

# **Appendix C SWPPP**

**Appendix C SWPPP**

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# STORMWATER POLLUTION PREVENTION PLAN

for

LOS OSOS WASTEWATER COLLECTION SYSTEM  
AREAS A, B, C, D & PUMP STATIONS

## LINEAR UNDERGROUND PROJECT

LUP Type 2

WDID # \_\_\_\_\_

### **Legally Responsible Person (LRP):**

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Deputy Public Works Director  
David Flynn  
805-781-5252

### **Prepared for:** County of San Luis Obispo

County Government Center  
San Luis Obispo, Ca.

### **Project Address:**

Town of Los Osos California

### **SWPPP Prepared by:**

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### **SWPPP Preparation Date**

February 1, 2012

### **Estimated Project Dates:**

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Start of Construction

**July 2012**

Completion of Construction

**July 2014**

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# Qualified SWPPP Developer

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## Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name:

*Los Osos Wastewater Collection System*

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Project Number/ID

*42502-83120*

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“This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Orders No. 2009-009-DWQ as amended by Order 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below.”

---

*QSD Signature*

---

*Date*

---

*QSD Name*

---

*QSD Certificate Number*

---

*Title and Affiliation*

---

*Telephone Number*

---

*Email*



# Legally Responsible Person

---

## Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: Los Osos Wastewater Collection System

Project Number/ID 42502-83120

"I certify under penalty of law that this document and all Attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

David Flynn, Deputy Director Public Works  
County of San Luis Obispo, Engineering Department

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Legally Responsible Person

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Signature of Legally Responsible Person

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Date

---

Name of Legally Responsible Person or Approved  
Signatory

---

Telephone Number



# Amendment Log

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Project Name:

Los Osos Wastewater Collection System

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Project Number/ID

42502-83120

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<b>Amendment No.</b>	<b>Date</b>	<b>Brief Description of Amendment, include section and page number</b>	<b>Prepared and Approved By</b>
			Name: QSD#



# Section 1 SWPPP Requirements

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## 1.1 INTRODUCTION

The Linear Underground Project, Los Osos Wastewater Collection System project comprises approximately 70.6 acres and is located in and around the Town of Los Osos in San Luis Obispo County, California. The property is owned by County of San Luis Obispo and is being developed by County of San Luis Obispo. The projects location is shown on the Site Map in Appendix B.

This Stormwater Pollution Prevention Plan (SWPPP) is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (NPDES No. CAS000002) issued by the State Water Resources Control Board (State Water Board). This SWPPP has been prepared following the SWPPP Template provided on the California Stormwater Quality Association Stormwater *Best Management Practice Handbook Portal: Construction* (CASQA, 2010). In accordance with the General Permit, Section XIV, this SWPPP is designed to address the following:

- Pollutants and their sources, including sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard;

Calculations and design details as well as BMP controls for are complete and correct, Appendix A.

Rain Event Action Plans (REAP(s)) will not be implemented in LUP Type 2 areas in accordance with the 2009 Order and is further discussed in this text.

## 1.2 PERMIT REGISTRATION DOCUMENTS

Required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP. The project-specific PRDs include:

1. Notice of Intent (NOI);
2. Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Map;
4. Annual Fee;

5. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal); and
6. SWPPP.

SWPPP Drawings can be found in Appendix B. A copy of the submitted PRDs shall also be kept in Appendix C along with the Waste Discharge Identification (WDID) confirmation.

Additional PRDs may be required depending on the construction type and location. Modify and include the below test to address items as applicable.

- Dischargers proposing an alternate soil erodibility factor must submit justification. Information based on FUGRO Soils Report.

### **1.3 SWPPP AVAILABILITY AND IMPLEMENTATION**

The discharger shall make the SWPPP available at the construction site during working hours (see Section 7.5 of CSMP for working hours) while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone. (CGP Section XIV.C)

The SWPPP shall be implemented concurrently with the start of ground disturbing activities.

### **1.4 SWPPP AMENDMENTS**

The SWPPP should be revised when:

- If there is a General Permit violation.
- When there is a reduction or increase in total disturbed acreage (General Permit Section II Part C).
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges.

Additionally, the SWPPP shall be amended when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters or groundwater(s);
- When there is a change in the project duration that changes the project's risk level; or
- When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1.1 can be field determined by the QSP. All other changes shall be made by the QSD as formal amendments to the SWPPP.

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and

- The new BMP proposed.

Amendment shall be logged at the front of the SWPPP and certification kept in Appendix D. The SWPPP text shall be revised replaced, and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. The following changes have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions.

**Table 1.1 List of Changes to be Field Determined**

<b>Candidate changes for field location or determination by QSP<sup>(1)</sup></b>	<b>Check changes that can be field located or field determined by QSP</b>
Increase quantity of an Erosion or Sediment Control Measure	X
Relocate/Add stockpiles or stored materials	X
Relocate or add toilets	X
Relocate vehicle storage and/or fueling locations	X
Relocate areas for waste storage	X
Relocate water storage and/or water transfer location	X
Changes to access points (entrance/exits)	X
Change type of Erosion or Sediment Control Measure	X
Changes to location of erosion or sediment control	X
Minor changes to schedule or phases	X
Changes in construction materials	X
<i>(1) Any field changes not identified for field location or field determination by QSP must be approved by QSD</i>	

## **1.5 RETENTION OF RECORDS**

Paper or electronic records of documents required by this SWPPP shall be retained for a minimum of three years from the date generated or date submitted, whichever is later, for the following items:

- Daily Monitoring Records
- Weekly Inspection and Monitoring Records
- All Sampling and Testing Data
- All Amendments
- SWPPP Plans and Plan Changes
- Annual Report Records
- Notice of Termination Records

- All other documents that the QSD or QSP deem worth keeping.
- All records pertaining to dewatering including monitoring records, plans submittals etc.

These records shall be available at the Site until construction is complete. Records assisting in the determination of compliance with the General Permit shall be made available within a reasonable time, to the Regional Water Board, State Water Board or U.S. Environmental Protection Agency (EPA) upon request. Requests by the Regional Water Board for retention of records for a period longer than three years shall be adhered to.

## **1.6 REQUIRED NON-COMPLIANCE REPORTING**

If a discharge violation occurs the QSP shall immediately notify the LRP and the LRP shall file a violation report electronically to the Regional Water Board within 10 days of identification of non-compliance using SMARTS. Corrective measures will be implemented immediately following the discharge or written notice of non-compliance from the Regional Water Board. Discharges and corrective actions will be documented on the NAL/NEL Exceedance Site Evaluation Report Form in CSMP Attachment 3 “Example Forms.”

The report to the LRP and to the Regional Water Board will contain the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order.

The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

Reporting requirements for Numeric Action Levels (NALs) exceedances are discussed in Section 7.7.2.7.

## **1.7 ANNUAL REPORT**

The General Permit requires that permittees prepare, certify, and electronically submit an Annual Report no later than September 1<sup>st</sup> of each year. Reporting requirements are identified in Section XVI of the General Permit. Annual reports will be filed in SMARTS and in accordance with information required by the on-line forms.

