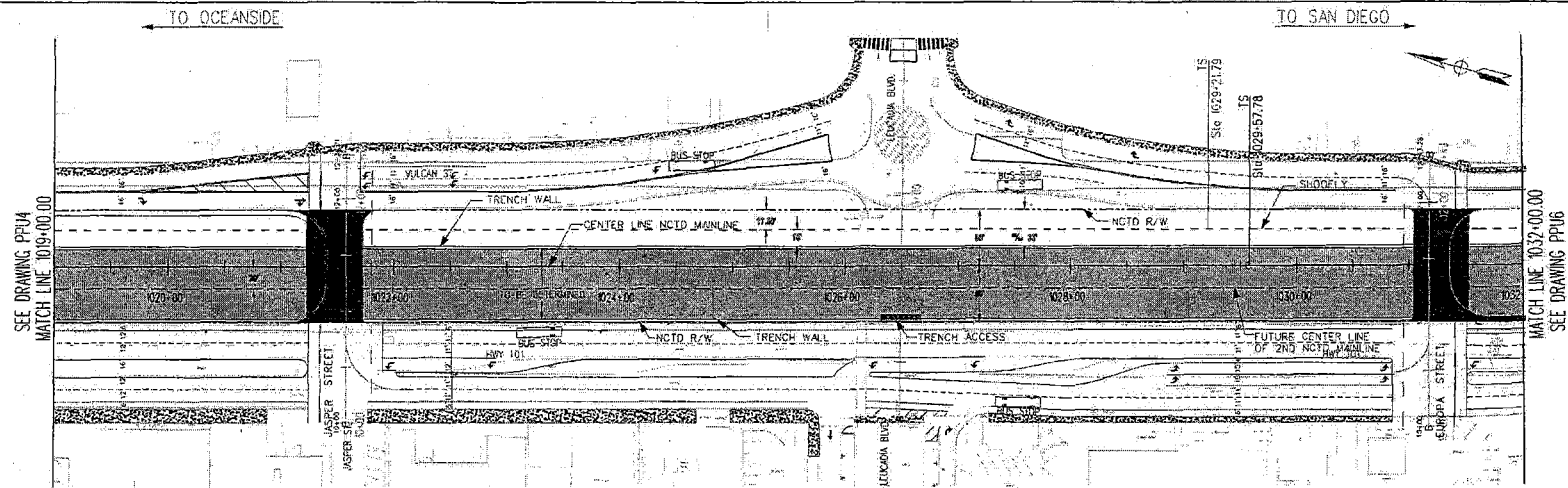
DESIGNED BY	REVISED BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	DATE
ENGINEER	RCE NO.	EXP.

APPROVALS	
RECOMMENDED	APPROVED
BY: _____	BY: _____
DATE: _____	DATE: _____

CITY OF ENCINITAS
ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
ALTERNATIVE 3 - RAILROAD TRENCH W/ONE WAY COUPLET
PLAN AND PROFILE
1006+00 TO 1019+00
WORK PROJECT NO. K4-510-200

DRAWING NO.
1019-00
SHEET 4 OF 10

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 271 W. GARDEN CITY BLVD. SUITE 200
PHONE: (619) 434-8000



PLAN

PROFILE

PRELIMINARY

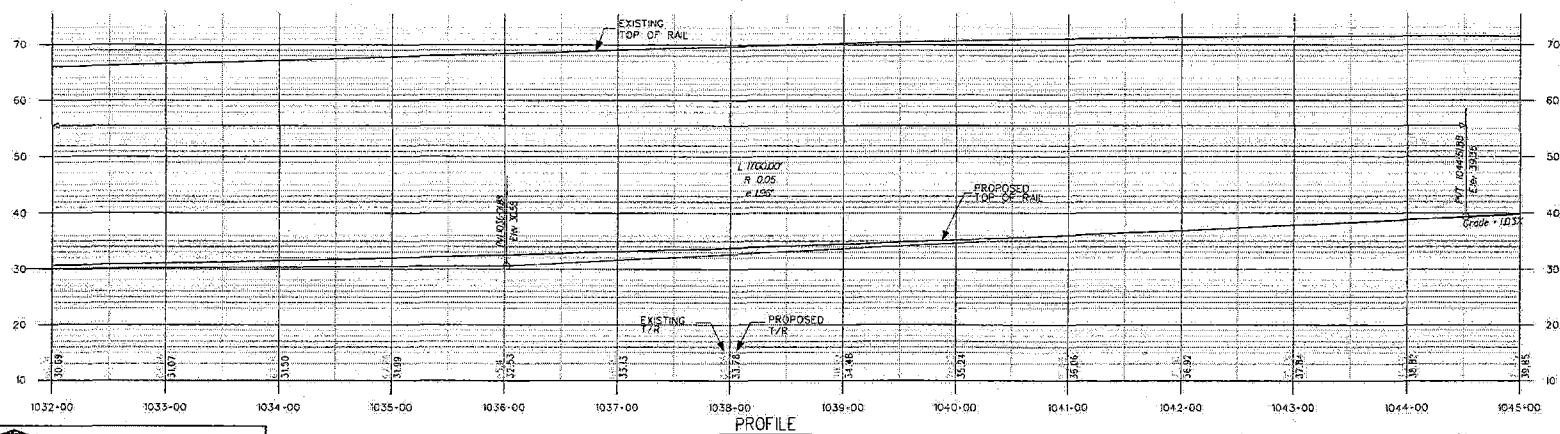
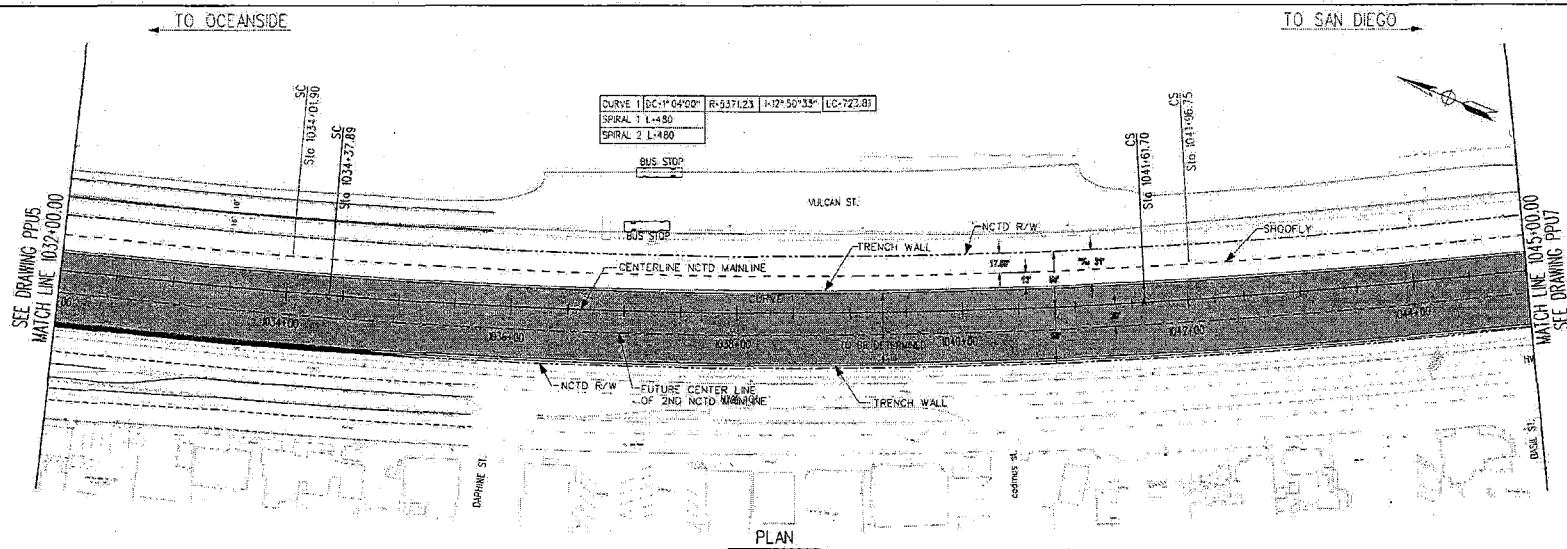


