APPENDIX I-2.
PRELIMINARY STORMWATER QUALITY MANAGEMENT PLAN

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CITY OF ENCINITAS
STORMWATER INTAKE FORM AND PRIORITY DEVELOPMENT PROJECT PRELIMINARY STORMWATER QUALITY MANAGEMENT PLAN (SWQMP)

FOR:
PIRAEUS POINT
MULTI-005158-2022

PIRAEUS STREET
ENCINITAS, CA 92024
APN 254-144-01

PREPARED BY:
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PREPARED FOR:
LENNAR HOMES OF CALIFORNIA, LLC
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SAN DIEGO, CA 92127

DATE OF SWQMP:
January 19, 2022
Revised: April 6, 2022
Revised: September 9, 2022

GRADING PLAN PREPARED BY:
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PREPARER'S CERTIFICATION

I hereby declare that I am the Engineer in Responsible Charge of design of storm water best management practices (BMPs) for this project, and that I have exercised responsible charge over the design of the BMPs as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the Priority Development Project (PDP) requirements of the City of Encinitas BMP Design Manual, which is a design manual for compliance with local City of Encinitas and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2015-0100) requirements for storm water management.

I have read and understand that the City Engineer has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the BMP Design Manual. I certify that this PDP SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this PDP Storm Water Quality Management Plan (SWQMP) by the City Engineer is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

Engineer's Seal

Engineer of Work's Signature, PE Number

Tyler G. Lawson
Print Name

Pasco Laret Suiter & Associates
Company

Date

PROJECT OWNER'S CERTIFICATION

This PDP SWQMP has been prepared for PIREAUS INVESTOR, LLC by PASCO LARET SUITER & ASSOCIATES. The PDP SWQMP is intended to comply with the PDP requirements of the City of Encinitas BMP Design Manual, which is a design manual for compliance with local City of Encinitas and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2015-0100) requirements for storm water management.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan. Once the undersigned transfers its interests in the property, its successor-in-interest shall bear the aforementioned responsibility to implement the best management practices (BMPs) described within this plan, including ensuring on-going operation and maintenance of structural BMPs. A signed copy of this document shall be available on the subject property into perpetuity.

_____
Project Owner's Signature

_____
Print Name

Lennar Homes of California, LLC
Company

04/06/2022
Date

SUBMITTAL RECORD

Use this table to keep a record of submittals of this PDP SWQMP. Each time the PDP SWQMP is re-submitted, provide the date and status of the project. In the fourth column, summarize the changes that have been made or indicate if response to plancheck comments is included. When applicable, insert response to plancheck comments behind this page.

Submittal Number	Date	Project Status	Summary of Changes
1	01/19/2022	☑ Preliminary Design/Planning/ CEQA □ Final Design	Initial Submittal
2	04/13/2022	☑ Preliminary Design / Planning/ CEQA □ Final Design	2nd Submittal
3	09/09/2022	☑ Preliminary Design / Planning/ CEQA □ Final Design	3rd Submittal
4		□ Preliminary Design / Planning/ CEQA □ Final Design	4th Submittal

PROJECT IDENTIFICATION

Project/Applicant Name: Piraeus Point/Lennar Homes of California, LLC	
Permit/Application Number: MULTI-005158-2022; CDP-005161-2022, DR-005160-2022; SUB-005159-2022	Date: 1/19/2022
Site Address: Piraeus Street, Encinitas, CA 92024	APN: 254-144-01
Scope of work/project description: The project proposes the construction of 149 condominiums and amenity space, paved private driveways and alleyways, onsite grading and supporting infrastructure such as sewer and water. Also proposed as part of this development are right of way improvements along Piraeus Street and Plato Place.	

DETERMINATION OF PROJECT STATUS AND REQUIREMENTS

This form will identify permanent, post construction BMP requirements. Refer to City of Encinitas Stormwater BMP Design Manual for guidance.

Step 1: Is the project a "development project"? Development projects are defined as "construction, rehabilitation, redevelopment, or reconstruction of any public or private projects". See Section 1.3 and Table 1-2 of the manual for guidance. For example, interior remodels, roof replacements, and electrical and plumbing work are not development projects.	☑ Yes	***Go to Step 2.***
	□ No	***Stop.*** Permanent BMP requirements do not apply. No SWQMP will be required. Provide discussion below.

If "No", provide discussion / justification explaining why the project is not a "development project":

Step 2: Complete questions below for Project Type Determination.
The project is (select one): ☑ New Development □ Redevelopment

The total proposed, newly created and/or replaced impervious area is: 199,195 ft^2

Is the project in any of the following categories, (a) through (f) below?

Yes ☑	No □	(a)	New development projects or redevelopment projects that create and/or replaced 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects.
Yes □	No ☑	(b)	Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of

			10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects.
Yes ☑	No □	(c)	New and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses: (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812). (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater. (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
Yes □	No ☑	(d)	New or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharge directly to an Environmentally Sensitive Area (ESA). "Discharge directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands). Note: ESAs are areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and SDRWQCB; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and SDRWQCB; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. See manual Section 1.4.2 for additional guidance.
Yes □	No ☑	(e)	New development projects, or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, that support one or more of the following uses: (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following SIC codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (ii) Retail gasoline outlets. This category includes retail gasoline outlets that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic of 100 or more vehicles per day.
Yes ☑	No □	(f)	New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction. *Note: See manual Section 1.4.2 for additional guidance.*

Does the project meet the definition of one or more of the PDP categories (a) through (f) listed above?

☑ Yes – **The project is a Priority Development Project, the applicant shall provide PDP Post Construction BMPs and *continue to Step 3*.**

□No – **The project is a Standard or Basic Project. *Stop here and complete the "City of Encinitas Stormwater Intake Form for All Developments and Standard Projects SWQMP".***

The following is for ***redevelopment PDPs*** only:

The area of existing (pre-project) impervious area at the project site is: n/a(A)
The total proposed newly created or replaced impervious area is: n/a (B)
Percent impervious surface created or replaced (B/A)*100: n/a%
The percent impervious surface created or replaced is (select one based on the above calculation):

□ Less than or equal to fifty percent (50%) – only new and/or replaced impervious areas are considered PDP subject to treatment and HMP criteria
OR
☑ Greater than fifty percent (50%) – the entire site is a PDP; treatment and HMP criteria apply to entire site regardless of whether it is replaced

Step 3 (PDPs only): Do hydromodification control requirements apply? See Section 1.6 of the BMP Design Manual for guidance.	☑ Yes	PDP structural BMPs required for pollutant control (Chapter 5) and hydromodification control (Chapter 6). ***Go to Step 4.***
	□ No	PDP structural BMPs required for pollutant control (Chapter 5) only. Provide brief discussion of exemption to hydromodification control below. ***Go to "Site Information Checklist"***

Discussion / justification if hydromodification control requirements do not apply:

Step 4 (PDPs subject to treatment and hydromodification controls): Does protection of critical coarse sediment yield areas apply based on review of City of Encinitas Potential Critical Coarse Sediment Yield Area Map? See Section 6.2 of the BMP Design Manual for guidance.	□ Yes	Management measures required for protection of critical coarse sediment yield areas (Chapter 6.2). ***Go to "Site Information Checklist"***
	☑ No	Management measures not required for protection of critical coarse sediment yield areas. Provide brief discussion below. ***Go to "Site Information Checklist"***

Discussion / justification if management measures not required for protection of critical coarse sediment yield areas:

The project site does not fall in a potential Critical Coarse Sediment Yield Area. Refer to Attachment 2b.

SITE INFORMATION CHECKLIST

Project's Watershed (Complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier)	Carlsbad HU, San Marcos HA, Batiquitos HSA 904.51
Parcel Area (Total area of Assessor's Parcel(s) associated with the project)	6.876 Acres (299,508 Square Feet)
Area to be Disturbed by the Project (Project Area)	6.25 Acres (272,590 Square Feet)
Project Proposed Impervious Area (Subset of Project Area)	4.63 Acres (202,011 Square Feet)
Project Proposed Pervious Area (Subset of Project Area)	1.62 Acres (70,579 Square Feet)
Note: Proposed Impervious Area + Proposed Pervious Area = Area to be Disturbed by the Project. This may be less than the Parcel Area.	

Description of Existing Site Condition

Current status of the site (select all that apply):

□ Existing development

☑ Previously graded but not built out

□ Demolition completed without new construction

□ Agricultural or other non-impervious use

□ Vacant, undeveloped/natural

Description / Additional Information:
The site is comprised of vegetated and non-vegetated open space area. The site was previously graded to address slope stability issues.

Existing Land Cover includes (select all that apply):

☑ Vegetative Cover

☑ Non-Vegetated Pervious Areas

□ Impervious Areas

Description / Additional Information:

Currently, the existing site is undeveloped, completely pervious but not in its natural state, remedial grading has occurred throughout the project site.

Underlying soil belongs to Hydrologic Soil Group (select all that apply):

□ NRCS Type A

□ NRCS Type B

□ NRCS Type C

☑ NRCS Type D

Approximate Depth to Groundwater (GW):

□ GW Depth < 5 feet

□ 5 feet < GW Depth < 10 feet

□ 10 feet < GW Depth < 20 feet

☑ GW Depth > 20 feet

Existing Natural Hydrologic Features (select all that apply):

□ Watercourses

□ Seeps

□ Springs

□ Wetlands

☑ None

Description / Additional Information:

Description of Existing Site Drainage Patterns

How is storm water runoff conveyed from the site? At a minimum, this description should answer:

1) Is existing drainage conveyance natural or urban?
2) Is runoff from offsite conveyed through the site? If yes, quantify all offsite drainage areas, design flows, and locations where offsite flows enter the project site, and summarize how such flows are conveyed through the site.
3) Provide details regarding existing project site drainage conveyance network, including any existing storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural or constructed channels. And
4) Identify all discharge locations from the existing project site along with a summary of conveyance system size and capacity for each of the discharge locations. Provide summary of the pre-project drainage areas and design flows to each of the existing runoff discharge locations.

Describe existing site drainage patterns:

In its current state the about 70% of the site drains from east to west via surface/sheet flow before entering a storm drain infrastructure adjacent to Piraeus Street. The remainder of the site drains from east to southwest via surface/sheet flow before entering a storm drain structure at the corner of Piraeus Street and Plato Place. Runoff from the site then continues west under interstate 5 through a series of storm drain pipes until it reaches a concrete drainage ditch on the west side of interstate 5 where runoff confluences. Runoff continues north until it eventually discharges into the Batiquitos Lagoon.

Description of Proposed Site Development

Project Description / Proposed Land Use and/or Activities:

The project proposes the construction of 149 condominiums and amenity space, paved private driveways and alleyways, onsite grading and supporting infrastructure such as sewer and water. Also proposed as a part of this development are right of way improvements along Piraeus Street and Plato Place.

As shown on the Post-Development Hydrology Node Map included in the drainage study, Drainage Basin A comprises a majority of the site. Runoff from Drainage Basin A surface flows to the south to the proposed storm drain system which conveys flow to the proposed biofiltration basin located along Plato Place. After being treated and stored, runoff discharges to the existing storm drain system along Piraeus Street and continues west under the Interstate-5 in a similar pattern to predevelopment condition.

List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features):

Impervious features include 149 condominiums, paved private driveways and alleyways as well as pathways and hardscape between building use for pedestrian circulation throughout the site are also proposed as a part of this development.

List/describe proposed pervious features of the project (e.g., landscape areas):

Pervious features include approximately 51,016 SF of landscaped area along with approximately 12,197 SF of fill slope.

Does the project include grading and changes to site topography?
☑ Yes
□ No

Description / Additional Information:

Mass grading associated with the private driveways, and pads are proposed over a majority of the site.

Description of Proposed Site Drainage Patterns

Does the project include changes to site drainage (e.g., installation of new storm water conveyance systems)?
☑ Yes

□ No

If yes, provide details regarding the proposed project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural or constructed channels, and the method for conveying offsite flows through or around the proposed project site. Identify all discharge locations from the proposed project site along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide a summary of pre- and post-project drainage areas and design flows to each of the runoff discharge locations. Reference the drainage study for detailed calculations.

Describe proposed site drainage patterns:

The project proposes the construction of a private storm drain system consisting of HDPE pipe, cleanouts, inlets, brooks boxes, area drains, perf pipe, and concrete brow ditches for the collection and conveyance of onsite drainage. In addition, an on-site biofiltration basin has been sized to handle the treatment and flow control requirements as well as attenuate the 100-year, 6-hour storm event.

In the proposed condition, there are two (2) discharge locations identified as POC-A and POC-B. The table below summarizes the pre and post-project peak flow rates in the mitigated and unmitigated conditions. Refer to the DMA Map included in the Appendix for information on the DMA areas.

Summary of 100-yr Peak Discharge Rates

	Pre-Development	Post-Dev Undetained	Post-Dev Detained
	Q100 (cfs)	Q100 (cfs)	Q100 (cfs)
POC-A	4.90	29.89	0.12
POC-B	10.17	4.83	4.83

Refer to the drainage report prepared for this site for detailed calculations.

Identification and Narrative of Receiving Water and Pollutants of Concern

Describe flow path of storm water from the project site discharge location(s), through urban storm conveyance systems as applicable, to receiving creeks, rivers, and lagoons as applicable, and ultimate discharge to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable):

A majority of the runoff generated by the proposed development will be collected in the private on-site drainage system which consists of HDPE pipes, inlets, cleanouts, and Brooks boxes. Runoff is conveyed to the proposed Biofiltration Basin that is located adjacent to Plato Place. Runoff that enters the basin is treated and then discharged out into the existing 30" RCP that travels west under Interstate-5.

The remainder of the runoff will be discharged to an existing 18" CMP pipe northwest of the site. Runoff will then travel west under Interstate-5.

All runoff from the site confluences to the west of Interstate-5 within a concrete ditch before heading north and discharging into the Batiquitos Lagoon and ultimately into the Pacific Ocean.

List any 303(d) impaired water bodies within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs and/or Highest Priority Pollutants from the WQIP for the impaired water bodies:

303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs / WQIP Highest Priority Pollutant
Batiquitos Lagoon (904.51)	Toxicity	Toxicity
Pacific Ocean (Batiquitos HSA)	Total Coliform	Total Coliform

Identification of Project Site Pollutants*

***Identification of project site pollutants is only required if flow-thru treatment BMPs are implemented onsite in lieu of retention or biofiltration BMPs (note the project must also participate in an alternative compliance program unless prior lawful approval to meet earlier PDP requirements is demonstrated)**

Identify pollutants expected from the project site based on all proposed use(s) of the site (see BMP Design Manual Appendix B.6):

Pollutant	Not Applicable to the Project Site	Expected from the Project Site	Also a Receiving Water Pollutant of Concern
Sediment	X		
Nutrients	X		
Heavy Metals	X		
Organic Compounds	X		
Trash & Debris	X		
Oxygen Demanding Substances	X		
Oil & Grease	X		
Bacteria & Viruses	X		

Pesticides	X		

Hydromodification Management Requirements

Do hydromodification management requirements apply (see Section 1.6 of the BMP Design Manual)?
☑ Yes, hydromodification management flow control structural BMPs required.

□ No, the project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

□ No, the project will discharge runoff directly to conveyance channels whose bed and bank are concrete-lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

□ No, the project will discharge runoff directly to an area identified as appropriate for an exemption by the WMAA for the watershed in which the project resides.

Description / Additional Information (to be provided if a 'No' answer has been selected above):

Critical Coarse Sediment Yield Areas*

*This section only required if hydromodification management requirements apply

Based on the maps provided within the WMAA, do potential critical coarse sediment yield areas exist within the project drainage boundaries?

□ Yes
☑ No, no critical coarse sediment yield areas to be protected based on WMAA maps

If yes, have any of the optional analyses presented in Section 6.2 of the BMP Design Manual been performed?

□ 6.2.1 Verification of Geomorphic Landscape Units (GLUs) Onsite

□ 6.2.2 Downstream Systems Sensitivity to Coarse Sediment

□ 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite

□ No optional analyses performed, the project will avoid critical coarse sediment yield areas identified based on WMAA maps

If optional analyses were performed, what was the final result?

□ No critical coarse sediment yield areas to be protected based on verification of GLUs onsite

□ Critical coarse sediment yield areas exist but additional analysis has determined that protection is not required. Documentation attached in Attachment 2.b of the SWQMP.

□ Critical coarse sediment yield areas exist and require protection. The project will implement management measures described in Sections 6.2.4 and 6.2.5 as applicable, and the areas are identified on the SWQMP Exhibit.

Discussion / Additional Information:

Flow Control for Post-Project Runoff*

*This section only required if hydromodification management requirements apply

List and describe point(s) of compliance (POCs) for flow control for hydromodification management (see Section 6.3.1). For each POC, provide a POC identification name or number correlating to the project's HMP Exhibit and a receiving channel identification name or number correlating to the project's HMP Exhibit.

In the proposed condition, there is one point of compliance for flow control hydromodification management identified as POC-A. Refer to the projects DMA Map for location. The biofiltration basin adjacent to Plato Place has been sized to meet HMP requirements for the site.

Has a geomorphic assessment been performed for the receiving channel(s)?