## **1.8 CHANGES TO PERMIT COVERAGE**

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, shall be logged at the front of the SWPPP and certification of SWPPP amendments are to be kept in Appendix D. Updated PRDs submitted electronically via SMARTS can be found in Appendix E.

## **1.9 NOTICE OF TERMINATION**

A Notice of Termination (NOT) must be submitted electronically by the LRP via SMARTS to terminate coverage under the General Permit. The NOT must include a final Site Map and representative photographs of the project site that demonstrate final stabilization has been achieved. The NOT shall be submitted within 90 days of completion of construction. The Regional Water Board will consider a construction site complete when the conditions of the General Permit, Section II.D have been met.



## Section 2 Project Information

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### 2.1 PROJECT AND SITE DESCRIPTION

#### 2.1.1 Site Description

The Los Osos Wastewater Collection System Project is a Linear Underground Project comprised of approximately 70.6 acres of disturbed area total for the construction of sewer main line, sewer lateral, ancillary facilities, stockpile, storage and construction office areas which are located throughout the town of Los Osos, California. The project site is located approximately 10 miles west of Hwy 101 on Los Osos Valley Road. The project site is located within the community of Los Osos in the County of San Luis Obispo and bounded on the northwesterly side by Morro Bay. The project is approximately located at Latitude 35-19-00.02 Longitude 120-50-18.98 and is identified on the Site Map in Appendix B.

#### 2.1.2 Existing Conditions

As of the initial date of this SWPPP, the project site is within the streets and Right of Ways of the streets of the town of Los Osos and on properties that are owned by the County of San Luis Obispo. The project site consists of existing paved, based and dirt roads that will be disturbed for the purpose of installing the sewer line, laterals, pump stations and ancillary facilities for the project. Historic sources of contamination include: Fertilizers and chemicals associated with single family residences and small commercial properties. There are no known contaminated sites that will be disturbed by the construction of the facilities.

#### 2.1.3 Existing Drainage

The project site slopes from 2- 5% and flatter to the west and north from around the 11 foot elevation along the Morro Bay Estuary at Baywood to the 130 foot elevation at 18<sup>th</sup> Street between Santa Maria and El Morro Avenues and to 180 foot elevation along Highland Drive all above mean sea level. The town drains overland via sheet flow and minor drainages and some culverts to Morro Bay as shown on the SWPPP Drawings. Stormwater discharges, from the site, are not considered direct discharges, as defined by the State Water Board. Existing site topography, drainage patterns, and stormwater conveyance systems are shown on SWPPP Drawings.

The project discharges to the Morro Bay Estuary and Los Osos Creek that is listed for water quality impairment on the most recent 303(d)-list for: Central Region 3.

#### 2.1.4 Geology and Groundwater

The site is underlain by sandy loam and sandy silt soils that are well draining except where ground water is high. FUGRO West, Inc. prepared a soils report for the project which is a part of the Los Osos Project and is a part of this SWPPP by reference. Groundwater occurs beneath the site at varying depths and is indicated with in the above referenced FUGRO West, Inc. soils

report. In general the groundwater gradient is toward the west and north to the Morro Bay Estuary.

### **2.1.5 Project Description**

The Los Osos Wastewater Collection System Project a Linear Underground Project consists of approximately 313,300 feet of sewer line, lateral excavation and backfill as well as two staging and storage areas, one at the Mid-Town site and the other at Pismo and South Bay Blvd. all totaling approximately 70.6 acres of the area within the town of Los Osos. The total area of work consists of approximately 1,700 acres. Ancillary facilities such as pump stations and stand by power buildings comprise approximately 1.4 acres or approximately 2% (percent) of the total area of disturbance. The limits of grading for ancillary facilities and the construction areas are shown on the Contract Document for each Work Area A-D & B-C and SP. Grading will consist mainly of the excavation for the installation of the sewer main lines, laterals, pump stations, force mains electrical trenches and standby generator buildings. The majority of the excavated material will go back into the excavations as backfill. Excavated materials are expected to be balanced onsite, be stockpiled and/or be hauled away to an approved and permitted site. Soil stockpiles at the staging and storage areas will be as shown on drawings in Appendix B and/or Amended by the Contractor and submitted to SMARTS.

### **2.1.6 Developed Condition**

Post construction surface drainage will remain as it was prior to construction for the most part. The installation of the sewer lines, lift stations and appurtenant piping will be restored to the original grade. The generator buildings are minor and are being located in areas that in general do not require a great deal of grading and should not alter the drainage patterns significantly.

Post construction drainage patterns and conveyance systems are presented on Contract Documents.

## **2.2 PERMITS AND GOVERNING DOCUMENTS**

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP

- Regional Water Board requirements
- Basin Plan requirements
- Contract Documents
- Air Quality Regulations and Permits
- Federal Endangered Species Act
- National Historic Preservation Act/Requirements of the State Historic Preservation Office
- State of California Endangered Species Act
- Clean Water Act Section 401 Water Quality Certifications and 404 Permits
- CA Department of Fish and Game 1600 Streambed Alteration Agreement

- Coastal Development Permit Requirements
- Fish and Game Permit to be issued
- Army Corp of Engineers Permit to be issued

### 2.3 STORMWATER RUN-ON FROM OFFSITE AREAS

Run-on to the LUP is generated by existing roadway, residential / commercial facilities in a sheet flow manner for the most part. Due to the nature of the LUP Project this run on is not anticipated to have any significant impact and will be routed to the best of the projects ability around the disturbed areas in a non-erosive manner.

The General Permit requires that temporary BMPs be implemented to direct offsite run-on away from disturbed areas through the use of runoff controls. The following BMPs will be implemented gravel bag berms, fiber roll implementation and other applicable means. These BMPs will be located upstream from the working areas. The off-site drainage areas and associated stormwater conveyance facilities or BMPs are shown in Appendix B.

### 2.4 FINDINGS OF THE CONSTRUCTION SITE SEDIMENT AND RECEIVING WATER RISK DETERMINATION

A construction site risk assessment has been performed for the project and the resultant risk level is LUP Type 2.

The risk level was determined through the use of Attachment A Linear Underground / Overhead Requirements, Order 2009-0009-DWQ. As per Attachment A, Section A, 2 “LUP evaluation shall consist of two tasks:” a. Confirm that the project of project sections(s) qualifies as an LUP per the Project Determination Guideline Flowchart and b. Identify which Type(s) 1,2 or 3 as per Section I and Attachment A.1.

Based on the review of the Project Determination Guideline Flowchart the project is a Linear Underground Project. As per Section I and Attachment A.1 the project has been determined to be a LUP Type 2 due to the fact that the Receiving Water Risk is Medium because the project is “in close proximity to a sensitive receiving watershed yet outside the flood plain”.

A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in Appendix C.

Table 2.2 and Table 2.3 summarize the sediment and receiving water risk factors and document the sources of information used to derive the factors.