PATH: C:\PROG\CGI\SW45\1005\w000045\PP05.dwt

REVISIONS	APPROVER	DATE	REFERENCE	DATE	BENCH MARK	SCALE	REVISION BY	CHECKED BY	APPROVALS	CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
PHONE: (619) 441-1000

SHEET 5 OF 10



PROFILE

PRELIMINARY



HANSON WILSON
275 W. HIGHWAY 101, SUITE 100
SAN DIMAS, CALIFORNIA 91764
PHONE (951) 861-8000
FACSIMILE (951) 861-8000

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE
	HORIZONTAL AS SHOWN
	VERTICAL AS SHOWN

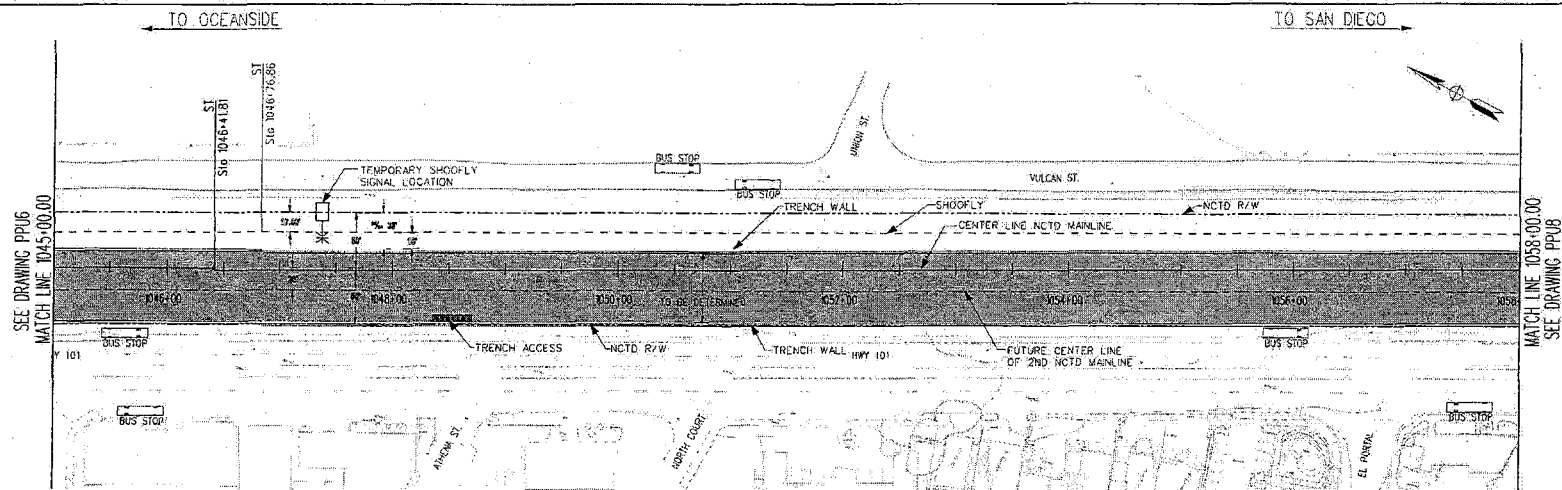


DESIGNED BY	REVIEW BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	BY
ENGINEER	R.E.C. NO.	DATE
EXP.		

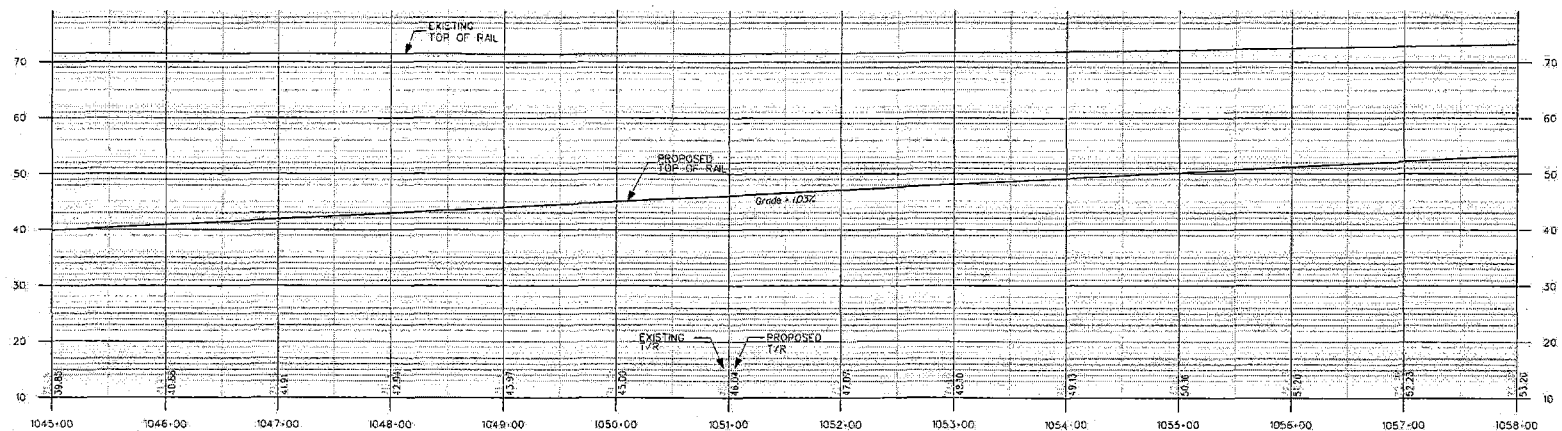
APPROVALS	
RECOMMENDED	APPROVED
BY	BY
DATE	DATE

CITY OF ENCINITAS	ENGINEERING DEPARTMENT	DRAWING NO.
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY		
ALTERNATIVE 3 - RAILROAD TRENCH W/ ONE WAY COUPLET		
PLAN AND PROFILE		
1032+00 TO 1045+00		
VORR PROJECT NO. X4-510-206		
		SHEET 6 OF 10

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HIGHWAY 101, SUITE 100
PHONE: (951) 861-8000



PLAN



PROFILE

PRELIMINARY



270 N. HOSPITALITY LANE, STE. 300
ENCINITAS, CALIFORNIA 92024
PHONE (619) 441-8800
FAX (619) 441-8801

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE
	HORIZONTAL: AS SHOWN
	VERTICAL: AS SHOWN



DESIGNED BY	DRAWN BY	CHECKED BY

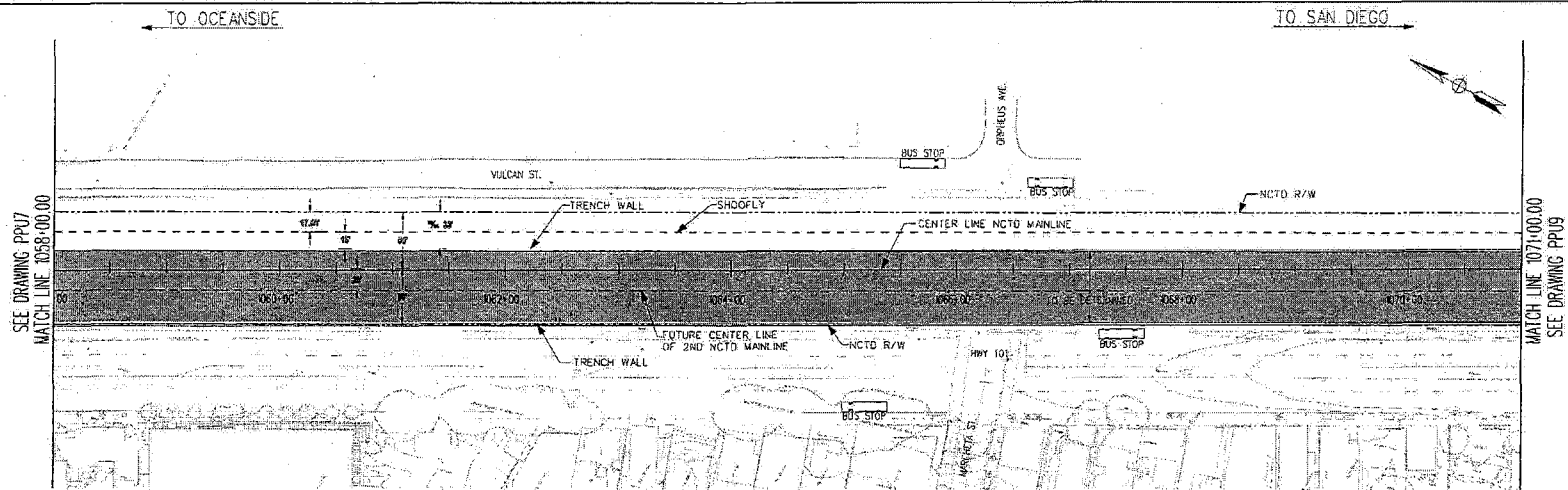
RECOMMENDED	APPROVED
BY: DATE: RCE NO: EXP:	BY: DATE:

CITY OF ENCINITAS	ENGINEERING DEPARTMENT
LEUCADIA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY ALTERNATIVE 3-RAILROAD TRENCH W/ONE WAY COUPLET 1045+00 TO 1058+00 WORK PROJECT NO. X4-S10-206	

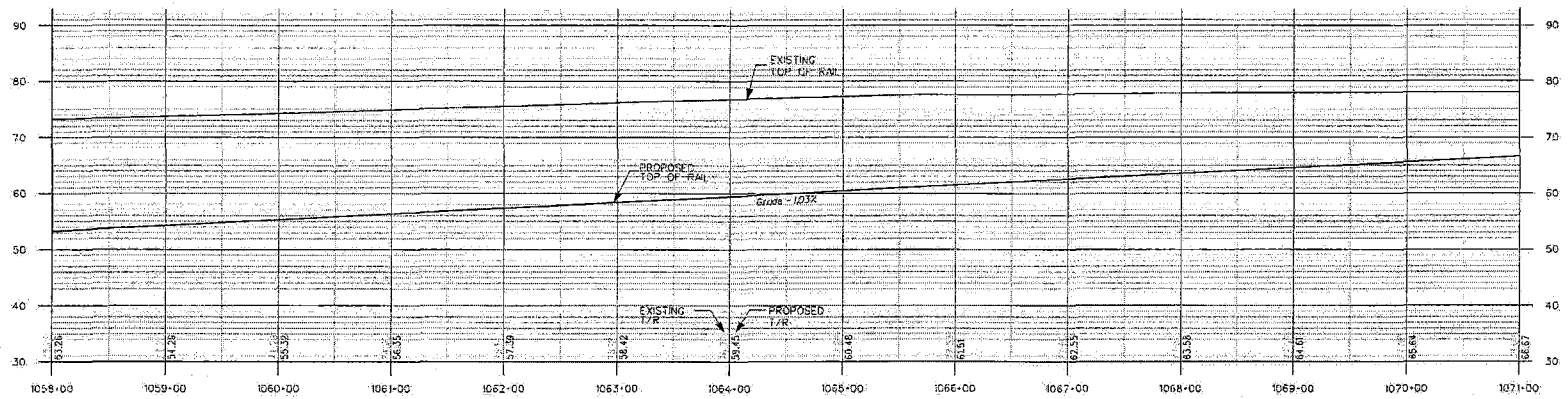
DRAWING NO.

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 N. HOSPITALITY LANE, STE. 300
PHONE: (619) 441-8800

SHEET 7 OF 10

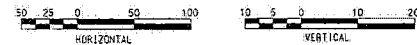


PLAN



PROFILE

PRELIMINARY



**HANSON
WILSON**
275 W. HOSPITALITY LANE, STE. 300
SAN JOSE, CALIFORNIA 95128
PHONE: (408) 281-8000
FAX: (408) 281-8000

REVISIONS	APPROVED	DATE	REFERENCES	DATE

BENCH MARK	SCALE



SANDAG
San Diego's Regional Planning Agency

DESIGNED BY	DRAWN BY	CHECKED BY

PLANS PREPARED UNDER SUPERVISION OF	RECOMMENDED	APPROVED

CITY OF ENCINITAS	ENGINEERING DEPARTMENT

DRAWING NO.

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
PHONE: (408) 281-8000

PATH:\projects\encinitas\1058+00\1058+00.dwg

HANSON WILSON INCORPORATED 275 W. HOSPITALITY LANE STE. 300 SAN DIEGO, CA 92108	
DATE	PROJECT
APPROVED	DATE

SCALE	VERTICAL
HORIZONTAL	AS SHOWN

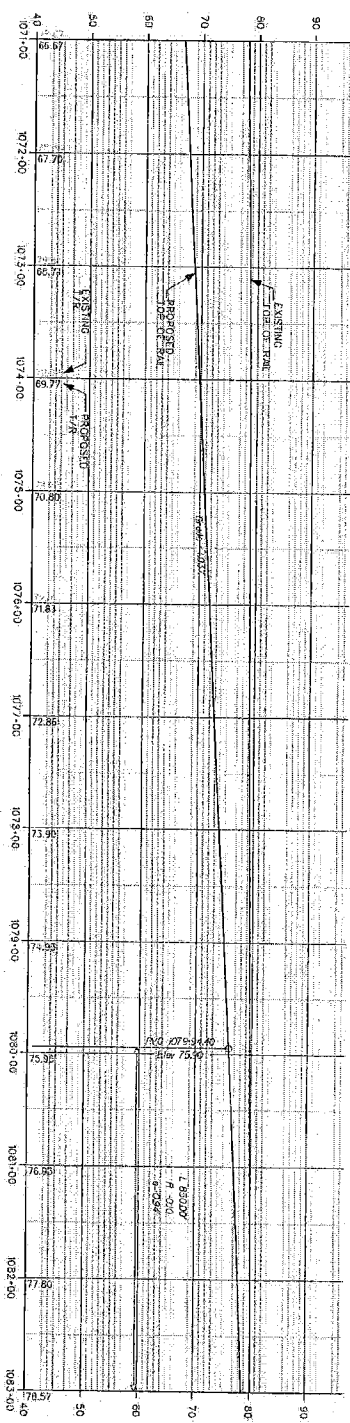


DESIGNED BY	DRAWN BY	CHECKED BY
PLANS PREPARED UNDER SUPERVISION OF	DATE	BY
ENGINEER	DATE	BY

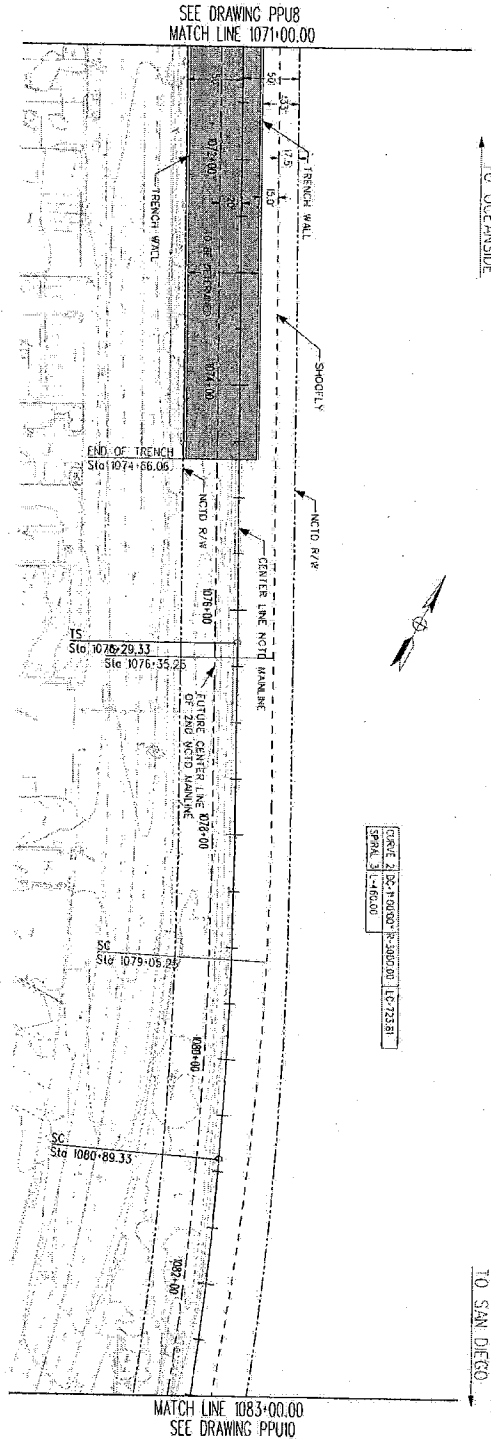
APPROVALS	CITY OF ENCINITAS
APPROVED	ENGINEERING DEPARTMENT
DATE	DATE

EDUCATION & RAIL CORRIDOR GRADE SEPARATION STUDY	ALTERNATIVE 3 - FAIRBANKS TRENCH W/ONE WAY COUPLET
1071+00 TO 1083+00	1071+00 TO 1083+00
DATE	DATE