☑ No, the low flow threshold is 0.1Q2 (default low flow threshold)

□ Yes, the result is low flow threshold 0.1Q2

□ Yes, the result is low flow threshold 0.3Q2

□ Yes, the result is low flow threshold 0.5Q2

If a geomorphic assessment has been performed, provide title, date, and preparer:

Discussion / Additional Information: (optional)

Other Site Requirements and Constraints

When applicable, list other site requirements or constraints that will influence storm water management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements.

SOURCE CONTROL BMP CHECKLIST

All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement source control BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SC-1 Prevention of Illicit Discharges into the MS4	☑ Yes	□ No	□ N/A
SC-2 Storm Drain Stenciling or Signage	☑ Yes	□ No	□ N/A
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☑ Yes	□ No	□ N/A
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☑ Yes	□ No	□ N/A
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☑Yes	□ No	□ N/A
SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)			
☑ Onsite storm drain inlets	☑ Yes	□ No	□ N/A
□ Interior floor drains and elevator shaft sump pumps drain to sewer	□ Yes	□ No	☑ N/A
□ Interior parking garages drain to sewer	□ Yes	□ No	☑ N/A
☑ Need for future indoor & structural pest control	☑ Yes	□ No	□ N/A
☑ Landscape/outdoor pesticide use	☑ Yes	□ No	□ N/A
☑ Pools, spas, ponds, decorative fountains, and other water features	☑ Yes	□ No	□ N/A
☐ Food service	☐ Yes	□ No	☑ N/A
☑ Refuse/Trash areas must be covered	☑ Yes	□ No	□ N/A
□ Industrial processes	□ Yes	□ No	☑ N/A
☑ Outdoor storage of equipment or materials must be covered	☑ Yes	□ No	□ N/A
□ Vehicle and equipment cleaning	□ Yes	□ No	☑ N/A
□ Vehicle/equipment repair and maintenance	□ Yes	□ No	☑ N/A
□ Fuel dispensing areas	□ Yes	□ No	☑ N/A
□ Loading docks	□ Yes	□ No	☑ N/A
☑ Fire sprinkler test water	☑ Yes	□ No	□ N/A
☑ Miscellaneous drain or wash water	☑ Yes	□ No	□ N/A
☑ Plazas, sidewalks, and parking lots	☑ Yes	□ No	□ N/A

Discussion / justification if SC-1 through SC-6 not implemented. Justification must be provided for ALL "No" answers shown above.

SITE DESIGN BMP CHECKLIST

All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement site design BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SD-1 Maintain Natural Drainage Pathways and Hydrologic Features	☑ Yes	□ No	□ N/A
SD-2 Conserve Natural Areas, Soils, and Vegetation	☑ Yes	□ No	□ N/A
SD-3 Minimize Impervious Area	☑ Yes	□ No	□ N/A
SD-4 Minimize Soil Compaction	☑ Yes	□ No	□ N/A
SD-5 Impervious Area Dispersion - Directly Connected Impervious Areas (e.g. roof downspouts connected to street) are not allowed	☑ Yes	□ No	□ N/A
SD-6 Runoff Collection	☑ Yes	□ No	☐ N/A
SD-7 Landscaping with Native or Drought Tolerant Species	☑ Yes	□ No	□ N/A
SD-8 Harvesting and Using Precipitation	□ Yes	□ No	☑ N/A

Discussion / justification if SD-1 through SD-8 not implemented. Justification must be provided for ALL "No" answers shown above.

Harvest and use is not feasible for this project. See Harvest and Use Feasibility Form for calculations.

PDP STRUCTURAL BMPS

All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the BMP Design Manual). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the BMP Design Manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s).

PDP structural BMPs must be verified by the local jurisdiction at the completion of construction. This may include requiring the project owner or project owner's representative and engineer of record to certify construction of the structural BMPs (see Section 1.12 of the BMP Design Manual). PDP structural BMPs must be maintained into perpetuity (see Section 7 of the BMP Design Manual). The local jurisdiction will confirm the maintenance annually.

Use this section to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP).

Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the BMP Design Manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.

The project site has been divided into two (2) drainage management areas (DMAs) draining to two (2) different points of confluence (POC) with one (1) de minimis area and two self-mitigating areas draining directly offsite.

The type of structural BMP chosen for the project was based on the flow chart presented in Figures 5-1 and 5-2 of the City of Encinitas BMP Design Manual (February 2016). Using Worksheet B.3-1 to determine feasibility of using capture and use techniques for the property, it was ultimately concluded harvest and use BMPs are considered infeasible.

A feasibility study was then performed to determine whether infiltration is feasible for the project's structural BMPs. The negative impacts associated with infiltration and retention were identified and documented in the attached Geotechnical Investigation. Based on site geologic conditions and at the recommendation of the geotechnical engineer, the site is in a "No Infiltration" designation for storm water BMP design.

The project is proposing one HMP-sized biofiltration basin (BF-1) to meet treatment and storage requirements. The biofiltration basins have been sized to demonstrate compliance with HMP requirements using the County of San Diego HMP spreadsheets. Refer to Attachment 2 of this report for detailed HMP calculations in addition to the project Hydrology Report prepared by Pasco, Laret, Suiter & Associates for additional information.

All on-site private storm drain systems and post construction BMP's have been sized to convey the 100-year, 6-hour storm event and release discharge to the existing storm drain system at a lower rate than in pre-development conditions.

STRUCTURAL BMP SUMMARY INFORMATION

Copy this page as necessary to provide information on each individual proposed structural BMP

Structural BMP ID No: BMP-A	DMA No: A
Construction Plan Sheet No: 6	
Type of structural BMP: □ Retention by harvest and use (HU-1) □ Retention by infiltration basin (INF-1) □ Retention by bioretention (INF-2) □ Retention by permeable pavement (INF-3) □ Partial retention by biofiltration with partial retention (PR-1) ☑ Biofiltration (BF-1) □ Biofiltration with Nutrient Sensitive Media Design (BF-2) □ Proprietary Biofiltration (BF-3) meeting all requirements of Appendix F □ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) □ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) □ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) □ Detention pond or vault for hydromodification management □ Other (describe in discussion section below)	
Purpose: □ Pollutant control only □ Hydromodification control only ☑ Combined pollutant control and hydromodification control □ Pre-treatment/forebay for another structural BMP □ Other (describe in discussion section below)	
Who will inspect and certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms required by the City Engineer (See Section 1.12 of the BMP Design Manual)	Pasco Laret Suiter & Associates 1911 San Diego Ave. Suite 100 San Diego, CA 92110 (858) 259-8212
Who will be the final owner of this BMP?	HOA
Who will maintain this BMP into perpetuity?	HOA
What is the funding mechanism for maintenance?	HOA
Discussion (as needed): An HOA will be formed and will be responsible for the maintenance of storm water facilities into perpetuity, as required by the City.	

ATTACHMENT 1 - BACKUP FOR PDP POLLUTANT CONTROL BMPS

This is the cover sheet for Attachment 1.

Indicate which items are included behind this cover sheet:

Attachment	Contents	Checklist
Attachment 1a	DMA Exhibit (Required) See DMA Exhibit Checklist on the back of this Attachment cover sheet.	☑ Included
Attachment 1b	Tabular Summary of DMAs Showing DMA ID matching DMA Exhibit, DMA Area, and DMA Type (Required)* *Provide table in this Attachment OR on DMA Exhibit in Attachment 1a	☑ Included on DMA Exhibit in Attachment 1a □ Included as Attachment 1b, separate from DMA Exhibit
Attachment 1c	Form I-7, Harvest and Use Feasibility Screening Checklist (Required unless the entire project will use infiltration BMPs) Refer to Appendix B.3-1 of the BMP Design Manual to complete Form I-7.	☑ Included □ Not included because the entire project will use infiltration BMPs
Attachment 1d	Form I-8, Categorization of Infiltration Feasibility Condition (Required unless the project will use harvest and use BMPs) Refer to Appendices C and D of the BMP Design Manual to complete Form I-8.	☑ Included □ Not included because the entire project will use harvest and use BMPs
Attachment 1e	Pollutant Control BMP Design Worksheets / Calculations (Required) Refer to Appendices B and E of the BMP Design Manual for structural pollutant control BMP design guidelines	☑ Included

Use this checklist to ensure the required information has been included on the DMA Exhibit:

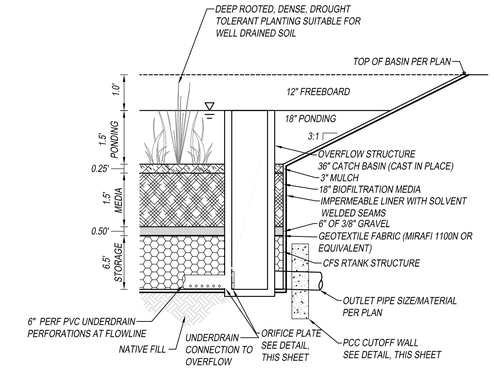
The DMA Exhibit must identify:

☑ Underlying hydrologic soil group
☑ Approximate depth to groundwater
□ Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
☐ Critical coarse sediment yield areas to be protected
☑ Existing topography and impervious areas
☑ Existing and proposed site drainage network and connections to drainage offsite
□ Proposed demolition
☑ Proposed grading
☑ Proposed impervious features
☑ Proposed design features and surface treatments used to minimize imperviousness
☑ Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
□ Potential pollutant source areas and corresponding required source controls (see Chapter 4, Appendix E.1, and Form I-3B)
☑ Structural BMPs (identify location, type of BMP, and size/detail)

Attachment 1a – DMA Exhibit

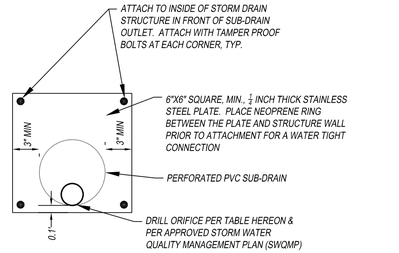
DMA/HMP EXHIBIT

PIRAEUS STREET, ENCINITAS, CA



TYPICAL BASIN DETAIL

NOTE:
1. BIOFILTRATION "ENGINEERED SOIL" LAYER SHALL BE EVENLY MIXED COMPOSITION OF WASHED SAND, SANDY LOAM TOPSOIL, AND HUMIC COMPOST. THE MIX SHALL CONTAIN 65% SAND, 20% TOPSOIL, AND 15% COMPOST OR HARDWOOD MULCH IN ACCORDANCE WITH COUNTY OF SAN DIEGO LID BIOSWALE MEDIA BIO65 CUT SHEET



DRILLED ORIFICE PLATE DETAIL (TYP.)

NOT TO SCALE

SOURCE CONTROL

IDENTIFIER	DESCRIPTION	USED?
SC-1	PREVENTION OF ILLICIT DISCHARGES INTO THE MS4	YES
SC-2	STORM DRAIN STENCILING OR SIGNAGE	YES
SC-3	PROTECT OUTDOOR MATERIALS STORAGE AREA	N/A
SC-4	PROTECT MATERIALS STORED IN OUTDOOR WORK AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND W	N/A
SC-5	PROTECT TRASH STORAGE AREAS	YES
SC-6	ADDITIONAL BMPS BASED ON POTENTIAL SOURCES OF POLLUTANTS	YES

SITE DESIGN

IDENTIFIER	DESCRIPTION	USED?
SD-1	MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES	YES
SD-2	CONSERVE NATURAL AREAS, SOILS, AND VEGETATION	YES
SD-3	MINIMIZE IMPERVIOUS AREA	YES
SD-4	MINIMIZE SOIL COMPACTION	YES
SD-5	IMPERVIOUS AREA DISPERSION	YES
SD-6	RUNOFF COLLECTION	YES
SD-7	DROUGHT TOLERANT OR NATIVE LANDSCAPING	YES
SD-8	HARVEST AND USE	NO

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- ADJACENT PROPERTY LINE
- CENTER LINE OF ROAD
- DMA BOUNDARY
- PROPOSED STORM DRAIN
- ROOFS
- ASHPHALT OR CONCRETE (ROAD)
- CONCRETE (HARDSCAPE)
- LANDSCAPE
- SELF- MITIGATING AREA
- DE-MINIMIS AREA

DMA-1 CALCULATIONS

TOTAL DISTURBED AREA	=	6.25 AC
DMA-1 AREA (A)	=	5.80 AC
RUNOFF FACTOR (C)	=	0.74
85TH PERCENTILE RAINFALL DEPTH (d)	=	0.57 INCHES
IMPERVIOUS AREA:		
BUILDING/ROOF		96,273 SF
HARDSCAPE		15,446 SF
ROAD		89,832 SF
PERVIOUS AREA:		
LANDSCAPE AREA		51,016 SF
% IMPERVIOUS AREA:		79.8%
DCV (C*d*A*3,630)	=	8,859 CU FT

SOIL TYPE INFORMATION

HYDROLOGIC SOIL TYPE: D

CRITICAL COARSE SEDIMENT YIELD

NO CRITICAL COARSE SEDIMENT YIELD AREAS TO BE PROTECTED.

GROUNDWATER INFORMATION

GROUNDWATER WAS ENCOUNTERED AT ELEVATIONS 38 TO 49 FEET BELOW EXISTING GRADE DURING TESTING

BMP BASIN DATA TABLE

BMP ID	SURFACE AREA	PONDING DEPTH	STORAGE DEPTH
A	5,600 SF	18"	96"

BMP SIZE & ORIFICE DIAMETER SUMMARY TABLE

BMP #	H_P (FT)	H_S (FT)	H_{RTANK} (FT)	HMP ORIFICE (IN)	A_{BOT} (FT^2)	A_{TOP} (FT^2)
A	1.5	1.5	6.5	1.2	5,600	7,608

REGISTERED PROFESSIONAL ENGINEER
TYLER G LAWSON
No. 80356
Exp. 12/31/22
CIVIL
STATE OF CALIFORNIA

0 50 100 150
SCALE: 1" = 50'

PREPARED BY:
PASCO LARET SUITER & ASSOCIATES
San Diego | Encinitas | Orange County
Phone 858.259.8212 | www.plsaengineering.com

Attachment 1c – Form I-7, Harvest and Use Feasibility

Worksheet B.3-1. Harvest and Use Feasibility Screening

Harvest and Use Feasibility Screening	**Worksksheet B.3-1**

1. Is there a demand for harvested water (check all that apply) at the project site that is reliably present during the wet season?
✓Toilet and urinal flushing
✓ Landscape irrigation
Other:_____

2. If there is a demand; estimate the anticipated average wet season demand over a period of 36 hours. Guidance for planning level demand calculations for toilet/urinal flushing and landscape irrigation is provided in Section B.3.2.

Toilet/Urinal Flushing
(9.3 gal/person-day) x (0.13368 cuft/gal) x (1.5 days) = 1.86 cuft/person-36hr
Assume (447 people) x (1.86 cuft/person-36 hr) = 832 cuft/36hr

Landscape Irrigation
(1.171 ac irrigated) x (390 gal/ac-36hr) x (0.13368 cuft/gal) = 61 cuft/36hr

Total = 832 cuft + 61 cuft = 893 cuft

3. Calculate the DCV using worksheet B-2.1.

DCV = 8,859 cuft

3a. Is the 36-hour demand greater than or equal to the DCV?	3b. Is the 36-hour demand greater than 0.25DCV but less than the full DCV?	3c. Is the 36-hour demand less than 0.25DCV?
Yes / ✓ No	Yes / ✓ No	✓ Yes
Harvest and use appears to be feasible. Conduct more detailed evaluation and sizing calculations to confirm that DCV can be used at an adequate rate to meet drawdown criteria.	Harvest and use may be feasible. Conduct more detailed evaluation and sizing calculations to determine feasibility. Harvest and use may only be able to be used for a portion of the site, or (optionally) the storage may need to be upsized to meet long term capture targets while draining in longer than 36 hours.	✓ Harvest and use is considered to be infeasible.

Attachment 1d – From I-8, Categorization of Infiltration Feasibility Condition

BMP-1

Categorization of Infiltration Feasibility Condition	Form I-8

Part 1 - Full Infiltration Feasibility Screening Criteria

Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
1	**Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X

Provide basis:

BMP-1 will be supported by approximately 15 feet of compacted fill over previously-placed fill. Based on our experience, compacted fill is not conducive to infiltration BMP's due low permeability. Infiltration BMP's supported on compacted fill increase the potential for differential settlement of granular soils, heaving of expansive soils, lateral water migration, daylight water seepage on slopes, slope instability, and landsliding.

2	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		X

Provide basis:

The property is underlain by a landslide that will be mitigated during grading. Infiltration BMP's greatly increase the risk for raised groundwater, slope instability and landsliding. BMP-1 is situated adjacent to an existing fill slope. Public utilities are located at the toe of this slope. Infiltration BMP's adjacent to existing fill slopes are not recommended. In addition, infiltration BMP's would require a standard horizontal setback from top of slope of 1.5H, H being the slope height. Infiltration BMP's may result in lateral water migration and daylight water seepage that could adversely impact public utilities and right of ways.

Form I-8 Page 2 of 4			
Criteria	Screening Question	**Yes**	**No**
3	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Groundwater is not expected within 10 feet from the bottom of the basin, therefore, we do expect an increase in groundwater contamination as a result of storm water infiltration.			
4	**Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: We are not aware of any water balance issues. Researching water balance issues is not the responsibility of the geotechnical engineer. We also are not aware of any increased discharge of contaminated water to surface water.			
Part 1 Result *	If all answers to rows 1 - 4 are "**Yes**" a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration** If any answer from row 1-4 is "**No**", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2	No	

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

Form I-8 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	**Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X

Provide basis:
BMP-1 will be supported by approximately 15 feet of compacted fill over previously-placed fill. Based on our experience, compacted fill is not conducive to infiltration BMP's due low permeability. Infiltration BMP's supported on compacted fill increase the potential for differential settlement of granular soils, heaving of expansive soils, lateral water migration, daylight water seepage on slopes, slope instability, and landsliding.