**Table 2.2 Summary of Sediment Risk**

<b>RUSLE Factor</b>	<b>Value</b>	<b>Method for establishing value</b>
R	120	NDPES Rainfall Erosivity Factor Calculator
K	.10	Fugro Soils Report Information
LS	1.23	Project Average Slope
<b>Total Predicted Sediment Loss (tons/acre)</b>		<b>14.76</b>

**Table 2.2 Summary of Sediment Risk**

<b>RUSLE Factor</b>	<b>Value</b>	<b>Method for establishing value</b>
<b>Overall Sediment Risk</b> Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		<b>X Low</b> <b>Medium</b> <b>High</b>

Runoff from the project site discharges into into the road right of ways and non-defined drainage swales that discharge eventually into the water body.

**Table 2.3 Summary of Receiving Water Risk**

<b>Receiving Water Name</b>	<b>303(d) Listed for Sediment Related Pollutant<sup>(1)</sup></b>	<b>TMDL for Sediment Related Pollutant<sup>(1)</sup></b>	<b>Beneficial Uses of COLD, SPAWN, and MIGRATORY<sup>(1)</sup></b>
Morro Bay Estuary	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No
Los Osos Creek	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No
<b>Overall Receiving Water Risk</b>			<input type="checkbox"/> <b>Low</b> <input checked="" type="checkbox"/> <b>High</b>
(1) If yes is selected for any option the Receiving Water Risk is High			

LUP Type 2 sites are subject to both the narrative effluent limitations and numeric effluent standards. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures and best management practices. Discharges from LUP Type 2 site are subject to NALs for pH and turbidity shown in Table 2-4. This SWPPP has been prepared to address LUP Type 2 requirements (General Permit Attachment D).

**Table 2.4 Numeric Action Levels**

<b>Parameter</b>	<b>Unit</b>	<b>Numeric Action Level Daily Average</b>
pH	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	NTU	250 NTU

## 2.5 CONSTRUCTION SCHEDULE

The site sediment risk was determined based on construction taking place between July 2012 and July 2014. Modification or extension of the schedule (start and end dates) may affect risk

determination and permit requirements. The LRP shall contact the QSD if the schedule changes during construction to address potential impact to the SWPPP. The estimated schedule for planned work can be found in Appendix F.

## **2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES**

Appendix G includes a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants were used in Section 3 to select the Best Management Practices for the project. Location of anticipated pollutants and associated BMPs are shown on the Site Map in Appendix B.

For sampling requirements for non-visible pollutants associated with construction activity please refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are retained onsite at the construction trailer.

Non-stormwater discharges consist of discharges which do not originate from precipitation events. The General Permit provides allowances for specified non-stormwater discharges that do not cause erosion or carry other pollutants.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project site include the following:

- de-chlorinated potable water sources such as: fire hydrant flushing
- irrigation of vegetative erosion control measures
- pipe flushing and testing
- water to control dust
- uncontaminated groundwater dewatering as long as it is either delivered to the Mid-Town Detention Basin or to Broderon Leach Field Site.

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in Section 3 of this SWPPP and will be minimized by the QSP.

Activities at this site that may result in unauthorized non-stormwater discharges include:

- Vehicle and equipment cleaning, fueling and maintenance operations;
- Vehicle and equipment wash water, including concrete washout water;
- Slurries from concrete cutting and coring operations, PCC grinding or AC grinding operations;
- Slurries from concrete or mortar mixing operations;
- Slurries from drilling or boring operations;
- Blast residue from high-pressure washing of structures or surfaces;

- Wash water from cleaning painting equipment;
- Runoff from dust control applications of water or dust palliatives;
- Sanitary and septic wastes;
- Chemical leaks and/or spills of any kind including but not limited to petroleum, paints, cure compounds, etc.

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

## **2.8 REQUIRED SITE MAP INFORMATION**

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography and other requirements identified in Attachment B of the General Permit is located in Appendix B.

## Section 3 Best Management Practices

### 3.1 SCHEDULE FOR BMP IMPLEMENTATION

The BMP schedule is the component of the project SWPPP that shows the timeline for when BMPs will be installed so that the project is in compliance with the General Permit. The schedule provides information necessary to plan for adequate materials and crews to install BMPs at the right time so that they are effective. Use Table 3.1 to identify BMP and their schedule for implementation.

The items identified below shall be deployed as noted and as per the information below. In order to be effective, some BMPs must be installed before the site is disturbed (e.g., to provide protection during grading operations or to reduce or minimize pollution from historic areas of contamination during construction).

This project is a Linear Underground Project that also contains Contractor Staging and Storage Areas as well as encompasses pump stations and stand by power buildings. The items marked “Prior to Construction” shall be installed at all locations as noted on the plans prior to any ground disturbing activities including but not limited to the installation of fencing. See SWPPP Drawings for installation locations.

**Table 3.1 BMP Implementation Schedule**

	<b>BMP</b>	<b>Implementation</b>	<b>Duration</b>
<b>Erosion Control</b>	EC-1, Scheduling	Prior to Construction	Entirety of Project
	EC-2, Preservation of Existing Vegetation	Start of Construction	Entirety of Project
	EC-7 Long Term Erosion Control Blankets	As Practicable	As shown on plans.
	EC- 3/6 Hydraulic Mulch / Straw Application	As Practicable	As shown on plans.
<b>Sediment Control</b>	SE-1 Silt Fencing	Prior to Construction	As shown on plans.
	SE-5 Fiber Rolls	Prior to Construction where part of Perimeter Controls	As shown on plans.
	SE-7 Street Cleaning	During Construction	As necessary and or directed by the QSD or QSP
	SE-6 Gravel Bag Barriers	During Construction	As shown on plans.
<b>Tracking Control</b>	TC-1 Stabilized Construction Entrance	Prior to Construction	As shown on plans.
	TC-2 Stabilized Construction Roads	Prior to Construction	As shown on plans or found necessary.

**Table 3.1 BMP Implementation Schedule**

	<b>BMP</b>	<b>Implementation</b>	<b>Duration</b>
<b>Wind Erosion</b>	WE-1 Wind Erosion Prevention	During Construction	As shown on plans and as stockpiles need.

### **3.2 EROSION AND SEDIMENT CONTROL**

Erosion and sediment controls are required by the General Permit to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

#### **3.2.1 Erosion Control**

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
4. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding or alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

The following temporary erosion control BMP selection table indicates the BMPs that shall be implemented to control erosion on the construction site. Fact Sheets for temporary erosion control BMPs are provided in Appendix H.