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO: (909) 806-8000



PROFILE



PLAN



DATE: 2-20-19
BY: J. WILSON
CHECKED: J. WILSON

CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

Attachment G

PROJECT DESCRIPTION: Leucadia Boulevard and Railroad Corridor Grade Separation Study PSR
Proposed Improvement (Scope): Alternative 3 - Trench Alternative with One-Way Couplet

ALTERNATIVE 3
SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	\$104,232,494
TOTAL STRUCTURE ITEMS	\$11,300,000
SUBTOTAL CONSTRUCTION COSTS	\$115,532,494
TOTAL RIGHT-OF-WAY ITEMS	\$3,000,000
 TOTAL PROJECT CAPITAL OUTLAY COSTS	 \$118,532,494
SUPPORT COSTS (35% OF CONSTRUCTION COST)	41,486,373
 TOTAL PROJECT COSTS	 \$160,018,867
USE	<u>\$160,000,000</u>

CONCEPTUAL PROJECT COST ESTIMATE FOR LEUCADIA GRADE SEPARATION

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	1,343,000	CY	\$5.5	\$7,386,500	
Clearing and Grubbing	1	LS	\$50,000	\$50,000	
Fill		CY		\$0	

Subtotal Earthwork \$7,436,500

<u>Section 2 Structural Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Asphalt Concrete	1,900	TON	\$70	\$133,000	
Aggregate Base	700	CY	\$85	\$59,500	

Subtotal Pavement Structural Section \$192,500

<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Inlets	40	EA	\$6,000	\$240,000	
Remove Inlets	10	EA	\$500	\$5,000	
RCP -	9,000	LF	\$2,000	\$18,000,000	
Bridge Drains	300	LF	\$60	\$18,000	
Other Drainage Improvements (Filters)	40	EA	\$500	\$20,000	
Interceptor Channel	7,500	LF	\$60	\$450,000	
Pump Station	1	EA	\$3,000,000	\$3,000,000	

Subtotal Drainage \$21,733,000

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Curb and Gutter	7,500	LF	\$20	\$150,000	
Construct PCC Sidewalk	400	CY	\$1,000	\$400,000	
Retaining Walls	1	LS	\$43,113,700	\$43,113,700	
Pump Station Structure	1	LS	\$150,000	\$150,000	
SWPPP	1	LS	\$250,000	\$250,000	
Architectural Treatment		LS		\$0	

Total Specialty Items \$44,063,700

I. ROADWAY ITEMS (Continued)

<u>Section 5 Traffic</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Traffic Signals and Lighting	1	LS	\$300,000	\$300,000	
Overhead Sign Structures				\$0	
Signing and Striping	1	LS	\$23,000	\$23,000	
Traffic Control System	1	LS	\$500,000	\$500,000	
Traffic Management Plan	1	LS		\$	

Subtotal Traffic \$823,000

TOTAL SECTIONS 1-5 \$74,248,700

I. ROADWAY ITEMS (Continued)

<u>Section 6 Minor Items (excludes retaining walls)</u>				<u>Item Cost</u>	<u>Section Cost</u>
	\$31,135,000	X (5%)		1,556,750	
(Subtotal Sections 1-5 minus retaining walls)					
					Total Minor Items

\$1,556,750

Section 7 Roadway Mobilization (includes ret walls)

	\$75,805,450	X (10%)		7,580,545	
(Subtotal Sections 1-6)					
					Total Roadway Mobilization

\$7,580,545

Section 8 Roadway Additions

Supplemental Work	\$75,805,450	X (0%)		0	
(Subtotal Sections 1-6)					
Contingencies	\$83,385,995	X (25%)		\$20,846,499	
(Subtotal Sections 1-7)					

TOTAL ROADWAY ADDITIONS \$29,983,794

TOTAL ROADWAY ITEMS \$104,232,494

(Subtotal for Sections 1-8)

ESTIMATE PREPARED BY: Sunnie House
DATE: September 2005

PHONE (858) 450-4700

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

II. STRUCTURES ITEMS

Structure
(1)

Bridge Name: Leucadia Blvd. Overhead

Structure Type: CIP Box Girder and Tunnel

Width (out to out) - (LF)	96.84
Span Lengths - (LF)	61.00
Total Area - (SF)	5,907.24

Footing Type (pile/spread)

Sub Total Cost for Structure \$1,211,912.80

SUBTOTAL STRUCTURES ITEMS	\$1,211,913
(Sum of Total Cost for Structures)	

Railroad Related Costs:	6,951,371	\$6,951,371
-------------------------	-----------	-------------