6	**Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		X

Provide basis:

The property is underlain by a landslide that will be mitigated during grading. Infiltration BMP's greatly increase the risk for raised groundwater, slope instability and landsliding. BMP-1 is situated adjacent to an existing fill slope. Public utilities are located at the toe of this slope. Infiltration BMP's adjacent to existing fill slopes are not recommended. In addition, infiltration BMP's would require a standard horizontal setback from top of slope of 1.5H, H being the slope height. Infiltration BMP's may result in lateral water migration and daylight water seepage that could adversely impact public utilities and right of ways.

Form I-8 Page 4 of 4			
Criteria	Screening Question	**Yes**	**No**
7	**Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Groundwater is not expected within 10 feet from the bottom of the basin, therefore, we do expect an increase in groundwater contamination as a result of storm water infiltration.			
8	**Can infiltration be allowed without violating downstream water rights**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: We are not aware of any water balance issues. Researching water balance issues is not the responsibility of the geotechnical engineer. We also are not aware of any increased discharge of contaminated water to surface water.			
Part 2 Result*	If all answers from row 5-8 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration.** If any answer from row 5-8 is no, then infiltration of any volume is considered to be **infeasible** within the drainage area. The feasibility screening category is **No Infiltration.**		No Infiltration

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

Attachment 1e – Pollutant Control BMP Design Worksheets/ Calculations

Runoff Factor (C)			
Surface	Runoff Factor	Area (sq. ft)	Weighted Area
Roofs	0.90	96,273	86,646
Asphalt or Concrete (Road)	0.90	89,832	80,849
Asphalt or Concrete (Hardscape)	0.90	15,446	13,901
Unit Pavers (Grouted)	0.90	-	-
Pervious Pavers	0.10	-	-
Pervious Pavement	0.10	-	-
Decomposed Granite	0.30	-	-
Cobbles or Crushed Aggregate	0.30	-	-
Amended, Mulched Soils or Landscape	0.10	51,016	5,102
Compacted Soil (eg. Unpaved Parking)	0.30	-	-
Natural (A Soil)	0.10	-	-
Natural (B Soil)	0.14	-	-
Natural (C Soil)	0.23	-	-
Natural (D Soil)	0.30	-	-
Total		252,567	186,498
Composite C	**0.74**		

Design Capture Volume (DCV)			Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.57	inches	
2	Area tributary to BMP(s)	A=	5.80	acres	
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.74	unitless	
4	Street trees volume reduction	TCV=	0	cubic-feet	
5	Rain barrels volume reduction (1 cubic foot=7.48 gallons)	RCV=	0	cubic-feet	
6	Calculate DCV=(3630 x C x d x A) - TCV -RCV	DCV=	8859	cubic-feet	

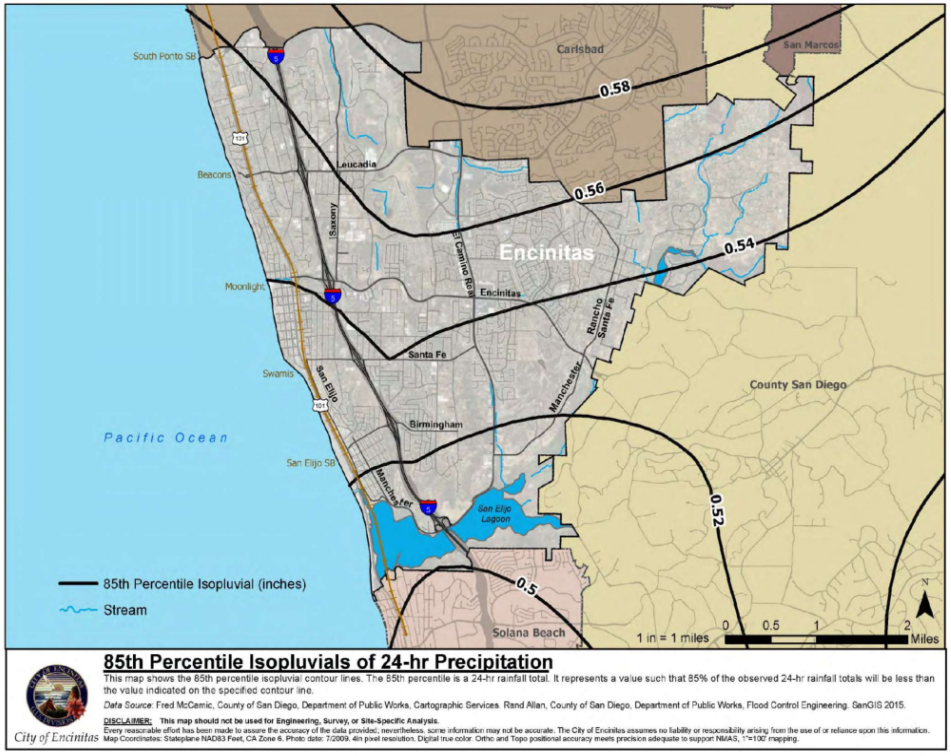


Figure B.1-1: 85th Percentile 24-hour Isopluvial Map

DMA-A

Simple Sizing Method for Biofiltration BMPs (DMA A1)		Worksheet B.5-1	
1	Remaining DCV after implementing retention BMPs	8859	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.00	in/hr
3	Allowable drawdown time for aggregate storage below the underdrain	36.00	hours
4	Depth of runoff that can be infiltrated [Line 2 x Line 3]	0.00	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain [Line 4/Line 5]	0.00	inches
7	Assumed surface area of the biofiltration BMP	5600.00	sq-ft
8	Media retained pore space	0.10	in/in
9	Volume retained by BMP [[Line 4 + (Line 12 x Line 8)]/12] x Line 7	840.00	cubic-feet
10	DCV that requires biofiltration [Line 1 -Line 9]	8018.64	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	18.00	inches
12	Media Thickness [18 inches minimum]	18.00	inches
13	Aggregate storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the aggregate is not over the entire bottom surface area	78.00	inches
14	Media available pore space	0.20	in/in
15	Media filtration rate to be used for sizing	5.00	in/hr
Baseline Calculations			
16	Allowable Routing Time for sizing	6.00	hours
17	Depth filtered during storm [Line 15 x Line 16]	30.00	inches
18	Depth of Detention Storage [Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5)]	52.80	inches
19	Total Depth Treated [Line 17 + Line 18]	82.80	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume [1.5 x Line 10]	12027.96	cubic-feet
21	Required Footprint [Line 20/Line 19] x 12	1743.18	sq-ft
Option 2 - Store 0.75 of the remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume [0.75 x Line 10]	6013.98	cubic-feet
23	Required Footprint [Line 22/Line 18] x 12	1366.81	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	252566.84	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.74	sq-ft
26	Minimum BMP Footprint [Line 24 x Line 25 x 0.03]	5594.93	sq-ft
27	Footprint of the BMP = Maximum (Minimum(Line 21, Line 23), Line 26)	5594.93	sq-ft

Note: Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until it is equivalent to the required biofiltration footprint (either Line 21 or Line 23)

ATTACHMENT 2 - BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

This is the cover sheet for Attachment 2.

□ Mark this box if this attachment is not included because the project is exempt from PDP hydromodification management requirements.

Indicate which items are included behind this cover sheet:

Attachment	Contents	Checklist
Attachment 2a	Hydromodification Management Exhibit (Required)	☑Included See Hydromodification Management Exhibit Checklist on the back of this Attachment cover sheet.
Attachment 2b	Management of Critical Coarse Sediment Yield Areas (WMAA Exhibit is required, additional analyses are optional) See Section 6.2 of the BMP Design Manual.	☑ Exhibit showing project drainage boundaries marked on WMAA Critical Coarse Sediment Yield Area Map (Required) Optional analyses for Critical Coarse Sediment Yield Area Determination □ 6.2.1 Verification of Geomorphic Landscape Units Onsite □ 6.2.2 Downstream Systems Sensitivity to Coarse Sediment □ 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite
Attachment 2c	Geomorphic Assessment of Receiving Channels (Optional) See Section 6.3.4 of the BMP Design Manual.	☑ Not performed □ Included □ Submitted as separate stand-alone document
Attachment 2d	Flow Control Facility Design, including Structural BMP Drawdown Calculations and Overflow Design Summary (Required) See Chapter 6 and Appendix G of the BMP Design Manual	☑ Included □ Submitted as separate stand-alone document
Attachment 2e	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	□ Included ☑ Not required because BMPs will drain in less than 96 hours

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit:

The Hydromodification Management Exhibit must identify:

☑ Underlying hydrologic soil group

☑ Approximate depth to groundwater

□ Existing natural hydrologic features (watercourses, seeps, springs, wetlands)

☐Critical coarse sediment yield areas to be protected

☑ Existing topography

☑ Existing and proposed site drainage network and connections to drainage offsite

☑ Proposed grading

☑ Proposed impervious features

☑ Proposed design features and surface treatments used to minimize imperviousness

☑ Point(s) of Compliance (POC) for Hydromodification Management

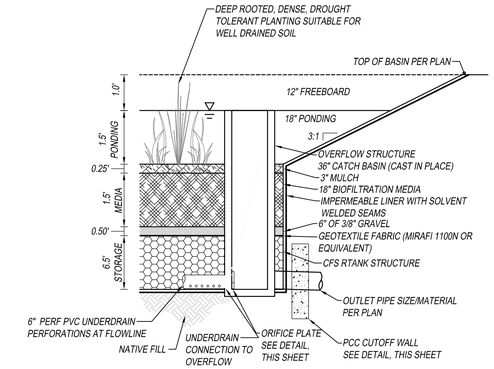
☑ Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)

☑ Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)

Attachment 2a – Hydromodification Management Exhibit

DMA/HMP EXHIBIT

PIRAEUS STREET, ENCINITAS, CA



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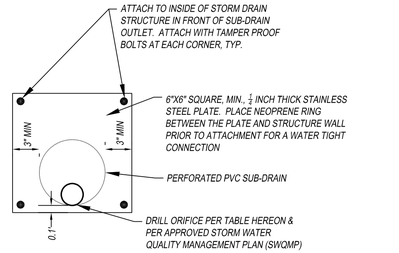

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SC-4	PROTECT MATERIALS STORED IN OUTDOOR WORK AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND W	N/A
SC-5	PROTECT TRASH STORAGE AREAS	YES
SC-6	ADDITIONAL BMPS BASED ON POTENTIAL SOURCES OF POLLUTANTS	YES

SITE DESIGN

IDENTIFIER	DESCRIPTION	USED?
SD-1	MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES	YES
SD-2	CONSERVE NATURAL AREAS, SOILS, AND VEGETATION	YES
SD-3	MINIMIZE IMPERVIOUS AREA	YES
SD-4	MINIMIZE SOIL COMPACTION	YES
SD-5	IMPERVIOUS AREA DISPERSION	YES
SD-6	RUNOFF COLLECTION	YES
SD-7	DROUGHT TOLERANT OR NATIVE LANDSCAPING	YES
SD-8	HARVEST AND USE	NO

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- ADJACENT PROPERTY LINE
- CENTER LINE OF ROAD
- DMA BOUNDARY
- PROPOSED STORM DRAIN
- ROOFS
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- CONCRETE (HARDSCAPE)
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% IMPERVIOUS AREA:		79.8%
DCV (C*d*A*3,630)	=	8,859 CU FT

SOIL TYPE INFORMATION

HYDROLOGIC SOIL TYPE: D

CRITICAL COARSE SEDIMENT YIELD

NO CRITICAL COARSE SEDIMENT YIELD AREAS TO BE PROTECTED.

GROUNDWATER INFORMATION

GROUNDWATER WAS ENCOUNTERED AT ELEVATIONS 38 TO 49 FEET BELOW EXISTING GRADE DURING TESTING

BMP BASIN DATA TABLE

BMP ID	SURFACE AREA	PONDING DEPTH	STORAGE DEPTH
A	5,600 SF	18"	96"

BMP SIZE & ORIFICE DIAMETER SUMMARY TABLE

BMP #	H_P (FT)	H_S (FT)	H_{RTANK} (FT)	HMP ORIFICE (IN)	A_{BOT} (FT^2)	A_{TOP} (FT^2)
A	1.5	1.5	6.5	1.2	5,600	7,608

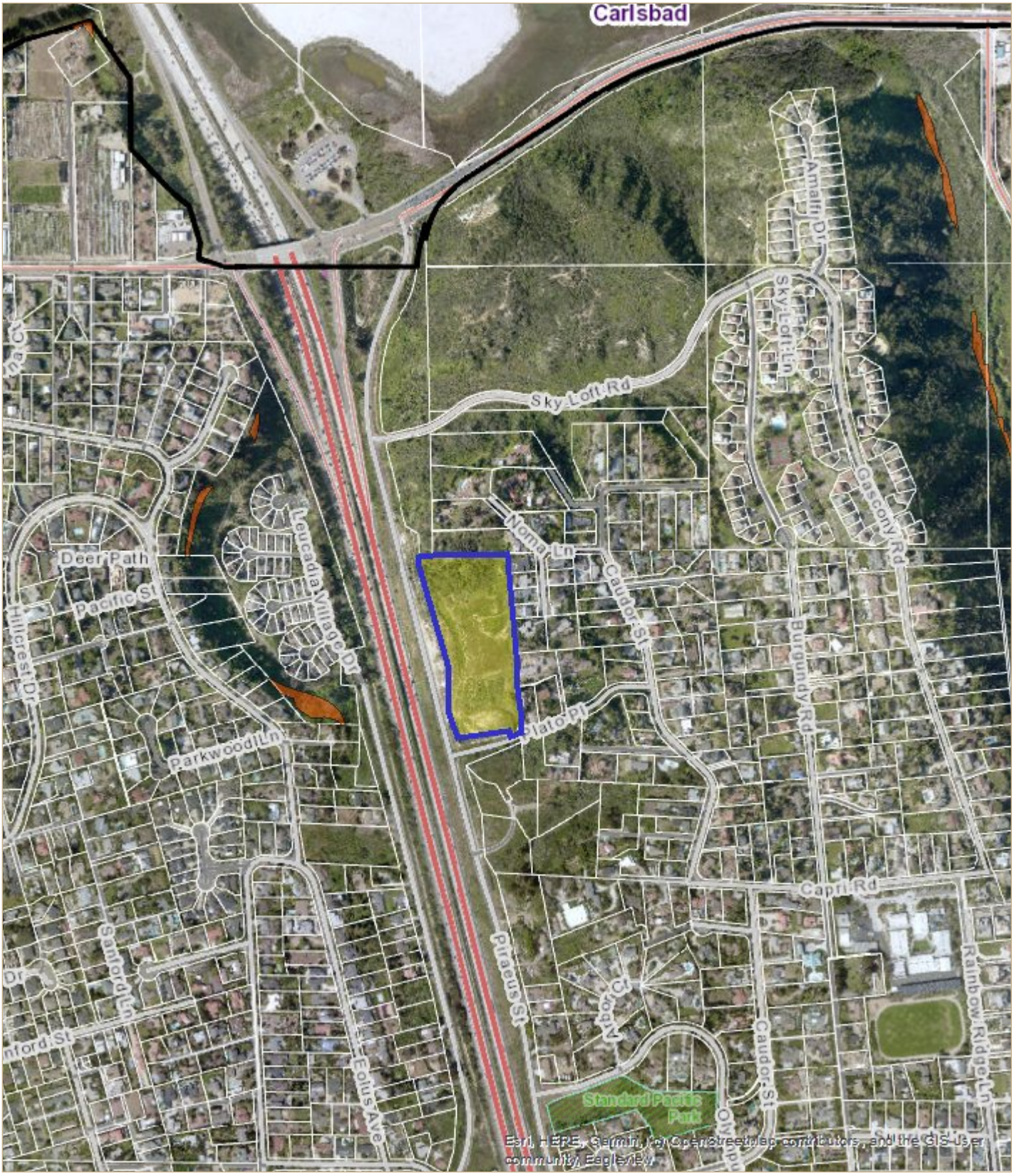
REGISTERED PROFESSIONAL ENGINEER
TYLER G LAWSON
No. 80356
Exp. 12/31/22
CIVIL
STATE OF CALIFORNIA

0 50 100 150
SCALE: 1" = 50'

PREPARED BY:
PASCO LARET SUITER & ASSOCIATES
San Diego | Encinitas | Orange County
Phone 858.259.8212 | www.plsaengineering.com

Attachment 2b – Management of Critical Course Sediment Yield Areas

APN: 2541440100 **Address: N/A**



Attachment 2d – Flow Control Facility Design

SDHM 3.1

PROJECT REPORT

General Model Information

Project Name:	3733 5600 sf Quick Model
Site Name:	3733
Site Address:	1500 Piraeus
City:	Encinitas
Report Date:	9/8/2022
Gage:	ENCINITA
Data Start:	10/01/1963
Data End:	09/30/2004
Timestep:	Hourly
Precip Scale:	1.000
Version Date:	2021/06/28