**Table 3.2 Temporary Erosion Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling	✓	X		
EC-2	Preservation of Existing Vegetation	✓	X		
EC-3	Hydraulic Mulch	✓ <sup>(2)</sup>	X		
EC-4	Hydroseed	✓ <sup>(2)</sup>	X		POSSIBLE USE OF NATIVE HYDROSEED
EC-5	Soil Binders	✓ <sup>(2)</sup>	X		
EC-6	Straw Mulch	✓ <sup>(2)</sup>	X		
EC-7	Geotextiles and Mats	✓ <sup>(2)</sup>	X		
EC-8	Wood Mulching	✓ <sup>(2)</sup>	X		USE OF EUCALIPTUS TREE MULCH
EC-9	Earth Dike and Drainage Swales	✓ <sup>(3)</sup>	X		
EC-10	Velocity Dissipation Devices		X		
EC-11	Slope Drains			X	NOT NECESSARY
EC-12	Stream Bank Stabilization		X		
EC-14	Compost Blankets	✓ <sup>(2)</sup>	X		
EC-15	Soil Preparation-Roughening		X		
EC-16	Non-Vegetated Stabilization	✓ <sup>(2)</sup>	X		
WE-1	Wind Erosion Control	✓	X		
<b>Alternate BMPs Used:</b>					
<sup>(1)</sup> Applicability to a specific project shall be determined by the QSD. <sup>(2)</sup> The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements. <sup>(3)</sup> Run-on from offsite shall be directed away from all disturbed areas, diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting					

These temporary erosion control BMPs shall be implemented in conformance with the following guidelines and as outlined in the BMP Factsheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

### **Scheduling**

The Contractor shall provide an implementation Schedule within 30 days of Notice to Proceed and Amend the SWPPP and upload the Amendment to the SMARTS.

### **Preservation of Existing Vegetation**

Contractor shall preserve all vegetation possible in the course of the work.

### **Hydraulic Mulch**

Hydraulic Mulch and/or Hydroseed shall be utilized on the Project as shown on the plans.

### **Hydroseed**

Hydraulic Mulch and/or Hydroseed shall be utilized on the Project as shown on the plans.

### **Soil Binders**

Bonded Fiber Matrix will be used as shown on the plans as practicable.

### **Geotextiles and Mats**

Coco Mats will be utilized on the Project as shown on the plans.

### **Wood Mulching**

Wood Mulching may be utilized by using the eucalyptus trees trimmings and grindings that will be removed from the Broderson Leach Field site.

### **Earth Dike and Drainage Swales**

Earthen Dikes and Drainage Swales shall be utilized as shown on the plans.

### **Velocity Dissipation Devices**

Gravel Bag Barriers and Chevrons will be utilized to intercept flows in paved and unpaved areas flowing to existing drop inlets and other drainage devices. These devices shall be installed in conformance with plans and as directed by the QSD or QSP.

### **Stream bank Stabilization**

Shall be used as appropriate in conjunction with the Fish and Game and Army Corp. of Engineers Permits for the Los Osos Valley Road Creek Crossing.

### **Compost Blankets**

Coco Mats and other types of blankets may be utilized on the Project as applicable and shown on the plans.

### **Soil Preparation-Roughening**

All fill and cut slopes will be roughened or track walked in a vertical manner prior to final finishing of slopes and prior to placement of other erosion control measure i.e. hydromulch, hydroseed etc.

### **Non-Vegetated Stabilization**

May be implemented as shown on plans as practicable.

### **Wind Erosion Control**

Dust Control and Wind Erosion Measures shall be implemented at all times.

### **3.2.2 Sediment Controls**

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix H.

Sufficient quantities of temporary sediment control materials shall be maintained on-site throughout the duration of the project. Allowing for implementation of temporary sediment controls in the event of predicted rain and for rapid response do to failures or emergencies, in conformance with other General Permit requirements and as described in this SWPPP

**Table 3.3 Temporary Sediment Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence	✓ <sup>(2),(3)</sup>	X		
SE-2	Sediment Basin		X		
SE-3	Sediment Trap		X		
SE-4	Check Dams		X		
SE-5	Fiber Rolls	✓ <sup>(2),(3)</sup>	X		
SE-6	Gravel Bag Berm	✓ <sup>(3)</sup>	X		
SE-7	Street Sweeping	✓	X		
SE-8	Sandbag Barrier		X		
SE-9	Straw Bale Barrier			X	INAPPROPRIATE BMP
SE-10	Storm Drain Inlet Protection	✓ Type 2&3	X		
SE-11	ATS			X	NOT REQUIRED AT THIS TIME
SE-12	Temporary Silt Dike		X		
SE-13	Compost Sock and Berm	✓ <sup>(3)</sup>		X	INAPPROPRIATE BMP
SE-14	Biofilter Bags	✓ <sup>(3)</sup>	X		
TC-1	Stabilized Construction Entrance and Exit	✓	X		
TC-2	Stabilized Construction Roadway		X		
TC-3	Entrance Outlet Tire Wash			X	USE OF ROCK OR RATTLEERS
<b>Alternate BMPs Used:</b>					
<sup>(1)</sup> Applicability to a specific project shall be determined by the QSD <sup>(2)</sup> The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements <sup>(3)</sup> LUP Type 2 & 3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope					

These temporary sediment control BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

### **Silt Fence**

Silt Fences shall be installed at the lower perimeter of project areas and around large stockpiles as Primary Protection.

### **Sediment Basin**

The Material Storage area that is adjacent to the Mid-Town Detention Basin might utilize this basin as desiltation or detention. Sediment Basins should not be necessary due to the Linear Nature of the Project however the materials stockpile areas may require basins depending on the Contractors final use.

### **Sediment Trap**

Gravel Bag Berms and Chevrons will be utilized as Sediment Traps in and around the Project.

### **Check Dams**

Gravel Bag Berms and Chevrons will be utilized as Check Dams in and around the Project.

### **Fiber Rolls**

Fiber Rolls will be used as Sediment Traps along unpaved areas and around stockpiles. They will also be used on all cut and fill slopes as required by regulations and shown on plans.

### **Gravel Bag Berm**

Gravel Bag Berms and Chevrons will be utilized as Sediment Traps in and around the Project.

### **Street Sweeping**

Street Sweeping will be performed daily at all staging and storage areas and as needed throughout the project to control tracking of materials from work areas and to recapture materials that have already been deposited.

### **Sandbag Barrier**

Sandbag Barriers will only be used to direct flows and not as a Desiltation BMP.

### **Storm Drain Inlet Protection**

DI Protection shall be installed at all existing Storm Drain Inlets in a timely manner. These protections will consist of a variety of measures included in Appendix H.

### **ATS**

Not required at this time. In the event that the Contractors QSP deems an ATS necessary or if the QSD deems it necessary for a particular circumstance of the Project an ATS System will be designed and implemented in accordance with the Order.

### **Temporary Silt Dike**

Not Used.

**Compost Sock and Berm**

Not Used.

**Biofilter Bags**

Not specified at this time. May be used in DI's as deemed necessary by the QSD or QSP.

**Stabilized Construction Entrance and Exit**

Contractor shall utilize either rock entrances or rattlers in accordance with TC-1.

**Stabilized Construction Roadway**

May be necessary at staging areas for adequate access.

**Entrance Outlet Tire Wash**

Not Used.

**3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT**

**3.3.1 Non-Stormwater Controls**

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit, are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in Appendix H.