TOTAL RAILROAD AND STRUCTURE ITEMS	\$8,163,284
------------------------------------	-------------

10% Mobilization	\$816,328
25% Contingency	\$2,244,903.16

TOTAL STRUCTURES ITEMS	\$11,224,516
For Budget Purpose	\$11,300,000

ESTIMATE PREPARED BY: Jim Frost
DATE: September 2005

PHONE (858) 566-3113

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

III. RIGHT OF WAY ITEMS

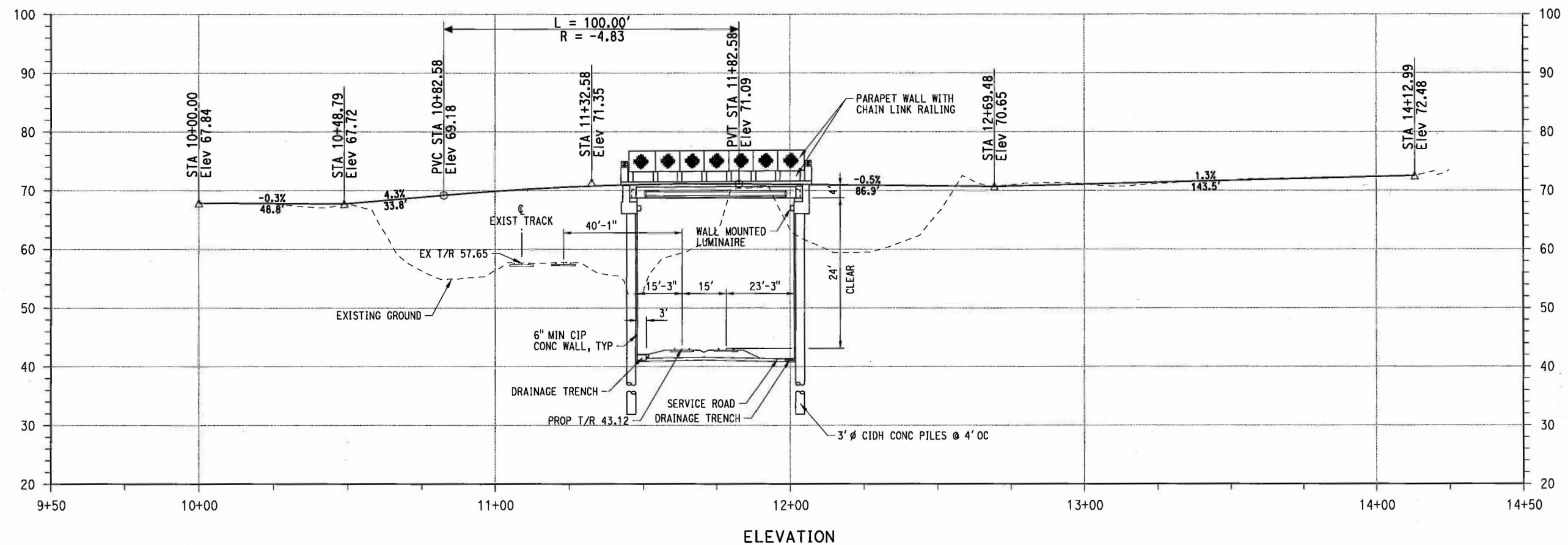
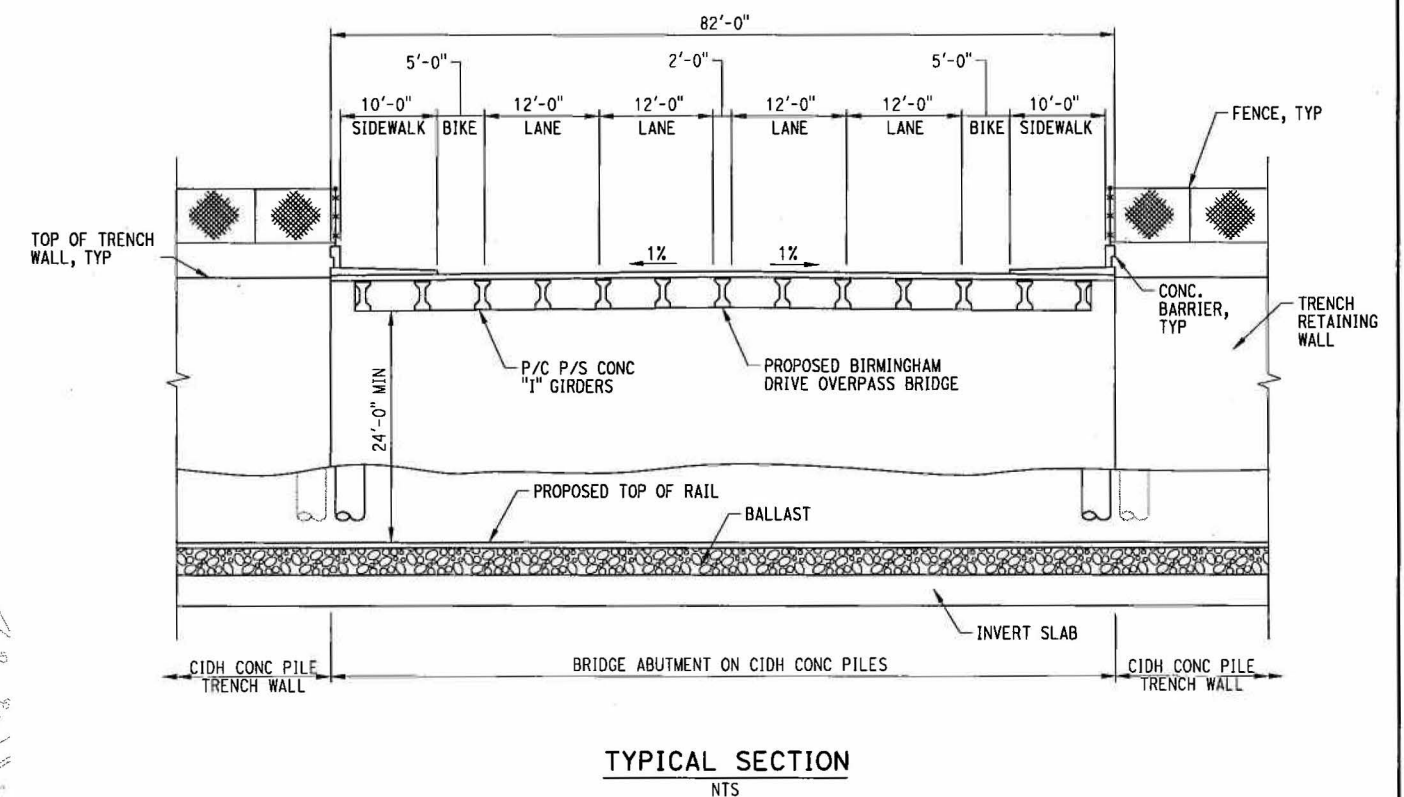
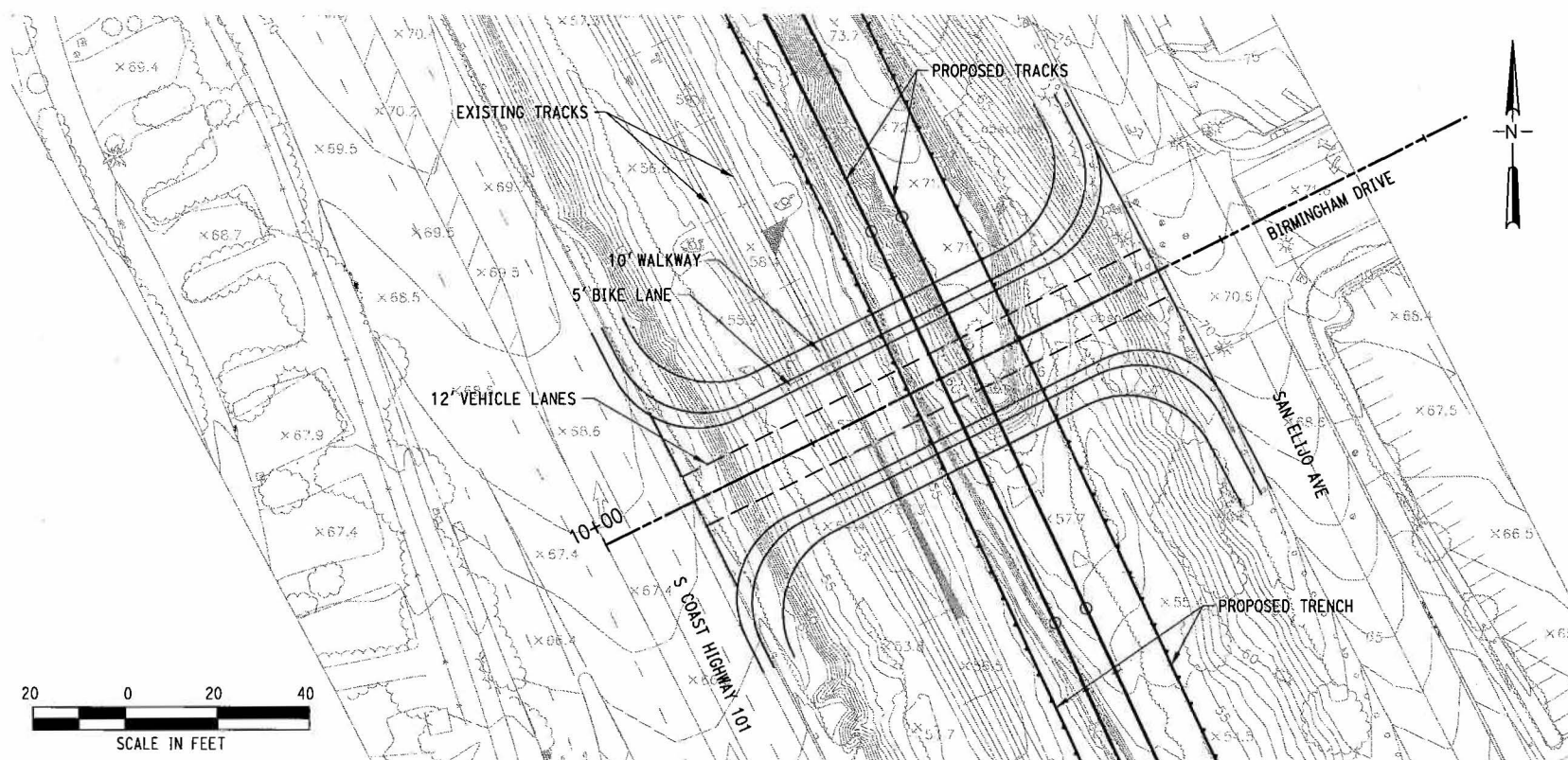
	VALUE	
A. Acquisition, including excess lands, damages to remainder (s) and goodwill	\$1,000,000	
B. Utility Relocation	\$2,000,000	
C. Relocation Assistance	\$0	
D. Clearance/Demolition	\$0	
E. Title and Escrow Fees	\$0	
TOTAL RIGHT OF WAY ITEMS (Escalated Value)		\$3,000,000