POC Thresholds

Low Flow Threshold for POC1:	10 Percent of the 2 Year
High Flow Threshold for POC1:	10 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
D,NatVeg,Steep	5.798
Pervious Total	5.798
Impervious Land Use	acre
Impervious Total	0
Basin Total	5.798

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A,NatVeg,Flat	1.171
Pervious Total	1.171

Impervious Land Use	acre
IMPERVIOUS-FLAT	4.627
Impervious Total	4.627
Basin Total	5.798

Element Flows To:

Surface	Interflow	Groundwater
Surface retention 1	Surface retention 1	

Routing Elements
Predeveloped Routing

Mitigated Routing

Bioretention 1

Bottom Length:	140.00 ft.
Bottom Width:	40.00 ft.
Material thickness of first layer:	0.25
Material type for first layer:	Mulch
Material thickness of second layer:	1.5
Material type for second layer:	ESM
Material thickness of third layer:	6.5
Material type for third layer:	PERMAVOID
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	1.2
Offset (in.):	0
Flow Through Underdrain (ac-ft.):	118.85
Total Outflow (ac-ft.):	120.732
Percent Through Underdrain:	98.44
Discharge Structure	
Riser Height:	1.5 ft.
Riser Diameter:	36 in.
Element Flows To:	
Outlet 1	Outlet 2

Biofilter Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.1286	0.0000	0.0000	0.0000
0.1181	0.1286	0.0046	0.0000	0.0000
0.2363	0.1286	0.0091	0.0000	0.0000
0.3544	0.1286	0.0137	0.0000	0.0000
0.4725	0.1286	0.0182	0.0041	0.0000
0.5907	0.1286	0.0228	0.0105	0.0000
0.7088	0.1286	0.0273	0.0194	0.0000
0.8269	0.1286	0.0319	0.0206	0.0000
0.9451	0.1286	0.0364	0.0212	0.0000
1.0632	0.1286	0.0410	0.0224	0.0000
1.1813	0.1286	0.0456	0.0249	0.0000
1.2995	0.1286	0.0501	0.0261	0.0000
1.4176	0.1286	0.0547	0.0267	0.0000
1.5357	0.1286	0.0592	0.0278	0.0000
1.6538	0.1286	0.0638	0.0284	0.0000
1.7720	0.1286	0.0781	0.0294	0.0000
1.8901	0.1286	0.0925	0.0314	0.0000
2.0082	0.1286	0.1068	0.0323	0.0000
2.1264	0.1286	0.1212	0.0328	0.0000
2.2445	0.1286	0.1355	0.0337	0.0000
2.3626	0.1286	0.1499	0.0354	0.0000
2.4808	0.1286	0.1642	0.0363	0.0000
2.5989	0.1286	0.1786	0.0379	0.0000
2.7170	0.1286	0.1929	0.0387	0.0000
2.8352	0.1286	0.2073	0.0404	0.0000
2.9533	0.1286	0.2217	0.0423	0.0000
3.0714	0.1286	0.2360	0.0433	0.0000
3.1896	0.1286	0.2504	0.0448	0.0000
3.3077	0.1286	0.2647	0.0465	0.0000

3.4258	0.1286	0.2791	0.0483	0.0000
3.5440	0.1286	0.2934	0.0500	0.0000
3.6621	0.1286	0.3078	0.0518	0.0000
3.7802	0.1286	0.3221	0.0535	0.0000
3.8984	0.1286	0.3365	0.0551	0.0000
4.0165	0.1286	0.3508	0.0568	0.0000
4.1346	0.1286	0.3652	0.0583	0.0000
4.2527	0.1286	0.3795	0.0599	0.0000
4.3709	0.1286	0.3939	0.0613	0.0000
4.4890	0.1286	0.4082	0.0628	0.0000
4.6071	0.1286	0.4226	0.0642	0.0000
4.7253	0.1286	0.4369	0.0656	0.0000
4.8434	0.1286	0.4513	0.0670	0.0000
4.9615	0.1286	0.4656	0.0683	0.0000
5.0797	0.1286	0.4800	0.0696	0.0000
5.1978	0.1286	0.4943	0.0709	0.0000
5.3159	0.1286	0.5087	0.0722	0.0000
5.4341	0.1286	0.5230	0.0734	0.0000
5.5522	0.1286	0.5374	0.0747	0.0000
5.6703	0.1286	0.5517	0.0759	0.0000
5.7885	0.1286	0.5661	0.0770	0.0000
5.9066	0.1286	0.5804	0.0782	0.0000
6.0247	0.1286	0.5948	0.0794	0.0000
6.1429	0.1286	0.6091	0.0805	0.0000
6.2610	0.1286	0.6235	0.0816	0.0000
6.3791	0.1286	0.6378	0.0827	0.0000
6.4973	0.1286	0.6522	0.0838	0.0000
6.6154	0.1286	0.6666	0.0849	0.0000
6.7335	0.1286	0.6809	0.0859	0.0000
6.8516	0.1286	0.6953	0.0870	0.0000
6.9698	0.1286	0.7096	0.0880	0.0000
7.0879	0.1286	0.7240	0.0890	0.0000
7.2060	0.1286	0.7383	0.0900	0.0000
7.3242	0.1286	0.7527	0.0910	0.0000
7.4423	0.1286	0.7670	0.0920	0.0000
7.5604	0.1286	0.7814	0.0930	0.0000
7.6786	0.1286	0.7957	0.0940	0.0000
7.7967	0.1286	0.8101	0.0949	0.0000
7.9148	0.1286	0.8244	0.0959	0.0000
8.0330	0.1286	0.8388	0.0968	0.0000
8.1511	0.1286	0.8531	0.0978	0.0000
8.2500	0.1286	0.8651	0.1122	0.0000

Biofilter Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
8.2500	0.1286	0.8651	0.0000	0.6481	0.0000
8.3681	0.1315	0.8805	0.0000	0.6481	0.0000
8.4863	0.1345	0.8962	0.0000	0.8583	0.0000
8.6044	0.1374	0.9123	0.0000	0.9093	0.0000
8.7225	0.1405	0.9287	0.0000	0.9604	0.0000
8.8407	0.1435	0.9455	0.0000	1.0114	0.0000
8.9588	0.1465	0.9626	0.0000	1.0624	0.0000
9.0769	0.1496	0.9801	0.0000	1.1135	0.0000
9.1951	0.1527	0.9979	0.0000	1.1645	0.0000
9.3132	0.1559	1.0162	0.0000	1.2156	0.0000
9.4313	0.1590	1.0348	0.0000	1.2666	0.0000
9.5495	0.1622	1.0537	0.0000	1.3177	0.0000
9.6676	0.1654	1.0731	0.0000	1.3687	0.0000

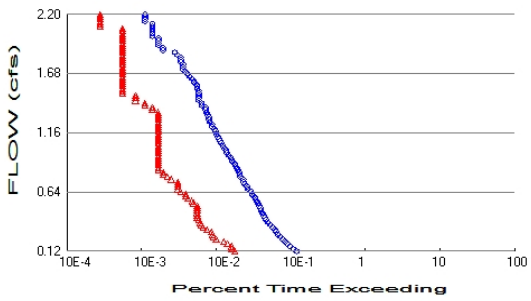
9.7857	0.1686	1.0928	0.2149	1.4198	0.0000
9.9038	0.1718	1.1129	1.9183	1.4708	0.0000
10.022	0.1751	1.1334	4.4941	1.5218	0.0000
10.140	0.1784	1.1543	7.6592	1.5729	0.0000
10.258	0.1817	1.1755	11.223	1.6239	0.0000
10.376	0.1850	1.1972	15.002	1.6750	0.0000
10.495	0.1884	1.2193	18.805	1.7260	0.0000
10.613	0.1917	1.2417	22.445	1.7771	0.0000
10.731	0.1952	1.2646	25.747	1.8281	0.0000
10.750	0.1957	1.2683	28.574	1.8364	0.0000

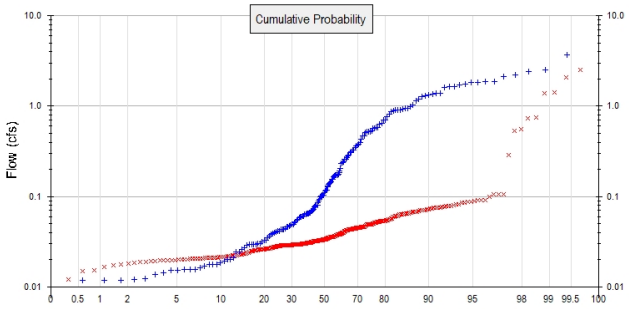
Surface retention 1

Element Flows To:

Outlet 1	Outlet 2
	Bioretention 1

Analysis Results
POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 5.798
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 1.171
Total Impervious Area: 4.627

Flow Frequency Method: Cunnane

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	1.208399
5 year	1.842808
10 year	2.202476
25 year	2.759572

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0.085283
5 year	0.426577
10 year	1.231832
25 year	2.162567

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.1208	433	64	14	Pass
0.1419	388	58	14	Pass
0.1629	353	58	16	Pass
0.1839	325	51	15	Pass
0.2049	302	45	14	Pass
0.2260	281	36	12	Pass
0.2470	264	33	12	Pass
0.2680	239	32	13	Pass
0.2891	230	31	13	Pass
0.3101	220	27	12	Pass
0.3311	208	24	11	Pass
0.3521	191	23	12	Pass
0.3732	179	22	12	Pass
0.3942	169	21	12	Pass
0.4152	160	20	12	Pass
0.4362	156	20	12	Pass
0.4573	150	20	13	Pass
0.4783	143	20	13	Pass
0.4993	141	20	14	Pass
0.5203	136	20	14	Pass
0.5414	131	18	13	Pass
0.5624	128	17	13	Pass
0.5834	121	15	12	Pass
0.6045	114	14	12	Pass
0.6255	108	14	12	Pass
0.6465	105	12	11	Pass
0.6675	96	11	11	Pass
0.6886	93	11	11	Pass
0.7096	87	11	12	Pass
0.7306	84	11	13	Pass
0.7516	83	9	10	Pass
0.7727	76	8	10	Pass
0.7937	74	7	9	Pass
0.8147	73	7	9	Pass
0.8357	70	6	8	Pass
0.8568	68	6	8	Pass
0.8778	65	6	9	Pass
0.8988	62	6	9	Pass
0.9199	58	6	10	Pass
0.9409	56	6	10	Pass
0.9619	53	6	11	Pass
0.9829	50	6	12	Pass
1.0040	49	6	12	Pass
1.0250	47	6	12	Pass
1.0460	44	6	13	Pass
1.0670	42	6	14	Pass
1.0881	41	6	14	Pass
1.1091	39	6	15	Pass
1.1301	38	6	15	Pass
1.1511	36	6	16	Pass
1.1722	35	6	17	Pass
1.1932	34	6	17	Pass
1.2142	32	6	18	Pass

1.2353	32	6	18	Pass
1.2563	30	6	20	Pass
1.2773	29	6	20	Pass
1.2983	29	6	20	Pass
1.3194	28	6	21	Pass
1.3404	27	6	22	Pass
1.3614	26	5	19	Pass
1.3824	26	5	19	Pass
1.4035	23	4	17	Pass
1.4245	23	4	17	Pass
1.4455	21	3	14	Pass
1.4665	21	3	14	Pass
1.4876	21	3	14	Pass
1.5086	21	2	9	Pass
1.5296	21	2	9	Pass
1.5507	20	2	10	Pass
1.5717	20	2	10	Pass
1.5927	19	2	10	Pass
1.6137	18	2	11	Pass
1.6348	17	2	11	Pass
1.6558	16	2	12	Pass
1.6768	15	2	13	Pass
1.6978	14	2	14	Pass
1.7189	13	2	15	Pass
1.7399	13	2	15	Pass
1.7609	13	2	15	Pass
1.7819	12	2	16	Pass
1.8030	12	2	16	Pass
1.8240	12	2	16	Pass
1.8450	11	2	18	Pass
1.8660	10	2	20	Pass
1.8871	7	2	28	Pass
1.9081	7	2	28	Pass
1.9291	6	2	33	Pass
1.9502	6	2	33	Pass
1.9712	6	2	33	Pass
1.9922	6	2	33	Pass
2.0132	5	2	40	Pass
2.0343	5	2	40	Pass
2.0553	5	2	40	Pass
2.0763	5	2	40	Pass
2.0973	5	1	20	Pass
2.1184	5	1	20	Pass
2.1394	4	1	25	Pass
2.1604	4	1	25	Pass
2.1814	4	1	25	Pass
2.2025	4	1	25	Pass

Water Quality

Model Default Modifications

Total of 0 changes have been made.

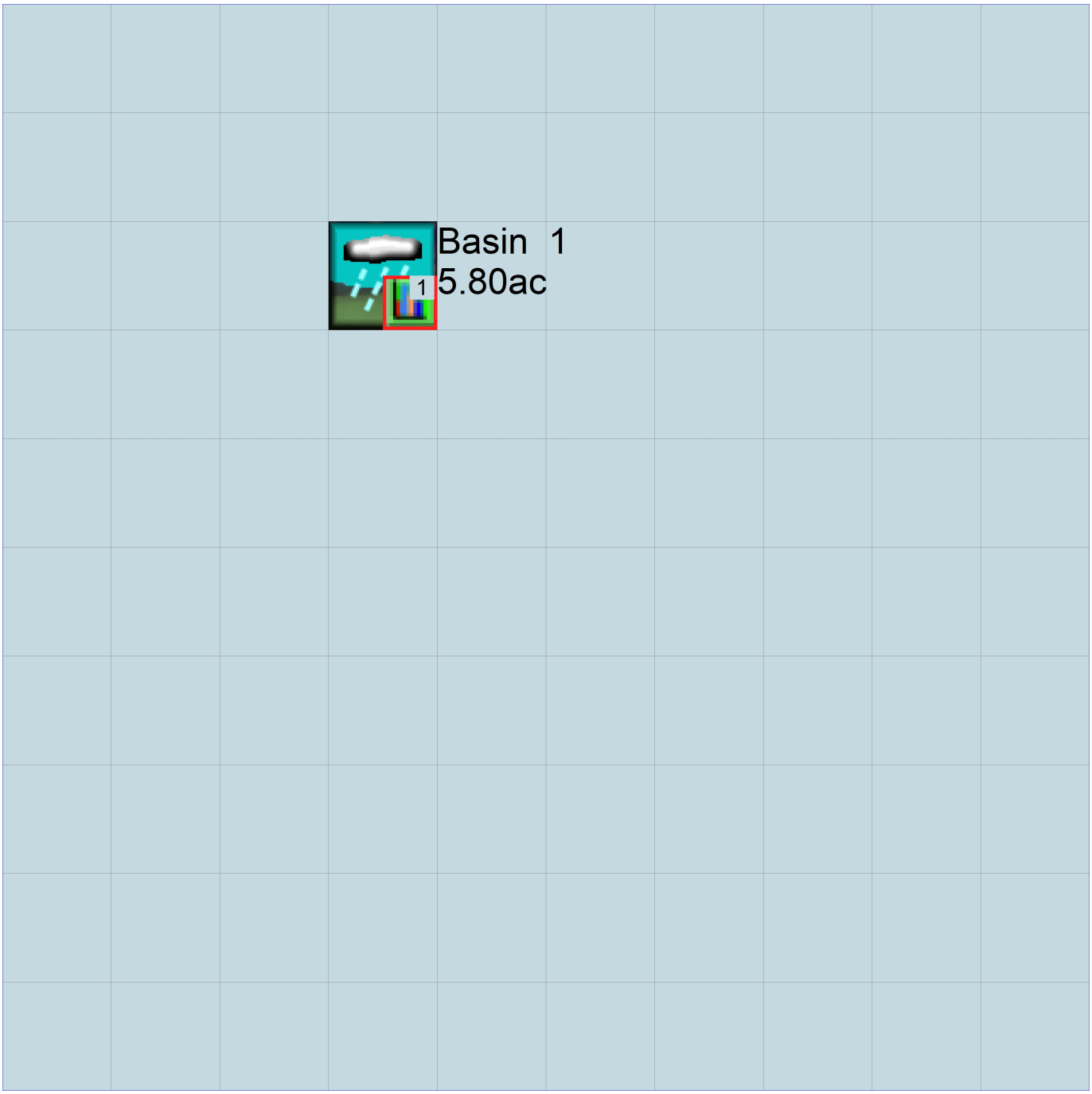
PERLND Changes

No PERLND changes have been made.