**Table 3.4 Temporary Non-Stormwater BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices	✓	X		
NS-2	Dewatering Operation		X		
NS-3	Paving and Grinding Operation		X		
NS-4	Temporary Stream Crossing			X	NO CROSSINGS
NS-5	Clear Water Diversion			X	NO DIVERSIONS
NS-6	Illicit Connection- Illegal Discharge Connection	✓	X		
NS-7	Potable Water Irrigation Discharge Detection				
NS-8	Vehicle and Equipment Cleaning	✓	X		
NS-9	Vehicle and Equipment Fueling	✓	X		
NS-10	Vehicle and Equipment Maintenance	✓	X		
NS-11	Pile Driving Operation				
NS-12	Concrete Curing		X	X	NO PILE DRIVING
NS-13	Concrete Finishing		X		
NS-14	Material and Equipment Use Over Water			X	NOT APPLICABLE
NS-15	Demolition Removal Adjacent to Water			X	NOT APPLICABLE
NS-16	Temporary Batch Plants		X		
<b>Alternate BMPs Used:</b>			<b>If used, state reason:</b>		
<sup>(1)</sup> Applicability to a specific project shall be determined by the QSD					

Non-stormwater BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

### **Water Conservation Practices**

Water Conservation will be practiced on the site.

#### **Dewatering Operation**

Dewatering will be performed in conformance with the contractors approved Dewatering Plans, Construction General Permit and with the applicable BMP's and requirements of the letter provided by the Central Coast RWQCB "Use and Disposal Plan for Construction Dewatering, Los Osos Project" dated May 27, 2011

#### **Paving and Grinding Operation**

Paving and Grinding Operations shall be performed in conformance with CGP regulations and BMP's.

#### **Temporary Stream Crossing**

No Temporary Stream Crossing and anticipated with this project.

#### **Clear Water Diversion**

No Clear Water Diversions are anticipated with this project.

#### **Illicit Connection- Illegal Discharge Connection**

The Contractor shall report in conformance with the CGP any and all Illicit or Illegal Discharges.

#### **Potable Water Irrigation Discharge Detection**

Potable Water will be utilized for irrigation of landscape elements at the pump stations, generator facilities and Broderson Leach Field. These areas should be monitored for over use and leaks. Release of irrigation discharge shall be in conformance with the CGP

#### **Vehicle and Equipment Cleaning**

Appropriate BMP's shall be in place in the Contractors construction yard for cleaning of vehicles and/or equipment.

#### **Vehicle and Equipment Fueling**

Appropriate BMP's shall be in place in the Contractors construction yard as well as the remote fueling trucks will need to be equipped with diapers, drip pans, etc. to perform field fueling.

#### **Vehicle and Equipment Maintenance**

Vehicle and Equipment Maintenance will be limited to minor maintenance items i.e. oil changes, filter changes and items considered minor in nature. Any major maintenance will be performed off site.

#### **Concrete Curing**

Concrete Curing BMP's shall be implemented at all sites that concrete placement and finishing takes place. In areas that drainage has a direct course to a culvert, drop inlet or alike leading to

Morro Bay or other water body special care will be taken in the implementation of BMP's and monitoring of activities.

### **Concrete Finishing**

Concrete Finishing BMP's shall be implemented at all sites that concrete placement and finishing takes place. In areas that drainage has a direct course to a culvert, drop inlet or alike leading to Morro Bay or other water body special care will be taken in the implementation of BMP's and monitoring of activities.

### **Temporary Batch Plants**

Temporary Batch Plants may be utilized by the Contractor in the event he elects to utilize slurry backfill for trenches. The Contractor will abide by the BMP's for Batch Plants and shall take special care that the plant is not located on a site that would allow runoff from the plant to be conveyed to any water of the US.

## **3.3.2 Materials Management and Waste Management**

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The

Materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges.

Materials and waste management pollution control BMPs shall be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.6. The following Materials and Waste Management BMP selection table indicates the BMPs that shall be implemented to handle materials and control construction site wastes associated with these construction activities. Fact Sheets for Materials and Waste Management BMPs are provided in Appendix H.

**Table 3.5 Temporary Materials Management BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
WM-01	Material Delivery and Storage	✓	X		
WM-02	Material Use	✓	X		
WM-03	Stockpile Management	✓	X		
WM-04	Spill Prevention and Control	✓	X		
WM-05	Solid Waste Management	✓	X		
WM-06	Hazardous Waste Management	✓		X	NO HAZARDOUS WASTE IS ANTICIPATED
WM-07	Contaminated Soil Management			X	NO CONTAMINATED SOIL IS ANTICIPATED
WM-08	Concrete Waste Management	✓	X		
WM-09	Sanitary-Septic Waste Management	✓	X		
WM-10	Liquid Waste Management		X		
<b>Alternate BMPs Used:</b>					
			<b>If used, state reason:</b>		
<sup>(1)</sup> Applicability to a specific project shall be determined by the QSD.					

Material management BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

### **Material Delivery and Storage**

Materials delivered and stored on site shall be kept in their original containers to the greatest extent possible. If the materials are removed from their original container the container shall be properly marked. All MSDS information shall be kept on site in conformance with the Contractors Health and Safety Plan. Materials shall be stored out of precipitation by either being covered or stored in a container. Materials covered shall not be in contact with the ground if possible.

### **Material Use**

Material shall be used for their intended purpose.

### **Stockpile Management**

Stockpiles of soil, AC Grindings, base and other materials shall be kept moist to prevent wind erosion and covered prior to rain events. Stockpiles shall be covered with plastic or geotextile prior to rain events to prevent erosion. Sediment control devices such as fiber rolls, gravel berms etc. shall be placed downstream of stockpiles to prevent the transport of sediment.

### **Spill Prevention and Control**

Spill Prevention and Control BMP's are a part of this SWPPP and shall be implemented.

### **Solid Waste Management**

Solid Waste Management BMP's are a part of this SWPPP. BMP's shall be implemented on this project. Solid Waste shall be deposited in trash bins or containers and shall be covered at the end of each business day and prior to rain events. The bins shall be water tight and covers shall be water proof to prevent rain intrusion into containers.

### **Hazardous Waste Management**

Hazardous Materials are not anticipated on the project site. In the event hazardous materials are encountered the SWPPP will need to be updated by the QSD or QSP accordingly.

### **Contaminated Soil Management**

Contaminated Soils are not anticipated on the project site. In the event they are encountered the SWPPP will need to be updated by the QSD or QSP accordingly.

### **Concrete Waste Management**

Concrete Waste Management BMP's are a part of this SWPPP and shall be implemented at each site that concrete is provided. These BMP's include providing wash out facilities on site adequate to contain waste materials and maintain appropriate freeboard for wash out water. As an alternate concrete trucks may be made to provide their own on truck washout system.

### **Sanitary-Septic Waste Management**

Sanitary-Septic Waste Management BMP's are a part of this SWPPP and shall be implemented. This shall include at a minimum portable toilet containment units at each location that portable toilets are provided. In addition portable toilets shall not be located within 100 feet of any drainage facility or drop inlet with in the project boundary.