Anticipated Date of Right-of-Way Certification
(Date to which Values are Escalated)

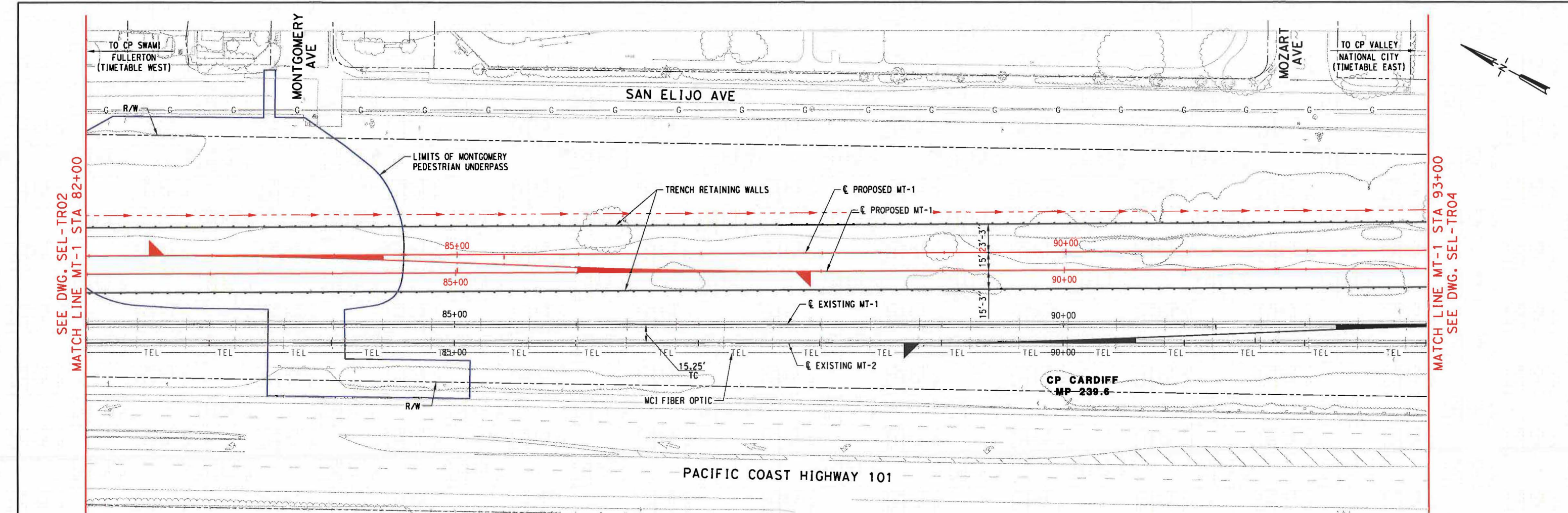
2004

ESTIMATE PREPARED BY: Sunnie House
DATE: September 2005

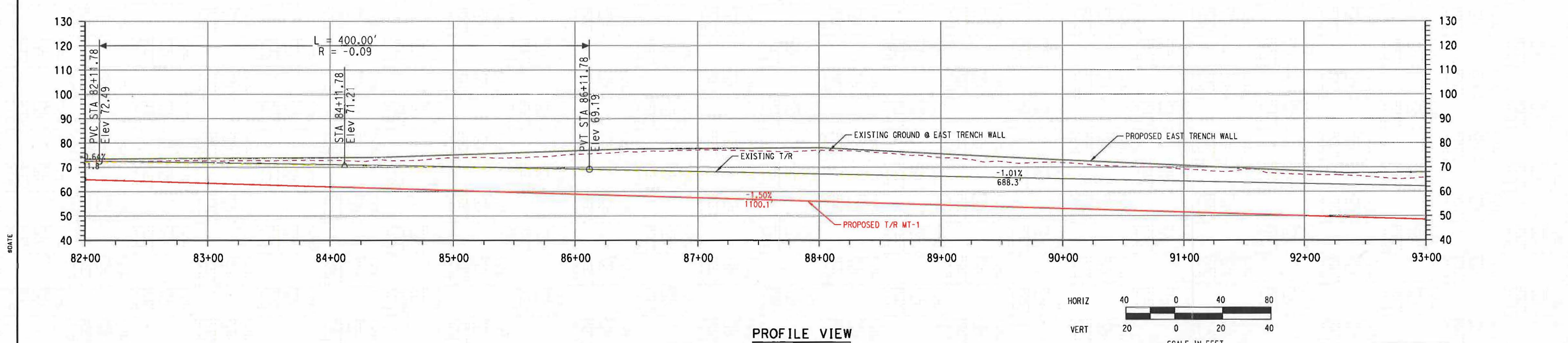
PHONE (858) 450-4700



--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

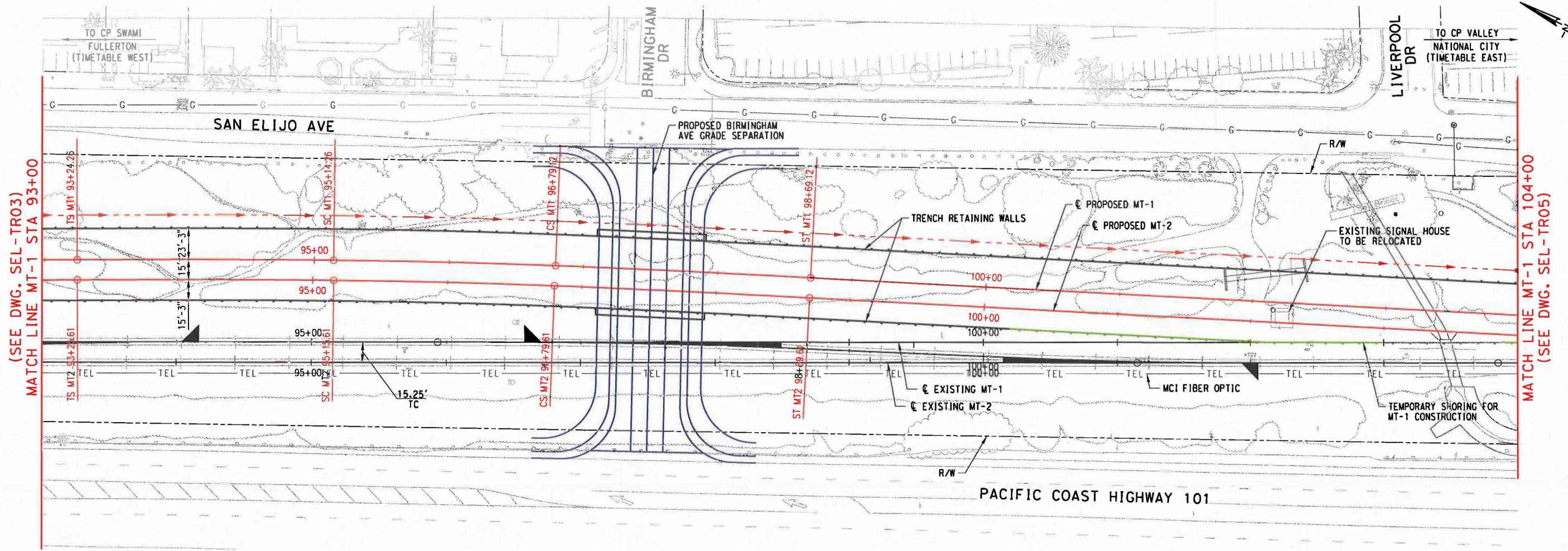


PLAN VIEW

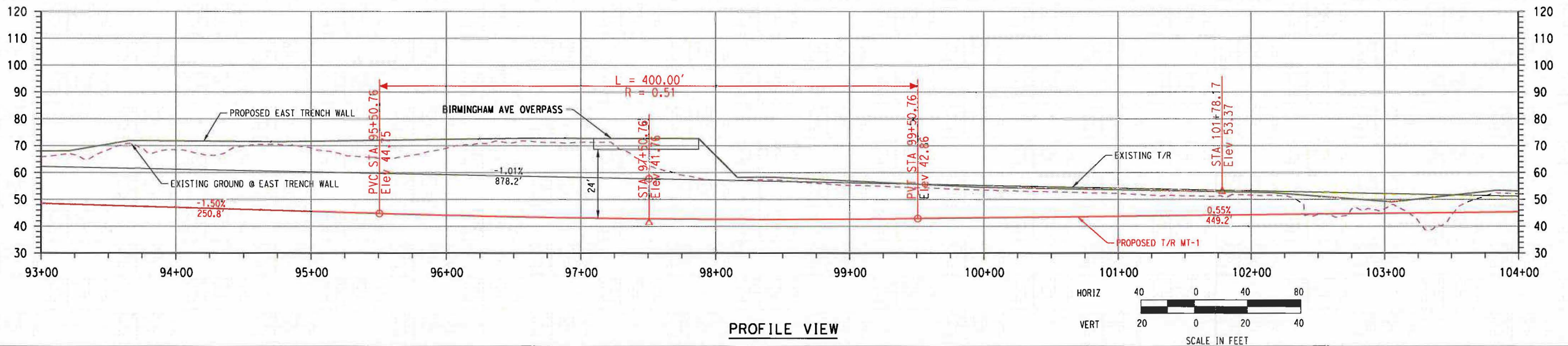


PROFILE VIEW

			DESIGNED BY ACR DRAWN BY MRG CHECKED BY JRC APPROVED BY G. ROSCA DATE MONTH 2013			 HDR Engineering, Inc. 3230 El Camino Real, Suite 200 Irvine California 92602			 San Diego's Regional Planning Agency			APPROVED: _____ DATE: _____			BIRMINGHAM DRIVE GRADE SEPARATION			CONTRACT NO. DRAWING NO. SEL-TR03		