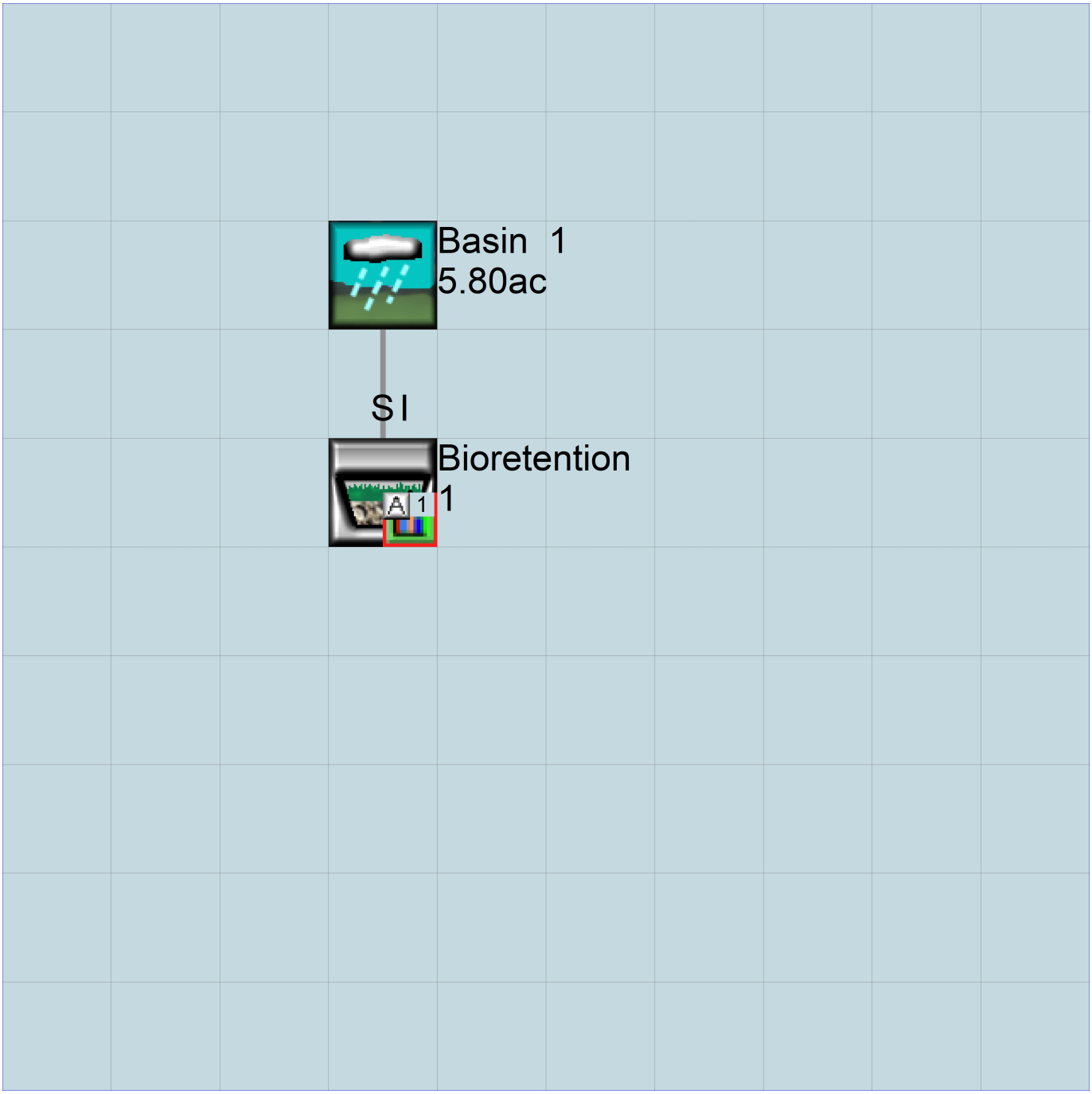
IMPLND Changes

No IMPLND changes have been made.

Appendix
Predeveloped Schematic



Mitigated Schematic



Predeveloped UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1963 10 01        END    2004 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   3733 5600 sf Quick Model.wdm
MESSU       25   Pre3733 5600 sf Quick Model.MES
            27   Pre3733 5600 sf Quick Model.L61
            28   Pre3733 5600 sf Quick Model.L62
            30   POC3733 5600 sf Quick Model1.dat
END FILES

OPN SEQUENCE
    INGRP               INDELT 00:60
      PERLND      30
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title---------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Basin  1                   MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                       in  out           ***
   30      D,NatVeg,Steep         1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
   30         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
   30         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO
```

```
  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
   30         0    1    1    1    0    0    0    0    1    1    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
   30             0       2.7      0.02        75      0.15       2.5     0.915
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   30             0         0         2         2         0      0.05      0.05
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                            ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
   30             0       0.6      0.04         1       0.3         0
  END PWAT-PARM4
  MON-LZETPARM
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   30       0.4  0.4  0.4  0.4  0.6  0.6  0.6  0.6  0.6  0.4  0.4  0.4
  END MON-LZETPARM
  MON-INTERCEP
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   30       0.1  0.1  0.1  0.1 0.06 0.06 0.06 0.06 0.06  0.1  0.1  0.1
  END MON-INTERCEP

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS       IFWS       LZS       AGWS      GWVS
   30             0         0      0.01          0       0.4       0.01         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                     in  out           ***
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
  END IWAT-PARM2
```

```
  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND  30                       5.798     COPY   501     12
PERLND  30                       5.798     COPY   501     13

******Routing******
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   12.1        DISPLY   1      INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                 ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG           ***
                                          in  out                             ***
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************* Active Sections *****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************* PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                      ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
            FG FG FG FG  possible  exit  *** possible  exit      possible  exit
             *  *  *  *     *  *  *  *  *        *  *  *  *  *         ***
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                         ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit       for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
  END HYDR-INIT
END RCHRES
```

```
SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    1              PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    1              IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    1              PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    1              IMPLND   1 999 EXTNL  PETINP

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
COPY   501 OUTPUT MEAN   1 1     12.1      WDM    501 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>            <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13


END MASS-LINK

END RUN
```

Mitigated UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1963 10 01        END    2004 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   3733 5600 sf Quick Model.wdm
MESSU       25   Mit3733 5600 sf Quick Model.MES
            27   Mit3733 5600 sf Quick Model.L61
            28   Mit3733 5600 sf Quick Model.L62
            30   POC3733 5600 sf Quick Model1.dat
END FILES

OPN SEQUENCE
    INGRP               INDELT 00:60
      PERLND       1
      IMPLND       1
      GENER        2
      RCHRES       1
      RCHRES       2
      COPY         1
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title---------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Surface retention  1        MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
    2        24
  END OPCODE
  PARM
    #    #         K ***
    2             0.
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                          in  out           ***
    1      A,NatVeg,Flat          1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
    1         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY
```

```
  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
    1         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
    1         0    1    1    1    0    0    0    0    1    1    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2          ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
    1              0       4.2      0.09       100      0.05       2.5     0.915
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3          ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
    1              0         0         2         2         0      0.05      0.05
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                                  ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC      LZETP ***
    1              0       0.6      0.04         1       0.3          0
  END PWAT-PARM4
  MON-LZETPARM
    <PLS >      PWATER input info: Part 3          ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1       0.4  0.4  0.4  0.4  0.6  0.6  0.6  0.6  0.6  0.4  0.4  0.4
  END MON-LZETPARM
  MON-INTERCEP
    <PLS >      PWATER input info: Part 3          ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1       0.1  0.1  0.1  0.1 0.06 0.06 0.06 0.06 0.06  0.1  0.1  0.1
  END MON-INTERCEP

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
    1              0         0      0.01         0       0.4      0.01         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                      in  out           ***
    1      IMPERVIOUS-FLAT        1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************* Active Sections ****************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
    1         0    0    1    0    0    0
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
    1         0    0    4    0    0    0    1    9
  END PRINT-INFO
```

```
  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
    1         0    0    0    0    1
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    1           100      0.05     0.011       0.1
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    1             0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    1             0         0
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND   1                     1.171      RCHRES   1      2
PERLND   1                     1.171      RCHRES   1      3
IMPLND   1                     4.627      RCHRES   1      5

******Routing******
PERLND   1                     1.171      COPY     1     12
IMPLND   1                     4.627      COPY     1     15
PERLND   1                     1.171      COPY     1     13
RCHRES   1                         1      RCHRES   2      8
RCHRES   2                         1      COPY   501     16
RCHRES   1                         1      COPY   501     17
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   12.1        DISPLY   1     INPUT  TIMSER 1
GENER    2 OUTPUT TIMSER      .0002778     RCHRES   1     EXTNL  OUTDGT 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<----------------><---> User T-series  Engl Metr LKFG             ***
                                        in  out                             ***
    1     Surface retentio-004    2    1    1    1   28    0    1
    2     Bioretention  1         1    1    1    1   28    0    1
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
    1         1    0    0    0    0    0    0    0    0    0
    2         1    0    0    0    0    0    0    0    0    0
```

```
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************* PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
    1         4    0    0    0    0    0    0    0    0    0    1    9
    2         4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                    ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
           FG FG FG FG  possible  exit  *** possible  exit      possible  exit
            *  *  *  *    *  *  *  *  *      *  *  *  *  *        ***
    1        0  1  0  0    4  5  0  0  0       0  1  0  0  0       2  1  2  2  2
    2        0  1  0  0    4  0  0  0  0       0  0  0  0  0       2  2  2  2  2
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN      DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><--------><--------> ***
    1              1      0.01       0.0       0.0       0.0       0.0
    2              2      0.03       0.0       0.0       0.0       0.0
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                       ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
         *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
    1            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
    2            0         4.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
*** User-Defined Variable Quantity Lines
***                      addr
***                    <------>
*** kwd  varnam optyp  opn  vari  s1 s2 s3 tp multiply  lc ls ac as agfn ***
  <****> <----> <----> <-> <----><-><-><-><-><--------> <><-> <><-> <--> ***
  UVQUAN vol2   RCHRES   2 VOL             4
  UVQUAN v2m2   GLOBAL     WORKSP  1        3
  UVQUAN vpo2   GLOBAL     WORKSP  2        3
  UVQUAN v2d2   GENER    2 K       1        3
*** User-Defined Target Variable Names
***                  addr or                       addr or
***                 <------>                      <------>
*** kwd   varnam ct  vari  s1 s2 s3  frac oper     vari  s1 s2 s3  frac oper
  <****>  <----><-> <----><-><-><-> <---> <-->    <----><-><-><-> <---> <-->
  UVNAME  v2m2    1 WORKSP  1         1.0 QUAN
  UVNAME  vpo2    1 WORKSP  2         1.0 QUAN
  UVNAME  v2d2    1 K       1         1.0 QUAN
*** opt foplop dcdts  yr mo dy hr mn d t   vnam  s1 s2 s3 ac quantity  tc  ts rp
  <****><-><--><><-><--> <> <> <> <><><>  <----><-><-><-><-><--------> <> <-><->
  GENER   2                               v2m2           =  38089.37
*** Compute remaining available pore space
  GENER   2                               vpo2           =  v2m2
  GENER   2                               vpo2          -=  vol2
*** Check to see if VPORA goes negative; if so set VPORA = 0.0
IF (vpo2 < 0.0) THEN
  GENER   2                               vpo2           =  0.0
END IF
*** Infiltration volume
  GENER   2                               v2d2           =  vpo2
END SPEC-ACTIONS
FTABLES
  FTABLE      2
   71    4
     Depth      Area    Volume  Outflow1 Velocity  Travel Time***
      (ft)   (acres) (acre-ft)   (cfs)   (ft/sec)    (Minutes)***
```

0.000000	0.128558	0.000000	0.000000
0.118132	0.128558	0.004556	0.000000
0.236264	0.128558	0.009112	0.000000
0.354396	0.128558	0.013668	0.000000
0.472527	0.128558	0.018224	0.004103
0.590659	0.128558	0.022780	0.010452
0.708791	0.128558	0.027336	0.019440
0.826923	0.128558	0.031892	0.020585
0.945055	0.128558	0.036448	0.021158
1.063187	0.128558	0.041004	0.022450
1.181319	0.128558	0.045561	0.024863
1.299451	0.128558	0.050117	0.026088
1.417582	0.128558	0.054673	0.026701
1.535714	0.128558	0.059229	0.027816
1.653846	0.128558	0.063785	0.028374
1.771978	0.128558	0.078136	0.029418
1.890110	0.128558	0.092488	0.031355
2.008242	0.128558	0.106839	0.032333
2.126374	0.128558	0.121191	0.032822
2.244505	0.128558	0.135542	0.033734
2.362637	0.128558	0.149894	0.035447
2.480769	0.128558	0.164246	0.036310
2.598901	0.128558	0.178597	0.037917
2.717033	0.128558	0.192949	0.038727
2.835165	0.128558	0.207300	0.040442
2.953297	0.128558	0.221652	0.042348
3.071429	0.128558	0.236003	0.043305
3.189560	0.128558	0.250355	0.044784
3.307692	0.128558	0.264707	0.046481
3.425824	0.128558	0.279058	0.048252
3.543956	0.128558	0.293410	0.050025
3.662088	0.128558	0.307761	0.051771
3.780220	0.128558	0.322113	0.053476
3.898352	0.128558	0.336464	0.055136
4.016484	0.128558	0.350816	0.056752
4.134615	0.128558	0.365167	0.058324
4.252747	0.128558	0.379519	0.059855
4.370879	0.128558	0.393871	0.061349
4.489011	0.128558	0.408222	0.062807
4.607143	0.128558	0.422574	0.064232
4.725275	0.128558	0.436925	0.065625
4.843407	0.128558	0.451277	0.066990
4.961538	0.128558	0.465628	0.068327
5.079670	0.128558	0.479980	0.069638
5.197802	0.128558	0.494331	0.070925
5.315934	0.128558	0.508683	0.072189
5.434066	0.128558	0.523035	0.073431
5.552198	0.128558	0.537386	0.074653
5.670330	0.128558	0.551738	0.075855
5.788462	0.128558	0.566089	0.077038
5.906593	0.128558	0.580441	0.078203
6.024725	0.128558	0.594792	0.079351
6.142857	0.128558	0.609144	0.080482
6.260989	0.128558	0.623495	0.081598
6.379121	0.128558	0.637847	0.082699
6.497253	0.128558	0.652199	0.083785
6.615385	0.128558	0.666550	0.084858
6.733516	0.128558	0.680902	0.085917
6.851648	0.128558	0.695253	0.086963
6.969780	0.128558	0.709605	0.087998
7.087912	0.128558	0.723956	0.089020
7.206044	0.128558	0.738308	0.090030
7.324176	0.128558	0.752659	0.091030
7.442308	0.128558	0.767011	0.092019
7.560440	0.128558	0.781363	0.092998
7.678571	0.128558	0.795714	0.093967
7.796703	0.128558	0.810066	0.094927
7.914835	0.128558	0.824417	0.095878
8.032967	0.128558	0.838769	0.096822
8.151099	0.128558	0.853120	0.097760

```
  8.250000  0.128558  0.874412  0.112240
  END FTABLE  2
  FTABLE      1
   23    5
     Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
      (ft)   (acres) (acre-ft)   (cfs)     (cfs)   (ft/sec)    (Minutes)***
  0.000000  0.128558  0.000000  0.000000  0.000000
  0.118132  0.131499  0.015361  0.000000  0.648149
  0.236264  0.134462  0.031070  0.000000  0.858263
  0.354396  0.137449  0.047130  0.000000  0.909307
  0.472527  0.140458  0.063545  0.000000  0.960352
  0.590659  0.143491  0.080317  0.000000  1.011397
  0.708791  0.146547  0.097448  0.000000  1.062441
  0.826923  0.149626  0.114942  0.000000  1.113486
  0.945055  0.152728  0.132801  0.000000  1.164531
  1.063187  0.155853  0.151027  0.000000  1.215576
  1.181319  0.159001  0.169625  0.000000  1.266620
  1.299451  0.162172  0.188595  0.000000  1.317665
  1.417582  0.165366  0.207941  0.000000  1.368710
  1.535714  0.168583  0.227666  0.214926  1.419754
  1.653846  0.171823  0.247773  1.918337  1.470799
  1.771978  0.175087  0.268263  4.494063  1.521844
  1.890110  0.178373  0.289141  7.659244  1.572888
  2.008242  0.181683  0.310408  11.22319  1.623933
  2.126374  0.185015  0.332067  15.00181  1.674978
  2.244505  0.188371  0.354121  18.80545  1.726022
  2.362637  0.191749  0.376573  22.44511  1.777067
  2.480769  0.195151  0.399426  25.74720  1.828112
  2.500000  0.195707  0.403184  28.57376  1.836421
  END FTABLE  1
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL       1             PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL       1             IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL       1             PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL       1             IMPLND   1 999 EXTNL  PETINP
WDM      2 PREC     ENGL       1             RCHRES   1     EXTNL  PREC
WDM      1 EVAP     ENGL       0.5           RCHRES   1     EXTNL  POTEV
WDM      1 EVAP     ENGL       0.7           RCHRES   2     EXTNL  POTEV

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
RCHRES   2 HYDR   RO     1 1        1      WDM   1000 FLOW     ENGL      REPL
RCHRES   2 HYDR   STAGE  1 1        1      WDM   1001 STAG     ENGL      REPL
RCHRES   1 HYDR   STAGE  1 1        1      WDM   1002 STAG     ENGL      REPL
RCHRES   1 HYDR   O      1 1        1      WDM   1003 FLOW     ENGL      REPL
COPY     1 OUTPUT MEAN   1 1     12.1      WDM    701 FLOW     ENGL      REPL
COPY   501 OUTPUT MEAN   1 1     12.1      WDM    801 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>             <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK        2
PERLND     PWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    2

  MASS-LINK        3
PERLND     PWATER IFWO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    3

  MASS-LINK        5
IMPLND     IWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    5
```

```
  MASS-LINK        8
RCHRES     OFLOW  OVOL   2                RCHRES         INFLOW IVOL
  END MASS-LINK    8

  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13

  MASS-LINK       15
IMPLND     IWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   15

  MASS-LINK       16
RCHRES     ROFLOW                          COPY           INPUT  MEAN
  END MASS-LINK   16

  MASS-LINK       17
RCHRES     OFLOW  OVOL   1                 COPY           INPUT  MEAN
  END MASS-LINK   17


END MASS-LINK

END RUN
```

Predeveloped HSPF Message File

Disclaimer

Legal Notice

This program and accompanying documentation are provided 'as-is' without warranty of any kind. The entire risk regarding the performance and results of this program is assumed by End User. Clear Creek Solutions Inc. and the governmental licensee or sublicensees disclaim all warranties, either expressed or implied, including but not limited to implied warranties of program and accompanying documentation. In no event shall Clear Creek Solutions Inc. be liable for any damages whatsoever (including without limitation to damages for loss of business profits, loss of business information, business interruption, and the like) arising out of the use of, or inability to use this program even if Clear Creek Solutions Inc. or their authorized representatives have been advised of the possibility of such damages.