**Liquid Waste Management**

Liquid Waste Management BMP's are a part of this SWPPP and shall be implemented.

**3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES**

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

This site is located in an area subject to a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) permit approved Stormwater Management Plan.    X    Yes        No

Los Osos CSD MS4 Phase II:

The LUP Type 2 is exempt from Post Construction BMP's because it does not increase overall run-off due to the nature of the underground improvements within existing Rights of Way and paved areas.

## Section 4 BMP Inspection, and Maintenance

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### **4.1 BMP INSPECTION AND MAINTENANCE**

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist includes the necessary information covered in Section 7.6. A blank inspection checklist can be found in Appendix I. Completed checklists shall be kept in CSMP Attachment 2 “Monitoring Records.

BMPs shall be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions shall be implemented within 72 hours of identified deficiencies and associated amendments to the SWPPP shall be prepared by the QSD.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix H.



## Section 5 Training

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Appendix L identifies the QSPs for the project. The Contractor shall assign a QSP to there working area and identify the QSP accordingly in Appendix L. This information shall be uploaded to the SMART System as an Addendum to the LUP SWPPP.

To promote stormwater management awareness specific for this project, periodic training of job-site personnel shall be included as part of routine project meetings (e.g. daily/weekly tailgate safety meetings), or task specific trainings as needed.

The QSP shall be responsible for providing this information at the meetings, and subsequently completing the training logs shown in Appendix K, which identifies the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting. Tasks may be delegated to trained employees by the QSP provided adequate supervision and oversight is provided. Training shall correspond to the specific task delegated including: SWPPP implementation; BMP inspection and maintenance; and record keeping.

Documentation of training activities (formal and informal) is retained in SWPPP Appendix K.



## Section 6 Responsible Parties and Operators

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### 6.1 RESPONSIBLE PARTIES

Approved Signatory(ies) who are responsible for SWPPP implementation and have authority to sign permit-related documents [is/are] listed below. Written authorizations from the LRP for these individuals are provided in Appendix L. The Approved Signatory(ies) assigned to this project [is/are]:

Name	Title	Phone Number
David Flynn	Deputy Director Public Work	805-782-5252

QSPs identified for the project are identified in Appendix L. The QSP shall have primary responsibility and significant authority for the implementation, maintenance and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project. Duties of the QSP include but are not limited to:

- Implementing all elements of the General Permit and SWPPP, including but not limited to:
  - Ensuring all BMPs are implemented, inspected, and properly maintained;
  - Performing non-stormwater and stormwater visual observations and inspections;
  - Performing non-stormwater and storm sampling and analysis, as required;
  - Performing routine inspections and observations;
  - Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general Site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.;
- The QSP may delegate these inspections and activities to an appropriately trained employee, but shall ensure adequacy and adequate deployment.
- Ensuring elimination of unauthorized discharges.
- The QSPs shall be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures.
- Coordinate with the Contractor(s) to assure all of the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, the General Permit and approved plans at all times.

- Notifying the LRP or Authorized Signatory immediately of off-site discharges or other non-compliance events.

## **6.2 CONTRACTOR LIST**

**The Contractor shall provide all of the below information in accordance with Contract Documents to be Amended to the SWPPP and uploaded to SMARTS.**

### **Area A-D**

#### **Contractor**

Name:

Title:

Company:

Address:

Phone Number:

Number (24/7):

### **Area B-C**

#### **Contractor**

Name:

Title:

Company:

Address:

Phone Number:

Number (24/7):

### **Pump Stations**

#### **Contractor**

Name:

Title:

Company:

Address:

Phone

Number:

Number  
(24/7):

## Section 7 Construction Site Monitoring Program

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### 7.1 Purpose

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the site is in compliance with the Discharge Prohibitions of the LUP Type 2 requirement of the Construction General Permit;
2. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
3. To determine whether immediate corrective actions, additional Best Management Practices (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
4. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

### 7.2 Applicability of Permit Requirements

This project has been determined to be a LUP Type 2 project. The General Permit identifies the following types of monitoring as being applicable for a LUP Type 2 project.

#### LUP Type 2

- All inspections shall be conducted by trained personnel
- Visual inspections of Best Management Practices (BMPs) on a daily basis during working hours;
- Photographs of the site taken before, during and after storm events are taken during inspections, and submitted through the SMART System once every three rain events;
- Visual inspection to verify that appropriate BMP's for storm water and non-storm water are being implemented and in place in areas where active construction is occurring (including staging areas);
- Visual monitoring of the site related to qualifying storm events;
- Conduct inspection of the construction site prior to anticipate storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. Pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that BMPs have functioned adequately. During extended storm events, inspection shall be required during normal working hours for each 24-hour period.
- Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met);
- Dischargers shall implement a monitoring program for inspecting projects that require temporary and permanent stabilization BMPs after active construction is complete. Inspections shall ensure that the BMPs are adequate and maintained. Inspection activities shall continue until adequate permanent stabilization is established and, in vegetated

areas, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

- Dischargers shall install a rain gauge on-site at an accessible and secure location with readings made during all storm event inspections. When readings are unavailable, data from the closest rain gauge with publically available data may be used;
- Dischargers shall include and maintain a log of the inspections conducted in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection;
- Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction including Turbidity, pH, and non-visible pollutant parameters;
- Dischargers shall collect storm water grab samples from sampling locations characterizing discharges associated with activity from the LUP active areas of construction. At a minimum, 3 samples shall be collected per day of discharge;
- Dischargers shall collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge;
- Dischargers shall ensure that storm water grab sample(s) obtained be representative of the flow and characteristics of the discharge;
- Dischargers shall analyze their effluent samples for: (1) pH and turbidity (2) Any additional parameter for which monitoring is required by the Regional Water Board;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for pH and turbidity;
- Dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire disturbed project or area;
- Dischargers may monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to exceedance of NALs;
- Dischargers shall select analytical test methods in accordance with the Order and as per the information provided in this document;
- Dischargers shall ensure that all storm water sample collection preservation and handling shall be conducted in accordance with the “Storm Water Sample Collection and Handling Instructions” below;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- Dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters;
- Sampling and analysis for non-visible pollutants is only required where dischargers believe pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection;

- Visual observations made during the monitoring program described above will help dischargers determine when to collect sample;
- Dischargers are not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.
- Dischargers shall collect samples down-gradient from the discharge locations where the visual observations were made triggering the monitoring and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.
- If sampling for non-visible pollutant parameters is required, dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required above;
- Dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff;
- Dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample<sup>14</sup>) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff;
- Dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS);
- For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. Dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed. Portable meters shall be calibrated according to manufacturer's specification;
- Dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document;
- Sampling and analysis of non-stormwater discharges when applicable;
- Dischargers shall refer to Table 5 below for test Methods, detection Limits, and reporting Units. During storm water sample collection and handling, the discharger shall;
- Identify the parameters required for testing and the number of storm water discharge points that will be sampled. Request the laboratory to provide the appropriate number of sample containers, types of containers, sample container labels, blank chain of custody forms, and sample preservation instructions;
- Determine how to ship the samples to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The options are to either deliver the samples to the laboratory, arrange to have the laboratory pick them up, or ship them overnight to the laboratory;
- Use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers could contaminate your samples;
- Prevent sample contamination, by not touching, or putting anything into the sample containers before collecting storm water samples;