															TRACK PLAN AND PROFILE MT-1 STA 82+00 TO STA 93+00			REVISION - SHEET NO. OF 		
															SCALE AS NOTED					



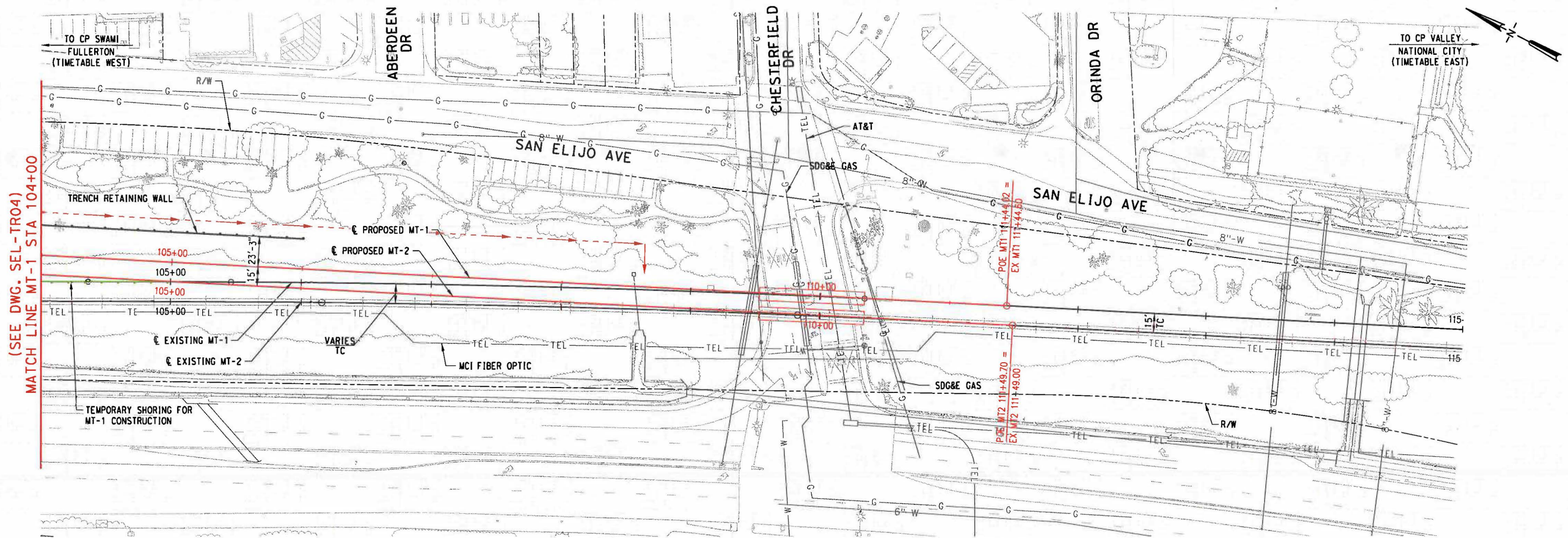
PLAN VIEW



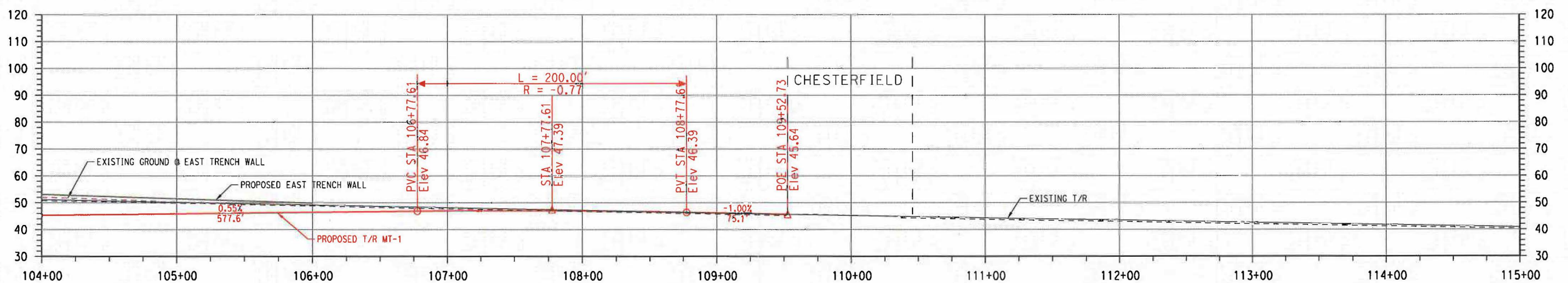
PROFILE VIEW

REQUEST

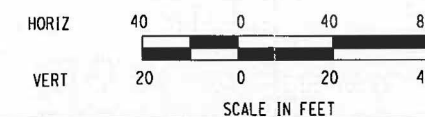
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



PLAN VIEW



PROFILE VIEW



DATE
BY
SUB
APP.

REV.	DATE	DESCRIPTION

Information confidential
all plans, drawings, speci-
fications, and/or information
furnished hereunder shall
remain the property of the
San Diego Association of
Governments and shall
not be held confidential
and shall not be used for
any purpose not provided
for in agreements with the
San Diego Association of
Governments.