Clear Creek Solutions, Inc.
6200 Capitol Blvd. Ste F
Olympia, WA. 98501
Toll Free 1(866)943-0304
Local (360)943-0304

www.clearcreeksolutions.com

Drawdown Calculation for BMP	A	
Project Name	Piraeus	
Project No	3733	
Drawdown Time:	20.1	**hr**
Surface Area	**5600**	**sq ft**
Underdrain Orifice Diameter: in	**1.2**	in
C:	**0.6**	
Ponding (to invert of lowest discharge opening in outlet structure):	**1.5**	ft
Amended Soil Depth:	**1.5**	ft
Permavoid Depth:	**6.5**	ft
Orifice Q =	**0.116**	cfs
Effective Depth	95.7	in
Flow Rate controlled by orifice	0.896	in/hr
Flow Rate controlled by soil media	5.000	in/hr

ATTACHMENT 3 - STRUCTURAL BMP MAINTENANCE INFORMATION

This is the cover sheet for Attachment 3.

Indicate which items are included behind this cover sheet:

Attachment	Contents	Checklist
Attachment 3a	Structural BMP Maintenance Thresholds and Actions (Required)	☑ Included See Structural BMP Maintenance Information Checklist on the back of this Attachment cover sheet.
Attachment 3b	Draft Maintenance Agreement (when applicable)	□ Included ☑ Not Applicable

Attachment 3a – Structural BMP Maintenance Thresholds and Actions

Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Information Attachment:

□ **Preliminary Design / Planning / CEQA level submittal:**

Attachment 3a must identify:

□ Typical maintenance indicators and actions for proposed structural BMP(s) based on Section 7.7 of the BMP Design Manual

☑ Attachment 3b is not required for preliminary design / planning / CEQA level submittal.

□ **Final Design level submittal:**

Attachment 3a must identify:

□ Specific maintenance indicators and actions for proposed structural BMP(s). This shall be based on Section 7.7 of the BMP Design Manual and enhanced to reflect actual proposed components of the structural BMP(s)

□ How to access the structural BMP(s) to inspect and perform maintenance

□ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)

□ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable

□ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)

□ Recommended equipment to perform maintenance

□ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management

Attachment 3b: For private entity operation and maintenance, Attachment 3b shall include a draft maintenance agreement in the local jurisdiction's standard format (PDP applicant to contact the City Engineer to obtain the current maintenance agreement forms).

APPENDIX 3a
BMP MAINTENANCE THRESHOLDS

BMP DESCRIPTION

BIOFILTRATION BASIN	STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT APPROVAL NO: _____ O&M RESPONSIBLE PARTY DESIGNEE: HOA

POST-CONSTRUCTION PERMANENT BMP OPERATION & MAINTENANCE PROCEDURE DETAILS

MAINTENANCE INDICATORS	MAINTENANCE ACTION
ACCUMULATION OF SEDIMENT, LITTER, OR DEBRIS	REMOVE AND PROPERLY DISPOSE OF ACCUMULATED MATERIALS, WITHOUT DAMAGE TO THE VEGETATION
POOR VEGETATION ESTABLISHMENT	RE-SEED, RE-PLANT, OR RE-ESTABLISH VEGETATION PER ORIGINAL PLANS
OVERGROWN VEGETATION	MOW OR TRIM AS APPROPRIATE, BUT NOT LESS THAT THE DESIGN HEIGHT OF THE VEGETATION PER ORIGINAL PLANS.
EROSION DUE TO CONCENTRATED IRRIGATION FLOW	REPAIR/RE-SEED/RE-PLANT ERODED AREAS AND ADJUST THE IRRIGATION SYSTEM
EROSION DUE TO CONCENTRATED STORM WATER RUNOFF FLOW	REPAIR/RE-SEED/RE-PLANT ERODED AREAS AND MAKE APPROPRIATE CORRECTIVE MEASURES SUCH AS ADDING STONE AT FLOW ENTRY POINTS OR MINOR RE-GRADING TO RESTORE PROPER DRAINAGE ACCORDING TO THE ORIGINAL PLAN.
STANDING WATER IN BIOFILTRATION AREAS	MAKE APPROPRIATE CORRECTIVE MEASURES SUCH AS ADJUSTING IRRIGATION SYSTEM, REMOVING OBSTRUCTION OF DEBRIS OR INVASIVE VEGETATION, OR CLEANING UNDERDRAINS
OBSTRUCTED INLET OR OUTLET STRUCTURE	CLEAR OBSTRUCTIONS
DAMAGE TO INLET OR OUTLET STRUCTURE	REPAIR OR REPLACE AS APPLICABLE

MAINTENANCE EQUIPMENT AND ACCESS
USE LANDSCAPE EQUIPMENT FOR MAINTENANCE; ACCESS BMP FROM PRIVATE ROAD AT NORTHWEST CORNER OF SITE

INSPECTION FACILITATION
INSTALL 3' X 3' OUTLET RISER STRUCTURE TO PROVIDE OBSERVATION ACCESS FOR INSPECTION OF MAINTENANCE THRESHOLDS; MARKING TO BE PROVIDED ON BMP COMPONENTS TO DETERMINE HOW FULL BMP IS.

PASCO LARET SUITER & ASSOCIATES
CIVIL ENGINEERING + LAND PLANNING + LAND SURVEYING
535 North Highway 101, Ste A, Solana Beach, CA 92075
ph 858.259.8212 | fx 858.259.4812 | plsaengineering.com

ATTACHMENT 4 - COPY OF PLAN SHEETS SHOWING PERMANENT STORM WATER BMPS

This is the cover sheet for Attachment 4.

Use this checklist to ensure the required information has been included on the plans:

The plans must identify:

☑ Structural BMP(s) with ID numbers matching Form I-6 Summary of PDP Structural BMPs
☑ The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit
☑ Details and specifications for construction of structural BMP(s)
☑ Signage indicating the location and boundary of structural BMP(s) as required by the [City Engineer]
☑ How to access the structural BMP(s) to inspect and perform maintenance
☑ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)

□ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable

□ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)

□ Recommended equipment to perform maintenance

□ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management

□ Include landscaping plan sheets showing vegetation requirements for vegetated structural BMP(s)
☑ All BMPs must be fully dimensioned on the plans

□ When proprietary BMPs are used, site-specific cross section with outflow, inflow, and model number shall be provided. Photocopies of general brochures are not acceptable.

MULTI-005158-2022/SUB-005159-2022/ DR-005160-2022/CDP-005161-2022
PIRAEUS POINT
PIRAEUS STREET, ENCINITAS, CA

LEGEND

PROPERTY BOUNDARY	
RIGHT-OF-WAY	
ADJACENT LINE	
LOT AREA	5,000 SF
CENTERLINE OF ROAD	
PROPOSED SETBACKS	
EXISTING UTILITY EASEMENT	

EXISTING EASEMENTS

1. AN EASEMENT FOR POLE LINES, UNDERGROUND CONDUITS, INGRESS AND EGRESS RIGHTS TO SAN DIEGO GAS & ELECTRIC COMPANY RECORDED OCTOBER 25, 1949 IN BOOK 3363, PAGE 154 OF OFFICIAL RECORDS.

2. AN EASEMENT FOR EITHER OR BOTH POLE LINES, UNDERGROUND CONDUITS, WITH THE RIGHT OF INGRESS AND EGRESS AND INCIDENTAL PURPOSES TO TO SAN DIEGO GAS & ELECTRIC COMPANY, RECORDED JULY 06, 1926 AS BOOK 1220, PAGE 410 OF OFFICIAL RECORDS. (2 FEET IN WIDTH)

LEGAL DESCRIPTION

PARCEL A:

THAT PORTION OF LOT 2 IN SECTION 4, TOWNSHIP 13 SOUTH, RANGE 4 WEST, SAN BERNARDINO BASEAND MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OFCALIFORNIA, ACCORDING TO OFFICIAL PLATTHEREOF, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 4; THENCE WESTERLY ALONG THE NORTH LINE THEREOF TO THE EASTERLY LINE OF THE LAND DESCRIBED IN DEED TO THE STATE OF CALIFORNIA, RECORDED DECEMBER 4, 1961 AS INSTRUMENT NO.209054 OF OFFICIAL RECORDS; THENCE ALONG THE BOUNDARY LINE OF SAID LAND, SOUTH 00°30'57" EAST 51.62 FEET; THENCE SOUTH 15°22'06" EAST 500.23 FEET; THENCE SOUTH 00°08'11" EAST 205.00 FEET; THENCE SOUTH 18°13'27" EAST 125.40 FEET; THENCE NORTH 82°17'49" EAST 241.30 FEET; THENCE SOUTH 20°46'18" EAST 26.42 FEET TO THE NORTHERLY LINE OF ORPHEUS AVENUE AS SHOWN ONCREST ACRES, ACCORDING TO MAP NO. 2019, FILED IN THE OFFICE OF COUNTY RECORDER OF SAN DIEGO COUNTY; THENCE EASTERLY ALONG SAID LINE TO THE EAST LINE OF SAID SECTION; THENCE NORTHERLY ALONG SAID EAST LINE TO THE POINT OF BEGINNING.

PARCEL B:

THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 33, TOWNSHIP 12 SOUTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, BEING A PORTION OF ACRE LOT 41 AND LOTS 1 TO 20, INCLUSIVE, IN BLOCK 22 OF EATONVILLE, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE MAP THEREOF NO. 513, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, MARCH 20, 1888. TOGETHER WITH THAT PORTION OF THE EAST HALF OF WILLOW STREET, CLOSED TO PUBLIC USE, AS AFORESAID LYING WEST OF AND ADJOINING LOTS 1 TO 20, INCLUSIVE, IN SAID BLOCK 22. ALSO THAT PORTION OF THE NORTH HALF OF CANON STREET, CLOSED TO PUBLIC USE AS AFORESAID, LYING SOUTH OF THE WESTERLY PROLONGATION OF THE SOUTH LINE OF SAID LOT 20, AND EAST OF THE CENTER LINE OF WILLOW STREET, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 33, SAID CORNER BEING MARKED BY A FOUND CONCRETE MONUMENT BEING AT COORDINATES X EQUALS 1,679,914.49 FEET, AND Y EQUALS 334,015.33 FEET; THENCE ALONG THE SOUTH LINE OF SAID SECTION 33, NORTH 89°37'43" WEST 64.35 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 89°37'43" EAST 64.35 FEET TO SAID SOUTHEAST CORNER OF SECTION 33; THENCE NORTHERLY ALONG THE EAST LINE OF SAID SECTION TO THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 33, TOWNSHIP 12 SOUTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN; THENCE ALONG THE EAST LINE OF SAID SECTION 33, NORTH 00°42'07" WEST 201.02 FEET TO A POINT IN A NONTANGENT CURVE CONCAVE EASTERLY HAVING A RADIUS OF 479.98 FEET AT WHICH A RADIAL LINE OF SAID CURVE BEARS NORTH 67°49'42" WEST, BEING A POINT ON THE SOUTHWESTERLY LINE OF LAND DESCRIBED IN PARCEL 2 OF DEED TO THE STATE OF CALIFORNIA, RECORDED DECEMBER 4, 1961 AS FILE NO. 209054 OF OFFICIAL RECORDS, SAID CURVE BEING THE EASTERLY LINE OF THAT PARCEL OF LAND DESCRIBED IN DEED TO THE COUNTY OF SAN DIEGO RECORDED MAY 28, 1918 IN BOOK 751, PAGE 39 OF DEEDS, RECORDS OF SAID COUNTY LAST SAID PARCEL IS SHOWN ON MAP OF ROAD SURVEY NO. 346 ON FILE IN THE OFFICE OF SAID COUNTY; THENCE SOUTHERLY AND SOUTHWESTERLY ALONG SAID CURVE AND SAID EASTERLY LINE A DISTANCE OF 131.47 FEET THROUGH AN ANGLE OF 15°41'36"; AND SOUTH 6°28'42" WEST 91.60 FEET TO A POINT IN A TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 419.98 FEET; THENCE SOUTHWESTERLY ALONG SAID CURVE A DISTANCE OF 224.92 FEET THROUGH AN ANGLE OF 30° 41' 05" TO A POINT IN A NON-TANGENT LINE; THENCE LEAVING THE EASTERLY LINE OF SAID COUNTY PARCEL SOUTH 31°07'57" WEST 80.15 FEET TO A POINT BEING A COORDINATES Y EQUALS 335,076.49 FEET AND X EQUALS 1,679,728.08 FEET IN A NON-TANGENT CURVE CONCAVE EASTERLY HAVING A RADIUS OF 950 FEET A RADIAL LINE OF SAID CURVE THROUGH SAID POINT BEING NORTH 70°04'00" WEST; THENCE SOUTHERLY ALONG SAID CURVE TO THE CENTER LINE OF SAID WILLOW STREET, BEING THE NORTHEASTERLY CORNER OF PARCEL 1 OF SAID DEED TO THE STATE OF CALIFORNIA; THENCE ALONG THE EASTERLY LINE OF SAID PARCEL 1 SOUTHERLY ALONG SAID CURVE TO A POINT IN A NON-TANGENT LINE, A RADIAL LINE OF SAID CURVE THROUGH SAID POINT BEARING SOUTH 77°17'34" WEST; THENCE ALONG SAID LINE SOUTH 13°39'00" EAST 400.00 FEET; THENCE SOUTH 58°39'00" EAST 70.71 FEET; THENCE SOUTH 00°30'57" EAST 102.41 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPTING THEREFROM, THAT PORTION OF SAID LAND AS DESCRIBED IN A DOCUMENT ENTITLED "AMENDED FINAL ORDER OF CONDEMNATION" RECORDED AUGUST 30, 1988 AS INSTRUMENT NO. 88-434542 OF OFFICIAL RECORDS.

ALSO, EXCEPTING THEREFROM ONE-HALF OF ALL MINERAL RIGHTS AS RESERVED IN THE DEED BY D S LINEBARGER, ET AL, TO ELIZABETH S. HILL, RECORDED FEBRUARY 8, 1919.

SOLAR STATEMENT

THIS IS A SOLAR SUBDIVISION AS REQUIRED BY THE SUBDIVISION ORDINANCE. ALL PARCELS TO HAVE AT LEAST 100 SQUARE FEET OF UNOBSTRUCTED ACCESS TO SUNLIGHT ON THE BUILDABLE PORTION OF THE PARCEL.

SCOPE OF WORK

THE PROJECT SEEKS APPROVAL OF A TENTATIVE CONDOMINIUM MAP, DESIGN REVIEW PERMIT AND COASTAL DEVELOPMENT PERMIT FOR THE CONSTRUCTION OF 52 ONE-BEDROOM UNITS, 37 TWO-BEDROOM UNITS AND 60 THREE-BEDROOM UNIT FOR A TOTAL OF 149 UNITS. SITE IMPROVEMENTS WILL CONSIST OF GRADING, INSTALLATION OF PUBLIC AND PRIVATE UTILITIES, AND LANDSCAPING AND FLATWORK ASSOCIATED WITH THIS TYPE OF USE.

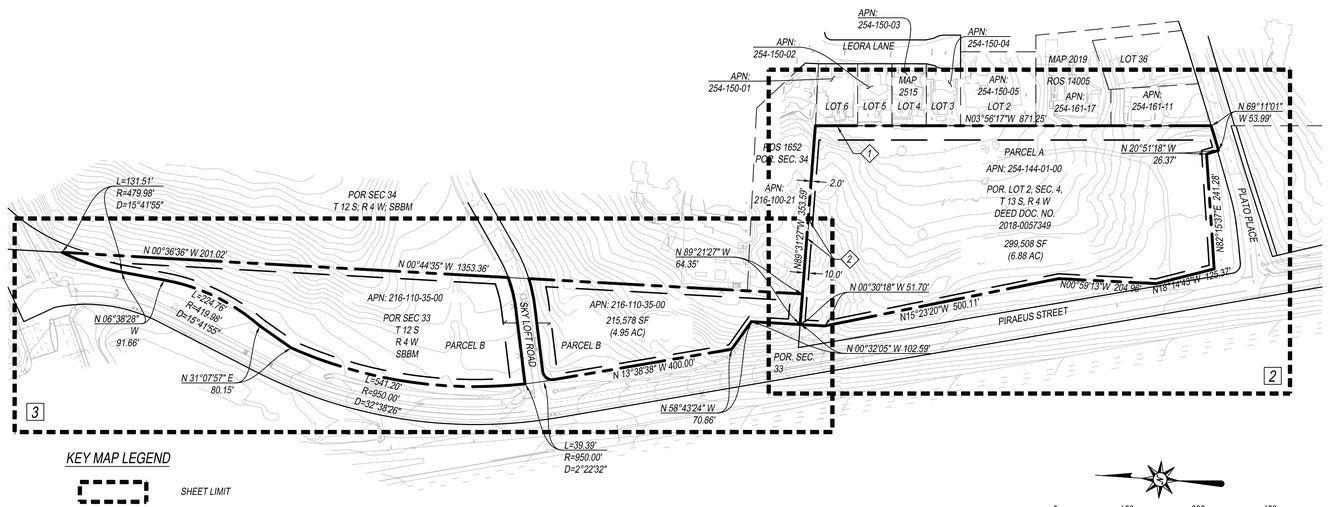
GRADING/EARTHWORK

TOTAL AREA DISTURBED: ± 272,600 (6.258 AC)
CUT VOLUME: ± 83,000 C.Y.
FILL VOLUME: ± 25,400 C.Y.