- Not overfilling sample containers. Overfilling can change the analytical results;
- Tightly screw the cap of each sample container without stripping the threads of the cap;
- Complete and attach a label to each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved;
- Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into the shipping container. Samples should be kept as close to 4° C (39° F) as possible until arriving at the laboratory. Do not freeze samples;
- Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container;
- Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers;
- Designate and train personnel to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices;
- Refer to the Surface Water Ambient Monitoring Program's (SWAMP) Quality Assurance Management Plan (QAMP) for more information on sampling collection and analysis. See [http://www.waterboards.ca.gov/water\\_issues/programs/swamp/15QAMP](http://www.waterboards.ca.gov/water_issues/programs/swamp/15QAMP) Link: [http://www.waterboards.ca.gov/water\\_issues/programs/swamp/qamp.shtm](http://www.waterboards.ca.gov/water_issues/programs/swamp/qamp.shtm)

### **7.3. Weather and Rain Event Tracking**

Visual monitoring, inspections, and sampling requirements of the General Permit are triggered by a qualifying rain event. The General Permit defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

#### **7.3.1 Weather Tracking**

The QSP should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. These forecasts can be obtained at <http://www.srh.noaa.gov/>. Weather reports should be printed and maintained with the SWPPP in CSMP Attachment 1 "Weather Reports".

#### **7.3.2 Rain Gauges**

The QSP shall install at each Area Staging Area and in the general vicinity of the ongoing work rain gauge(s) on the project site. Locate the gauge in an open area away from obstructions such as trees or overhangs. Mount the gauge on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post. Make sure that the top of the gauge is level. Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.

The rain gauge(s) shall be read daily during normal site scheduled hours. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Log rain gauge readings in CSMP Attachment 1 “Weather Records”. Follow the rain gauge instructions to obtain accurate measurements.

Once the rain gauge reading has been recorded, accumulated rain shall be emptied and the gauge reset.

For comparison with the site rain gauge, the nearest appropriate governmental rain gauge(s) is located at the Los Osos Landfill. The web address is:

<http://www.slocountywater.org/weather/alert/precipitation/lolandfill.htm>.

#### **7.4 Monitoring Locations**

Monitoring locations for the LUP Type 2 project will be at the areas of work where flows are adequate to monitor and collect for Turbidity and pH sampling. A map of the entire site is shown on the SWPPP Drawings in Appendix B. Monitoring locations are described in the Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations shall be revised accordingly. Due to the ongoing movement of the work the sampling points will move along with the work progress. All such revisions shall be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

#### **7.5 Safety and Monitoring Exemptions**

Safety practices for sample collection will be in accordance with the Contractors Health and Safety Plan CHSP. A summary of the safety requirements that apply to sampling personnel is provided below.

- None at this time
- 
- 
- 

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms.
- Outside of scheduled site business hours.

Scheduled site business hours are: In compliance with the Working Hours as described in the Construction Documents.

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in CSMP Attachment 2 “Monitoring Records”.

## 7.6 Visual Monitoring

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

Table 7.1 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.3.

**Table 7.1 Summary of Visual Monitoring and Inspections**

Type of Inspection	Frequency
<i>Routine Inspections</i>	
BMP Inspections	Daily
BMP Inspections – Tracking Control	Daily
Photographs	Before, During & After Rain Events (to be provided to RWQCB via SMARTS every 3 <sup>rd</sup> Rain Event)
Non-Stormwater Discharge Observations	Daily
<i>Rain Event Triggered Inspections</i>	
Site Inspections Prior to a Qualifying Event	Within 48 hours of a qualifying event <sup>2</sup>
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rainevent <sup>2</sup>
Site Inspections Following a Qualifying Event	Within 48 hours of a qualifying event <sup>2</sup>
<sup>2</sup> Inspections are only required during scheduled site operating hours. Note however, these inspections are required daily regardless of the amount of precipitation.	

### 7.6.1 Routine Observations and Inspections

Routine site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the Construction General Permit.

#### 7.6.1.1 Routine BMP Inspections

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

#### 7.6.1.2 Non-Stormwater Discharge Observations

Each drainage area will be inspected for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.); and
- Source of discharge.

### **7.6.2 Rain-Event Triggered Observations and Inspections**

Visual observations of the site and inspections of BMPs are required prior to a qualifying rain event; following a qualifying rain event, and every 24-hour period during a qualifying rain event. Pre-rain inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50% or greater probability of precipitation has been predicted.

#### **7.6.2.1 Visual Observations Prior to a Forecasted Qualifying Rain Event**

Daily inspections of BMPs are required in conformance with LUP Type 2. In addition within 48-hours prior to a qualifying event a stormwater visual monitoring site inspection will include observations of the following locations:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly implemented;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

Consistent with guidance from the State Water Resources Control Board, pre-rain BMP inspections and visual monitoring will be triggered by a NOAA forecast that indicates a probability of precipitation of 50% or more in the project area.

or

BMP inspections and visual monitoring will be triggered by a NOAA quantitative predicted forecast (QPF) that indicates ½-inch or more of rain will occur in the project area.]

#### **7.6.2.2 BMP Inspections During an Extended Storm Event**

During an extended rain event BMP inspections will be conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

If the construction site is not accessible during the rain event, the visual inspections shall be performed at all relevant outfalls, discharge points, downstream locations. The inspections should record any projected maintenance activities.

#### **7.6.2.2 Visual Observations Following a Qualifying Rain Event**

Daily inspections of BMPs are required in conformance with LUP Type 2. In addition within 48 hours following a qualifying rain event (0.5 inches of rain) a stormwater visual monitoring site inspection is required to observe:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly designed, implemented, and effective;

- Need for additional BMPs;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard; and
- Discharge of stored or contained rain water.

### **7.6.3 Visual Monitoring Procedures**

Visual monitoring shall be conducted by the QSP or staff trained by and under the supervision of the QSP.

The name(s) and contact number(s) of the site visual monitoring personnel are listed below and their training qualifications are provided in Appendix K.

Assigned inspector: \_\_\_\_\_ Contact phone: TELEPHONE NUMBER

Alternate inspector: \_\_\_\_\_ Contact phone: TELEPHONE NUMBER

Stormwater observations shall be documented on the *Visual Inspection Field Log Sheet* (see CSMP Attachment 3 “Example Forms”). BMP inspections shall be documented on the site specific BMP inspection checklist. Any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Attachment 2.

The QSP shall within 5 days of the inspection submit copies of the completed inspection report to the QSD and/or LRP.

The completed reports will be kept in CSMP Attachment 2 “Monitoring Records”.