DESIGNED BY
ACR
DRAWN BY
MRG
CHECKED BY
JRC
APPROVED BY
G. ROSCA
DATE
MONTH 2013

HDR
HDR Engineering, Inc.
3230 El Camino Real, Suite 200
Irvine California 92602

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

BIRMINGHAM DRIVE GRADE SEPARATION

**TRACK PLAN AND PROFILE
MT-1 STA 104+00 TO STA 115+00**

CONTRACT NO.	SEL-TR05
DRAWING NO.	
REVISION	SHEET NO.
SCALE	AS NOTED

Birmingham Drive Grade Separation PSR

PROJECT COST ESTIMATE

Revised: February 27, 2014

Design Level: Conceptual Design

Estimated By: HDR

Item	Quantity	Unit	Unit Price	Amount	Subtotal
DESIGN					
Agency Design Admin. (SANDAG)	3.11%	x	CCE	\$ 2,100,400	
Agency Program Management (SANDAG)	1.85%	x	CCE	\$ 1,248,700	
Agency Design Admin. (NCTD/MTS)	0.55%	x	CCE	\$ 368,200	
Alternative Analysis & Environmental	2.77%	x	CCE	\$ 1,870,500	
Design - Preliminary to 30%	2.77%	x	CCE	\$ 1,870,500	
Design - 30% to 60% and Permits	3.00%	x	CCE	\$ 2,027,000	
Design - 60% to Final PS&E	3.00%	x	CCE	\$ 2,027,000	
Independent Peer Reviews	0.67%	x	CCE	\$ 453,200	
DESIGN TOTAL					\$ 11,965,500
RIGHT OF WAY					
Temporary R/W, Easements	1	Acre	\$25,000	\$ 25,000	
Slope Easements	0	Acre	\$6,250	\$ -	
Footing/Utility Easements	0	Acre	\$25,000	\$ -	
Property Acquisition	0	Acre	\$100,000	\$ -	
Appraisals & ROW Consultant	25	%	R.O.W Costs	\$ 6,300	
Right-of-way Contingency (10% to 35%)	30	%	R.O.W Costs	\$ 7,500	
RIGHT OF WAY TOTAL					\$ 38,800
CONSTRUCTION CONTRACT ESTIMATE					
CONSTRUCTION CONTRACT ESTIMATE (CCE)					\$ 67,542,544
ANCILLARY CONSTRUCTION COSTS					
Agency Construction Admin. (SANDAG)	1.83%	x	CCE	\$ 1,237,200	
Agency Construction Prog. Mgmt. (SANDAG)	0.83%	x	CCE	\$ 563,900	
Agency Construction Admin. (NCTD/MTS)	0.34%	x	CCE	\$ 230,100	
Design Support During Construction	2.77%	x	CCE	\$ 1,870,500	
Construction Management	10.95%	x	CCE	\$ 7,397,500	
NCTD Signal & Maintenance Support & Testing	1.37%	x	CCE	\$ 923,600	
Flagging Services	2,000	Hr	\$65	\$ 130,000	
Busing Passengers	2	AWW	\$75,000	\$ 150,000	
ANCILLARY CONSTRUCTION COSTS					\$12,502,800
OFF-SITE ENVIRONMENTAL MITIGATION					
Tidal Wetlands Permanent Impact Mitigation	0	Acre	\$610,000	\$ -	
Tidal Wetlands Temporary Impact Mitigation	0	Acre	\$310,000	\$ -	
Other Wetlands Permanent Impact Mitigation	0.15	Acre	\$185,000	\$ 27,750	
Other Wetlands Temporary Impact Mitigation	0	Acre	\$135,000	\$ -	
Uplands Permanent Impact Mitigation	0.14	Acre	\$125,000	\$ 17,500	
Uplands Temporary Impact Mitigation	0	Acre	\$65,000	\$ -	
Other	0	Acre		\$ -	
Subtotal					\$45,250
TOTAL PROJECT COST ESTIMATE					\$92,094,894
COST ESCALATION					
Year of Expenditure	Annual %	Cumulative	Estimated	Escalation	
2012 (7/11 through 6/12)	0.0%	0.0%	\$ -	\$ -	
2013 (7/12 through 6/13)	0.0%	0.0%	\$ -	\$ -	
2014 (7/13 through 6/14)	0.0%	0.0%	\$ -	\$ -	

Birmingham Drive Grade Separation PSR**PROJECT COST ESTIMATE**

Revised: February 27, 2014

Design Level: **Conceptual Design**Estimated By: **HDR**

Item	Quantity	Unit	Unit Price	Amount	Subtotal
2015 (7/14 through 6/15)	1.0%		1.0%	\$ -	\$ -
2016 (7/15 through 6/16)	2.0%		3.0%	\$ -	\$ -
2017 (7/16 through 6/17)	2.8%		5.8%	\$ -	\$ -
2018 (7/17 through 6/18)	2.8%		8.6%	\$ 46,047,447	\$ 3,960,080
2019 (7/18 through 6/19)	2.8%		11.4%	\$ 46,047,447	\$ 5,249,409
2020 (7/19 through 6/20)	2.8%		14.2%	\$ -	\$ -
TOTAL EXPENDITURES IN 2011 DOLLARS				\$92,094,894	
TOTAL COST ESCALATION					\$ 9,209,489
PROJECT COST IN YEAR OF EXPENDITURE DOLLARS					\$101,304,383

Note: Project Risk Category based upon the SANDAG Design Procedures Manual is: Medium Risk

Birmingham Drive Grade Separation PSR

Construction Cost Estimate

Revised: February 27, 2014

Design Level: Conceptual Design

Estimated By: HDR

Item	Quantity	Unit	Unit Price	Amount	Subtotal
CONSTRUCTION					
1. Site Civil					
Clearing and Grubbing	6	AC	\$9,000	\$ 54,000	
Earth Embankment (FILL)	5,624	CY	\$9.00	\$ 50,616	
Excavation (CUT)	81,861	CY	\$12.00	\$ 982,332	
Construct pavement section	10,498	SF	\$5.00	\$ 52,490	
Minor Concrete (Sidewalk)	4,470	SF	\$5.00	\$ 22,350	
Minor Concrete (Curb and Gutter)	406	LF	\$20.00	\$ 8,120	
Removals	1	LS	\$100,000.00	\$ 100,000	
Subtotal					\$1,269,908
2. Track					
New Track	6,320	TF	\$260	\$ 1,643,200	
Remove Track	6,320	TF	\$40	\$ 252,800	
Shift Track	2,214	TF	\$80	\$ 177,120	
Crossover - No. 24	2	EA	\$575,000	\$ 1,150,000	
Turnout Removal	4	EA	\$30,000	\$ 120,000	
Subtotal					\$3,343,120
3. Signal					
Permanent / Temporary Signal Work	1	LS	\$4,000,000	\$ 4,000,000	
Subtotal					\$4,000,000
4. Structures					
Birmingham Overpass Bridge	1,000	SF	\$4,954	\$ 4,954,000	
Soldier Pile Retaining Wall (Trench)	91,400	SF	\$260	\$ 23,764,000	
Cable Railing for Retaining Walls	5,600	LF	\$14	\$ 78,400	
Temporary Shoring Wall	4,000	LF	\$150	\$ 600,000	
Subtotal					\$29,396,400
5. Culverts and Drainage					
Pump Station	1	LS	\$2,000,000	\$ 2,000,000	
Concrete Lined Ditch	3,265	LF	\$672	\$ 2,194,080	
72" Storm Drain	510	LF	\$285	\$ 145,350	
Subtotal					\$4,339,430
6. Site Mitigation					
SWPPP	1	LS	\$60,000.00	\$ 60,000	
On-site Uplands	2.00	Acre	\$65,000	\$ 130,000	
Subtotal					\$190,000
7. Utilities					
Misc Utilities Protection and Relocation	1	LS	\$500,000	\$ 500,000	
Subtotal					\$500,000
8. Traffic					
Traffic Management Plan	1	LS	\$50,000	\$ 50,000	
Traffic Delineation Items	1	LS	\$100,000	\$ 100,000	
Traffic Signal Modification	2	EA	\$150,000	\$ 300,000	
Traffic Signal	1	EA	\$200,000	\$ 200,000	
Traffic Signal Removal	1	EA	\$50,000	\$ 50,000	
Temporary Traffic Control	1	LS	\$100,000	\$ 100,000	
Roadside Signs/Overhead Signs	1	LS	\$20,000	\$ 20,000	

Birmingham Drive Grade Separation PSR**Construction Cost Estimate**

Revised: February 27, 2014

Design Level: **Conceptual Design**Estimated By: **HDR**

Item	Quantity	Unit	Unit Price	Amount	Subtotal
Subtotal					\$820,000
9. Minor Items (10% of 1-8)					\$4,385,886
Base Construction Estimate (BCE)				\$ 48,244,744	
Contractor Mobilization	7.50%	x	BCE	\$ 3,618,300	
Contractor Demobilization	2.50%	x	BCE	\$ 1,206,100	
Contingency	30%	x	BCE	\$ 14,473,400	
Subtotal					\$19,297,800
CONSTRUCTION COST ESTIMATE (CCE)					\$ 67,542,544