EXPORT VOLUME: ± 57,600 C.Y.

MAX CUT: ± 33
MAX FILL: ± 24

EXISTING IMPERVIOUS AREA: 0 SF
PROPOSED IMPERVIOUS AREA: 202,011 SF
NET IMPERVIOUS AREA: 70,579 SF

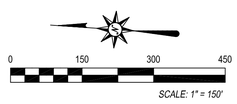


KEY MAP LEGEND

- SHEET LIMIT
- # SHEET NUMBER
- PROPERTY BOUNDARY
- RIGHT-OF-WAY
- ADJACENT PROPERTY LOT LINE
- SETBACK

KEY MAP

SCALE 1" = 150'



CONDOMINIUM NOTE

PARCEL A IS A CONDOMINIUM PARCEL AS DEFINED IN SECTION 1351 AND/OR 4125 OF THE CIVIL CODE OF THE STATE OF CALIFORNIA, AND THIS MAP IS FILED PURSUANT TO THE SUBDIVISION MAP ACT. THERE WILL BE A MAXIMUM OF 149 CONDOMINIUM UNITS ON PARCEL A.

BENCHMARK

ELEVATIONS SHOWN HEREON ARE BASED ON 2.5" BRASS DISC IN THE SOUTHEAST QUADRANT OF LEUCADIA BLVD. AND ORPHEUS AVE. AS SHOWN PER ROS 18416, AS PT. NO. 1024. ELEV: 178.543. (MSL)

CALIFORNIA LAMBERT COORDINATES

CALIF COORD. INDEX

DENSITY CALCULATIONS

MINIMUM REQUIRED DENSITY

NET ACREAGE CALCULATIONS

TOTAL GROSS ACREAGE = 6.876 AC (299,508 SF)

TRANSMISSION LINE EASEMENT: 0.019 AC (832 SF)

NET LOT AREA: 6.857 AC (298,676 SF)

NATURAL SLOPE ADJUSTMENT FOR MINIMUM DENSITY (R-30 ZONING OVERLAY)

SLOPE%	ACREAGE	DENSITY	DWELLING UNITS
0-25	4.625	25	115.6
25-40	1.463	25/2	18.3
40+	0.769	0	0
			133.9 DU'S

MINIMUM REQUIRED DENSITY = 134 DWELLING UNITS

PROPOSED DENSITY = 149 DWELLING UNTIS

NET LOT AREA CALCULATIONS

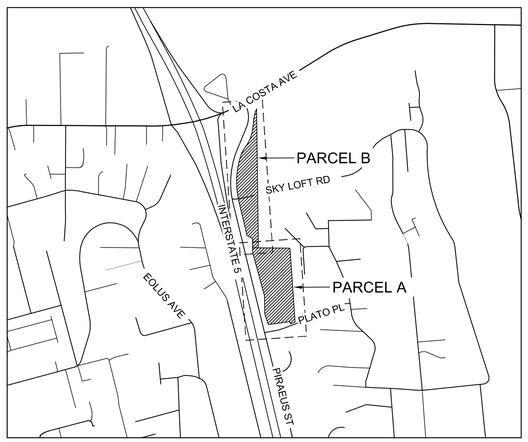
TOTAL GROSS ACREAGE = 6.876 AC (299,508 SF)

EXISTING/PROPOSED RIGHT-OF-WAY = 0.000 AC (0 SF)

NET LOT AREA: 6.876 AC (299,508 SF)

ZONE REQUIREMENTS	R-30	RR-1	RR-2	PARCEL A (R-30)	PARCEL B (RR1/RR2)
NET LOT AREA (SF)	30,000	43,560	21,500	299,508	215,578
LOT WIDTH	100	110	100	341	154
LOT DEPTH	150	150	150	842	981
FRONT YARD SETBACK	10	30	30	32	-
STREET SIDE YARD SETBACK	10	15	10	12	-
SIDE YARD SETBACK	10	15	15	30	-
30' SETBACK PER 30.16.010 (E)(7)(a)	30	-	-	30	-
REAR YARD SETBACK	10	25	25	151	-
BUILDING FOOTPRINT	-	-	-	96,144	-
LOT COVERAGE	65%	35%	35%	32%	-

= REQUESTED CONCESSION OR WAIVER UNDER DENSITY BONUS



VICINITY MAP

NOT TO SCALE

OWNER'S CERTIFICATE

WE HEREBY CERTIFY THAT WE ARE THE RECORDED OWNERS OF THE PROPERTY SHOWN ON THE ATTACHED TENTATIVE MAP AND THAT SAID MAP SHOWS THE ENTIRE CONTIGUOUS OWNERSHIP. I UNDERSTAND THAT PROPERTY IS CONSIDERED CONTIGUOUS EVEN IF IT IS SEPARATED BY ROADS, STREETS, UTILITY EASEMENTS, OR RAILROAD RIGHTS OF WAY.

OWNER:_____ DATE

PIRAEUS INVESTOR LLC
PIRAEUS STREET, ENCINITAS, CA 92024

SUBDIVIDER'S CERTIFICATE

THE SUBDIVIDER AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY OF ENCIIINITAS AND ITS AGENTS, OFFICERS, AND EMPLOYEES FROM ANY CLAIM ACTION, OR PROCEEDING AGAINST THE CITY OF ENCINITAS OR ITS AGENTS, OFFICERS OR EMPLOYEES, TO ATTACK, SET ASIDE, VOID, OR ANNUL AN APPROVAL FROM THE CITY OF ENCINITAS CONCERNING THE SUBDIVISION WHEN SUCH ACTION IS BROUGHT WITHIN THE TIME PERIOD SPECIFIED IN GOV. CODE SECTION 66499.37. THIS CERTIFICATION IS CONDITIONED UPON THE CITY OF ENCINITAS PROVIDING PROMPT NOTICE TO THE SUBDIVIDER AS PROVIDED FOR BY THE ACT (GOV. CODE 66474.9)

SUBDIVIDER:_____ DATE

PIRAEUS INVESTOR LLC
16465 VIA ESPRILLO, SUITE 150, SAN DIEGO, CA 92127

SITE ADDRESS

PIRAEUS STREET ENCINITAS, CA 92024

TOPOGRAPHY

PREPARED BY: PASCO LARET SUITER & ASSOCIATES
DATED: 08/07/2019

ZONING INFORMATION

TOTAL PARCELS:	2
GENERAL PLAN DESIGNATION:	ENCINITAS GENERAL PLAN, R-30 OVERLAY ZONE (25-30 DU/AC)
ZONING REGULATIONS:	ENCINITAS GENERAL PLAN, R-30 OVERLAY ZONE, RR-1 ZONE, RR-2 ZONE
HEIGHT	PER CODE 30.16.010 B6
LOT COVERAGE:	65%
MINIMUM LOT SIZE:	30,000 SF
PRESENT USE:	UNDEVELOPED
PROPOSED USE:	149 FOR SALE CONDOMINIUM UNITS

MINIMUM NET LOT SIZE:	215,578 SF	4.95 AC
MAXIMUM NET LOT SIZE:	299,508 SF	6.88 AC
AVERAGE NET LOT SIZE:	257,543 SF	5.91 AC

APN (PARCEL A): 254-144-01-00
APN (PARCEL B): 216-110-35-00

SETBACKS

	R-30	RR-1	RR-2	MIN PROPOSED
FRONT YARD (FYSB):	10'	30'	30'	32'
REAR YARD (RYSB):	10'	25'	25'	151'
INTERIOR SIDE YARD (SYSB):	10'	15'	15'	30'
STREET SIDE YARD (SSYSB):	10'	15'	10'	12'

ACCESS

PIRAEUS STEET

UTILITIES

WATER	SAN DIEGUITO WATER DISTRICT
FIRE	ENCINITAS FIRE PROTECTION DISTRICT
SEWER	LEUCADIA WASTE WATER DISTRICT
ELEMENTARY SCHOOL	ENCINITAS UNION SCHOOL DISTRICT
HIGH SCHOOL	SAN DIEGUITO UNION SCHOOL DISTRICT

PREPARED BY

PASCO LARET SUITER & ASSOCIATES, INC.
535 N. HIGHWAY 101, SUITE A
SOLANA BEACH, CA 92075
(858)259-8212

OWNER

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158 N MELROSE DR.
VISTA, CA 92083
760.500.7039
EMAIL: HARRINGTONCANNON@ICLOUD.COM

APPLICANT

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858.618.4942
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949.851.2133
EMAIL: DOBITZ@KTGY.COM

LANDSCAPE ARCHITECT:
SCHMIDT DESIGN GROUP
1310 ROSECRANS STREET, SUITE G
SAN DIEGO, CA 92106
619.236.1462
EMAIL:JMONTGOMERY@SCHMIDTDESIGN.COM

ENGINEER OF WORK

TYLER LAWSON, RCE 80356 — DATE 12-31-2022

REGISTERED PROFESSIONAL ENGINEER — TYLER G LAWSON — No. 80356 Exp. 12/31/22 — CIVIL — STATE OF CALIFORNIA

SHEET INDEX

PREPARED BY:

PASCO LARET SUITER & ASSOCIATES
San Diego | Encinitas | Orange County
Phone 858.259.8212 | www.plsaengineering.com

PLAN VIEW: TENTATIVE MAP - PARCEL A

SCALE: 1" = 40'

GENERAL NOTES

1. PUBLIC IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED TO THE SATISFACTION OF THE CITY INSPECTOR.
2. EXISTING SURVEY MONUMENTS SHALL BE PROTECTED IN PLACE. ANY MONUMENT THAT IS DISTURBED OR DESTROYED SHALL BE REPLACED BY A LICENSED LAND SURVEYOR WHO SHALL FILE A CORNER RECORD OR RECORD OF SURVEY WITH THE COUNTY.
3. ALL EXISTING ONSITE STRUCTURES TO BE DEMOLISHED.
4. REFER TO LANDSCAPE PLAN FOR ONSITE TREES TO BE REMOVED. ADDITIONALLY, ANY LANDSCAPE WORK WITHIN THE RIGHT-OF-WAY SHALL BE MONITORED BY THE PARKS AND RECREATION DEPARTMENT.
5. FOR INFORMATION ON THE PROPOSED STORM DRAIN, SEE PRELIMINARY GRADING AND DRAINGAGE PLAN ON SHEETS 04-06.

ABBREVIATIONS

FF = FINISH FLOOR
FG = FINISH GRADE
POR = PORTION OF
ROS = RECORD OF SURVEY
FS = FINISH SURFACE
TC = TOP OF CURB
FL = FLOW LINE
TG = TOP OF GRATE
IE = INVERT ELEVATION
TW = TOP OF WALL
R/W = RIGHT OF WAY
BW = BOTTOM OF WALL
HP = HIGH POINT
LP = LOW POINT
LA = LANDSCAPE AREA
FYSB = FRONT YARD SETBACK
SYSB = SIDE YARD SETBACK
RYSB = REAR YARD SETBACK

EASEMENTS OF RECORD

1. AN EASEMENT FOR POLE LINES, UNDERGROUND CONDUITS, INGRESS AND EGRESS RIGHTS TO SAN DIEGO GAS & ELECTRIC COMPANY RECORDED OCTOBER 25, 1949 IN BOOK 3363, PAGE 154 OF OFFICIAL RECORDS.
2. AN EASEMENT FOR EITHER OR BOTH POLE LINES, UNDERGROUND CONDUITS, WITH THE RIGHT OF INGRESS AND EGRESS AND INCIDENTAL PURPOSES TO TO SAN DIEGO GAS & ELECTRIC COMPANY, RECORDED JULY 06, 1926 AS BOOK 1220, PAGE 410 OF OFFICIAL RECORDS. (2 FEET IN WIDTH)

PROPOSED EASEMENTS

1. PROPOSED EMERGENCY VEHICLE ACCESS EASEMENT
2. PROPOSED PUBLIC SEWER EASEMENT TO THE LEUCADIA WASTE WATER DISTRICT
3. PROPOSED PUBLIC EASEMENT OVER PRIVATE STREETS TO THE CITY OF ENCINITAS
4. PROPOSED OPEN SPACE EASEMENT TO THE CITY OF ENCINITAS

FOUND MONUMENTS

1. FOUND 1" IRON PIPE AND DISK "DIV HWYS" PER R4
2. FOUND CONCRETE MON PER ROS 528
3. FOUND 3/4" IRON PIPE OPEN BROKEN PER R1 DOWN 0.4'
4. FOUND 3/4" IRON PIPE AND DISK "RCE 26175" PER R2

REFERENCES

R4 - MS 775

LEGEND

- SUBDIVISION BOUNDARY
- R/W — RIGHT-OF-WAY
- EXIST. R/W — EXISTING RIGHT-OF-WAY
- PROP. R/W — PROPOSED RIGHT-OF-WAY
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- SETBACK
- OE — EXISTING OVERHEAD LINE
- 150 — EXISTING CONTOUR
- S — EXISTING SEWER MAIN
- W — EXISTING WATER MAIN
- EXISTING UTILITY POLE
- FOUND MONUMENT AS NOTED HEREON
- LIMITS OF RIGHT-OF-WAY VACATION

0 40 80 120

SCALE: 1" = 40'

PREPARED BY:
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San Diego | Encinitas | Orange County
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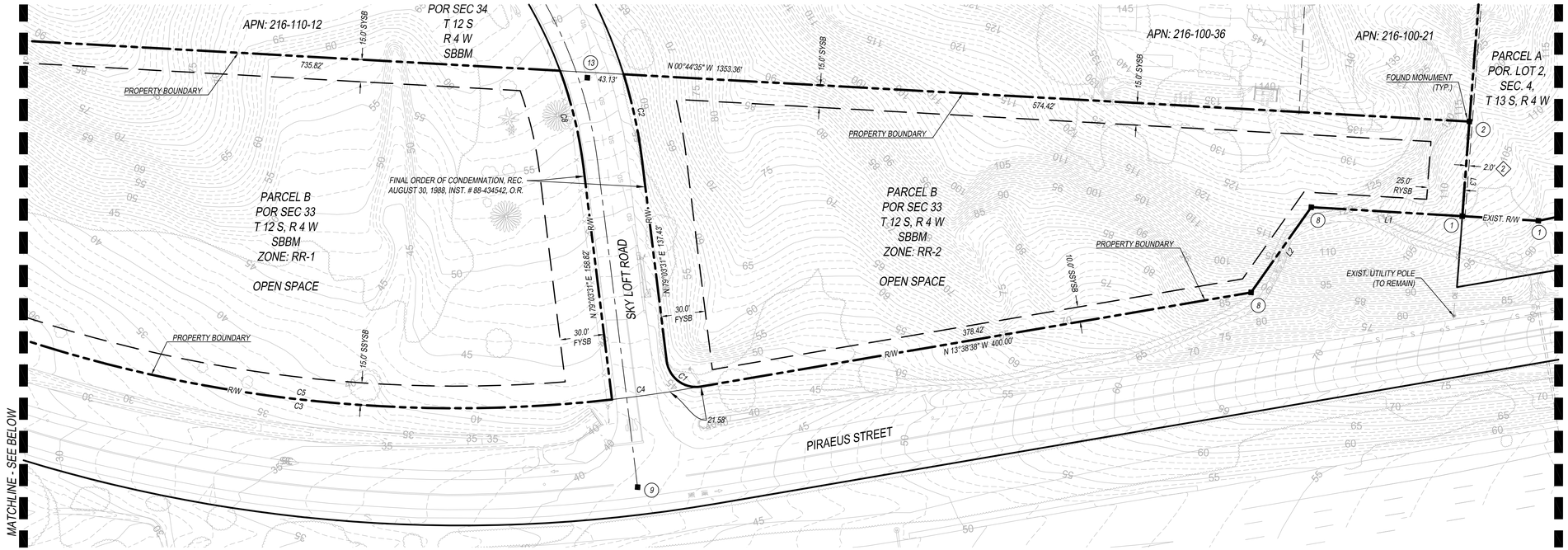

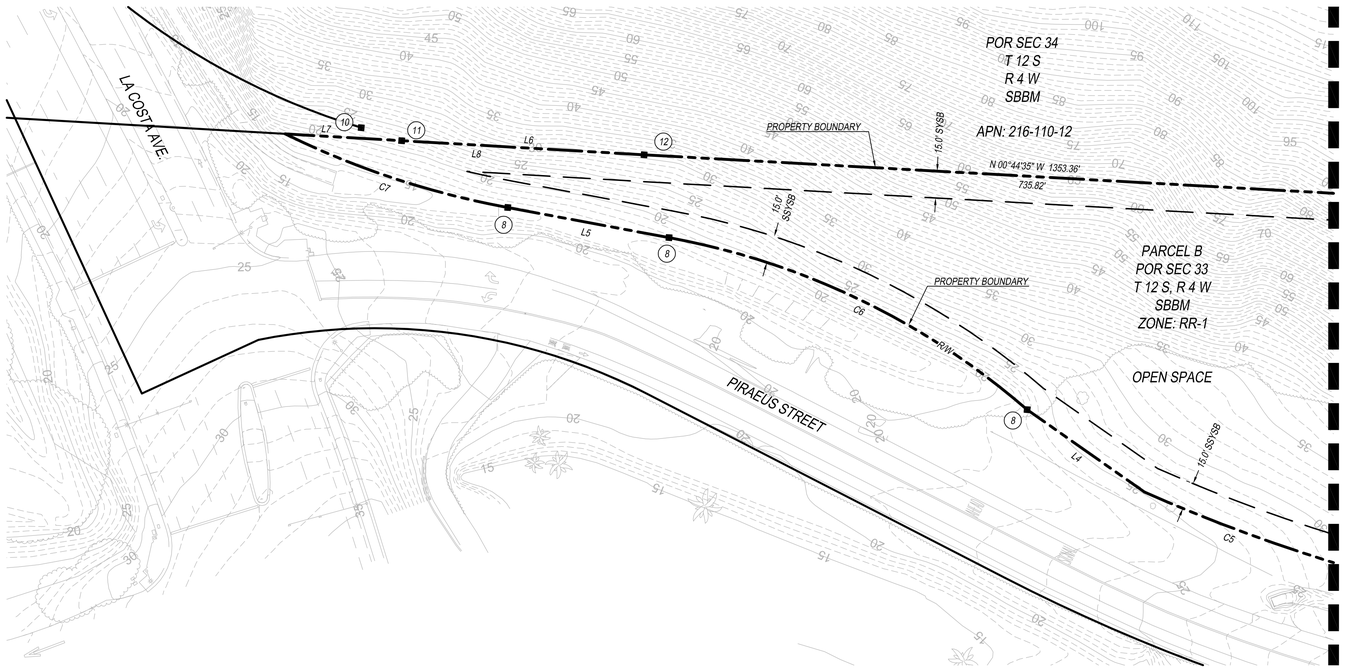

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4. REFER TO LANDSCAPE PLAN FOR ONSITE TREES TO BE REMOVED. ADDITIONALLY, ANY LANDSCAPE WORK WITHIN THE RIGHT-OF-WAY SHALL BE MONITORED BY THE PARKS AND RECREATION DEPARTMENT.
5. FOR INFORMATION ON THE PROPOSED STORM DRAIN, SEE PRELIMINARY GRADING AND DRAINGAGE PLAN ON SHEETS 04-06.

ABBREVIATIONS

FF = FINISH FLOOR	BW = BOTTOM OF WALL
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EASEMENTS OF RECORD

(2) AN EASEMENT FOR EITHER OR BOTH POLE LINES, UNDERGROUND CONDUITS, WITH THE RIGHT OF INGRESS AND EGRESS AND INCIDENTAL PURPOSES TO TO SAN DIEGO GAS & ELECTRIC COMPANY, RECORDED JULY 06, 1926 AS BOOK 1220, PAGE 410 OF OFFICIAL RECORDS. (2 FEET IN WIDTH)

FOUND MONUMENTS

REFERENCES: R4 - MS 775

(1) FOUND 1" IRON PIPE AND DISK "DIV HWYS" PER R4
(2) FOUND CONCRETE MON PER ROS 528
(8) FOUND 1" IRON PIPE W/DISK "DIV HWYS" PER MS 637
(9) FOUND M-10 "LS 5134" NO RECORD
(10) FOUND 2" IRON PIPE W/DISK "RCE 29577"
(11) FOUND 1" IRON PIPE W/DISK "DIV HWYS" PER MS 637, MAP 12012
(12) FOUND 1.5" IRON PIPE W/CAP "NW COR, SW1/4, SW1/4, SEC.34 PER ROS 1652, ROS 10467
(13) FOUND M-10 "LS 5134" AT P.I. PER MAP 12012

LINE TABLE

L1 - N 00°32'05" W 102.59' (N 00°30'57" W 102.41' R2)
L2 - N 58°43'24" W 70.76' (N 58°39'00" W 70.71' R2)
L3 - N 89°38'14" W 64.35' (64.35' MS 775)
L4 - N 31°07'57" E 80.15' (N 31°07'35" E 80.15' R2)
L5 - N 06°38'28" E 91.66' (N 06°28'42" E 91.60' R2)
L6 - N 00°36'36" W 201.02' (N 00°42'07" W 201.01' R2)
L7 - N 00°36'36" W 65.29' (N 00°42'07" W 65.19' R2)
L8 - N 00°36'36" W 135.73' (N 00°42'07" W 135.83' R2)

CURVE TABLE

C1 - L=32.36' R=20.00' D=92°42'09"
C2 - L=59.42' R=330.00' D=10°19'03"
C3 - L=541.20' R=950.00' D=32°38'26" (L=541.20' R=950.00' D=32°38'26" R2)
C4 - L=39.39' R=950.00' D=2°22'32"
C5 - L=501.81' R=950.00' D=30°15'54"
C6 - L=224.76' R=419.98' D=30°39'44" (L=224.92' R=419.98' D=30°41'05" R2)
C7 - L=131.51' R=479.98' D=15°41'55" (L=131.47' R=479.98' D=15°41'36"-R2)
C8 - L=67.34' R=290.00' D=13°18'19"

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0 40 80 120
SCALE: 1" = 40'

PLAN VIEW: TENTATIVE MAP - PARCEL B

SCALE: 1" = 40'

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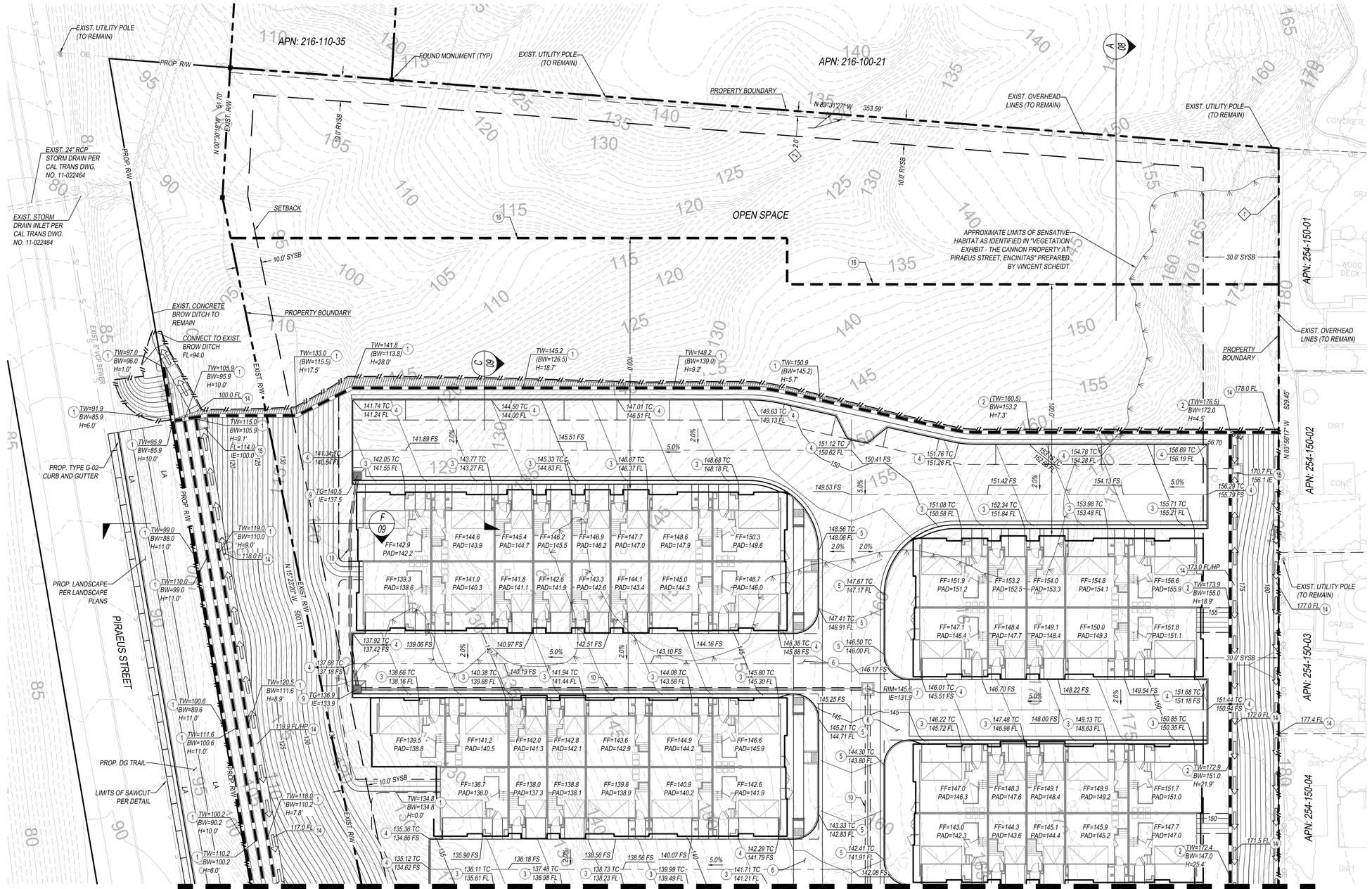

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3. PROPOSED MODIFIED ROLLED CURB (SEE DETAIL)
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PRELIMINARY GRADING AND DRAINAGE PLAN

SCALE: 1" = 20'

MATCHLINE - SEE SHEET 5

0 20 40 60

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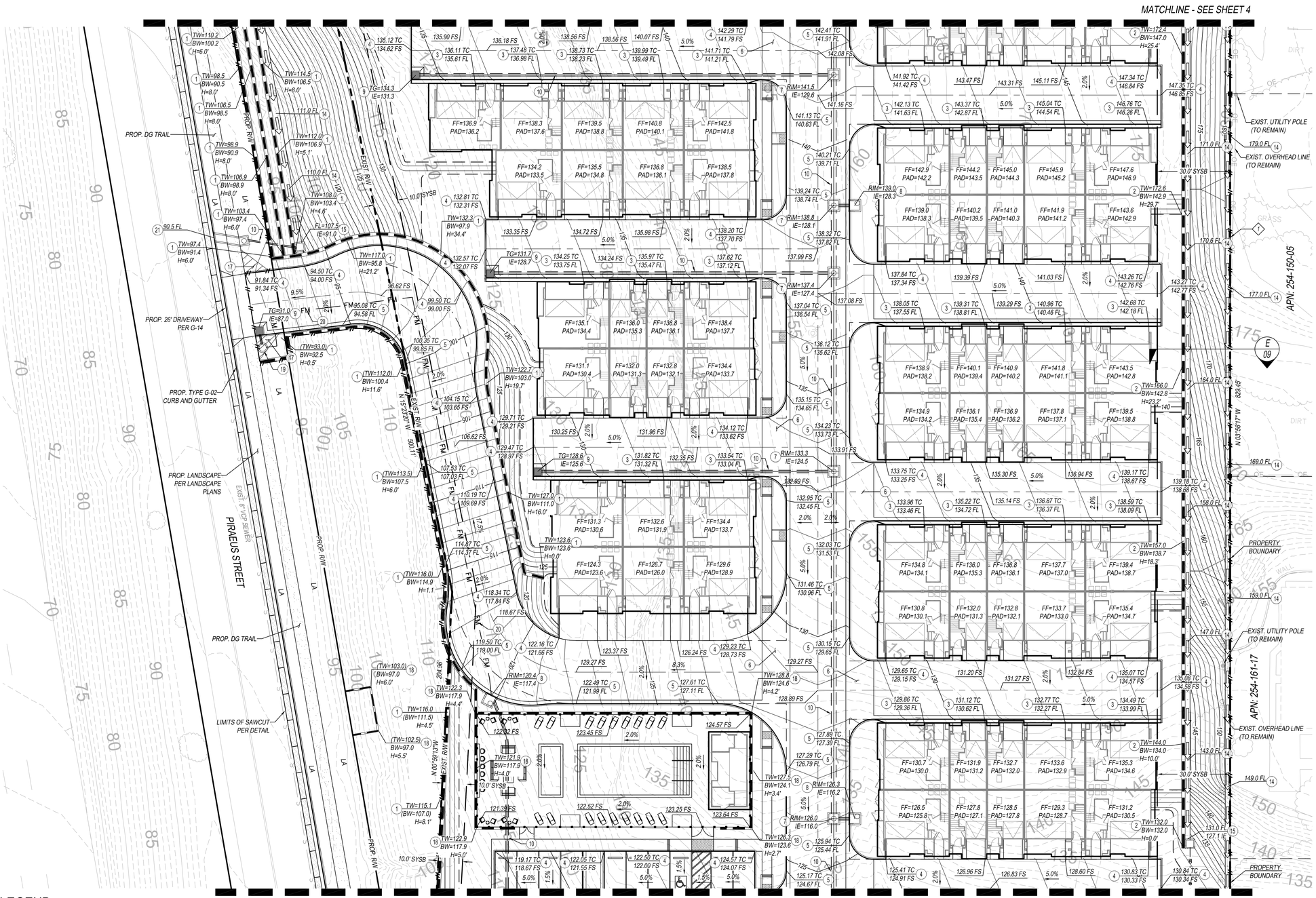

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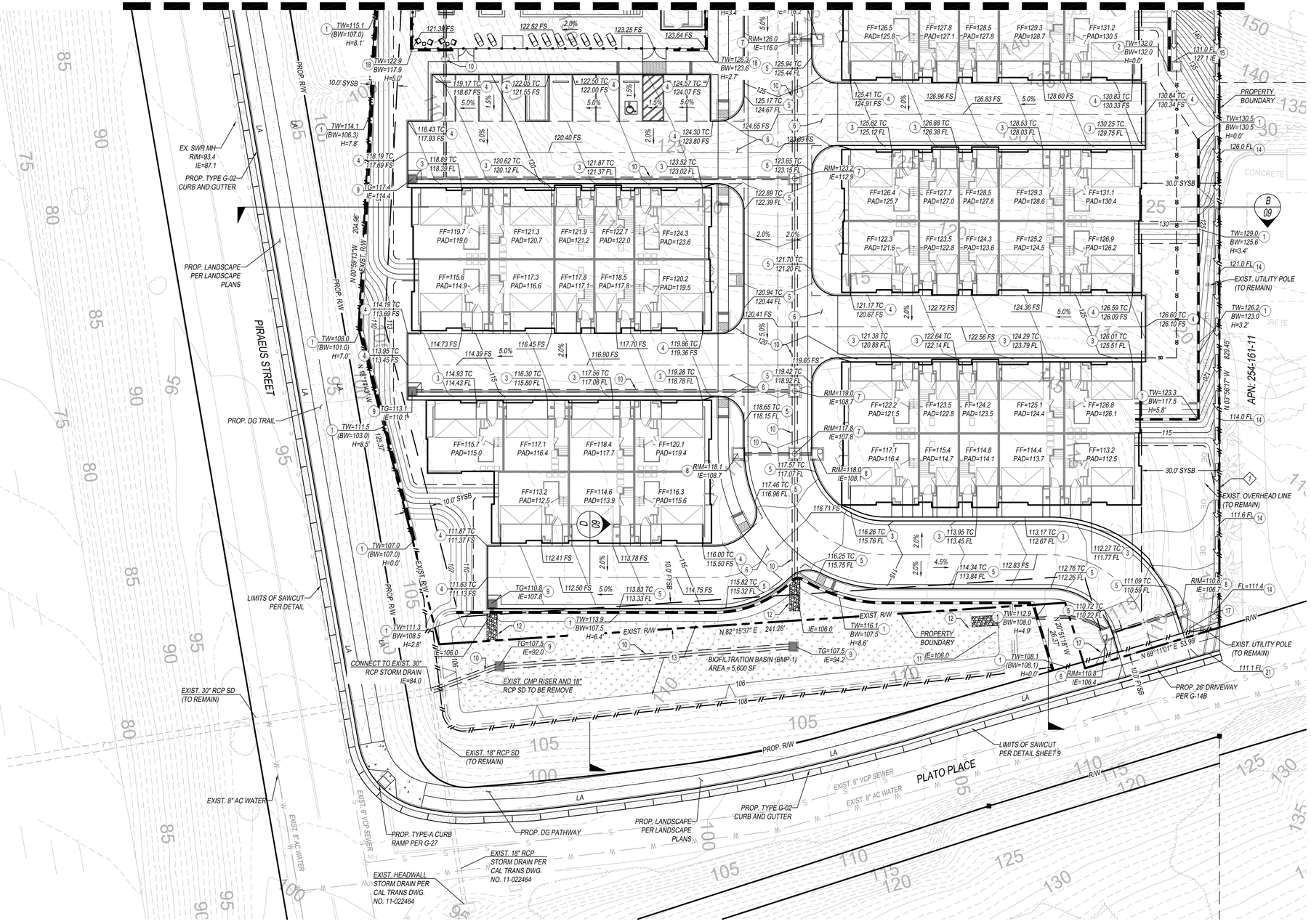

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