### **7.6.4 Visual Monitoring Follow-Up and Reporting**

Correction of deficiencies identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated and completed as soon as possible.

If identified deficiencies require design changes, including additional BMPs, the implementation of changes will be initiated within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the *Inspection Field Log Sheet* or *BMP Inspection Report* and shall be submitted to the QSP and shall be kept in CSMP Attachment 2 “Monitoring Records”.

The QSP shall within 5 days of the inspection submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions to QSD and LRP.

Results of visual monitoring must be summarized and reported in the Annual Report.

### **7.6.5 Visual Monitoring Locations**

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section.

BMP locations are shown on the SWPPP Drawings in SWPPP Appendix A.

The LUP Type 2 project will consist of ongoing pipeline construction headings along the streets of Los Osos therefore; the specific locations for inspection and observation are not identified. Static drainage area(s) such as the pump stations, stand by power buildings and alike on the project site and the contractor's yard, staging areas, and storage areas are shown on the SWPPP Drawings and Drawing in Appendix B. and Table 7.2 identifies each drainage area by location.

**Table 7.2 Site Drainage Areas**

<b>Location No.</b>	<b>Location</b>
1	Mid-Town Staging and Storage Area
2	Pismo & South Bay Blvd. Staging and Storage Area

There is no stormwater storage or containment area(s) are on the project site. Stormwater storage or containment area(s) are shown on the SWPPP Drawings in Appendix B and Table 7.3 identifies each stormwater storage or containment area by location.

**Table 7.3 Stormwater Storage and Containment Areas**

<b>Location No.</b>	<b>Location</b>

There are numerous discharge location(s) along the LUP project site. Site stormwater discharge location(s) are shown on the SWPPP Drawings in Appendix B and Table 7.4 identifies each stormwater discharge location.

**Table 7.4 Site Stormwater Discharge Locations**

<b>Location No.</b>	<b>Location</b>
D1	Mid-Town Detention Basin
D2	Drainage Swale to the North of the Pismo & S. Bay Blvd Staging & Storage Area

## **7.7 Water Quality Sampling and Analysis**

### **7.7.1 Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges**

This Sampling and Analysis Plan for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

The following construction materials, wastes, or activities, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the SWPPP Drawings in Appendix B.

- Solvents
- Battery Acid
- Fertilizers

The following existing site features, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the SWPPP Drawings in Appendix B.

- NONE

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the SWPPP Drawings in Appendix B.

- NONE
- 

The project has the potential to receive stormwater run-on from the following locations with the potential to contribute non-visible pollutants to stormwater discharges from the project. Locations of such run-on to the project site are shown on the SWPPP Drawings in Appendix B.

- Staging and Storage Area at Mid-Town Site
- Staging and Storage Area at Pismo and South Bay Blvd.
- Along the LUP Type 2 Pipeline Alignment

#### 7.7.1.1 *Sampling Schedule*

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during the site's scheduled hours and shall be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.6, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

#### 7.7.1.2 Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the SWPPP Drawings in Appendix B and include the locations identified in Table 7.5 through 7.10.

No specific locations along the Pipeline Alignments have been identified for sampling location(s) sampling sites will be identified as the project progresses. Two sites where the Contractor Staging and Storage Yards are located have been identified on the project site for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant producing construction activities are planned.

**Table 7.6 Non-Visible Pollutant Sample Locations – Contractors’ Yard**

<b>Sample Location Number</b>	<b>Sample Location Description</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>
1	Mid-Town Staging and Storage Area	35-18-46.48” N 120-50-18.51”W
2	Pismo & South Bay Blvd.	35-19-24.88”N 120-49-19.70” W

There are no sampling locations currently identified for the collection of samples of runoff from drainage areas where soil amendments will be applied that have the potential to affect water quality.

**Table 7.7 Non-Visible Pollutant Sample Locations – Soil Amendment Areas**

<b>Sample Location Number</b>	<b>Sample Location</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>

2 sampling locations have been identified for the collection of samples of runoff from drainage areas contaminated by historical usage of the site.

**Table 7.8 Non-Visible Pollutant Sample Locations – Areas of Historical Contamination**

<b>Sample Location Number</b>	<b>Sample Location</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>
S-1	Upstream of the Mid-Town Staging and Storage Area	35-18-46.48" N 120-50-18.51"W
S-2	Up Stream of the Pismo & South Bay Blvd Staging and Storage Area	35-19-24.88"N 120-49-19.70" W

2 sampling location(s) has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location(s) was selected such that the sample will not have come in contact with the operations, activities, or areas identified in Section 7.7.1 or with disturbed soils areas.

**Table 7.9 Non-Visible Pollutant Sample Locations – Background (Unaffected Sample)**

<b>Sample Location Number</b>	<b>Sample Location</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>
S-1	Upstream of the Mid-Town Staging and Storage Area	35-18-46.48" N 120-50-18.51"W
S-2	Up Stream of the Pismo & South Bay Blvd Staging and Storage Area	35-19-24.88"N 120-49-19.70" W

No specific areas have been identified for Run-On sampling locations due to the LUP nature of the project. In the event that the need for Run-On sampling becomes necessary the QSD & QSP will determine the appropriate locations and identify them in the SWPPP and on the plans.

Run-on from these locations has the potential to combine with discharges from the site being sampled for non-visible pollutants. These samples are intended to identify potential sources of non-visible pollutants that originate off the project site.

**Table 7.10 Non-Visible Pollutant Sample Locations – Site Run-On**

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)

If a stormwater visual monitoring site inspection conducted prior to or during a storm event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm drain system that is at a location not listed above and has not been identified on the SWPPP Drawings, sampling locations will be selected by the QSP using the same rationale as that used to identify planned locations. Non-visible pollutant sampling locations shall be identified by the QSP on the pre-rain event inspection form prior to a forecasted qualifying rain event.

**7.7.1.3 Monitoring Preparation**

Non-visible pollutant samples will be collected by:

- Contractor             Yes             No
- Consultant             Yes             No
- Laboratory             Yes             No

Samples on the project site will be collected by the following contractor sampling personnel:

Name/Telephone Number: \_\_\_\_\_

Alternate(s)/Telephone Number: \_\_\_\_\_

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder-free nitrile gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and *Effluent Sampling Field Log Sheets* and Chain of Custody (CoC) forms, which are provided in CSMP Attachment 3 “Example Forms”.

If the Contractor chooses to have a laboratory sample on their behalf the laboratory shall be named below:

Company Name:

Street Address:

City, State Zip:

Telephone Number:

Point of Contact:

Name of Sampler(s):

Name of Alternate(s):

The QSP or his/her designee will contact \_\_\_\_\_ 24 hours prior to a predicted rain event or for an unpredicted event, as soon as a rain event begins if one of the triggering conditions is identified during an inspection to ensure that adequate sample collection personnel and supplies for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

#### 7.7.1.4 Analytical Constituents

Table 7.11 lists the specific sources and types of potential non-visible pollutants on the project site and the water quality indicator constituent(s) for that pollutant.

**Table 7.11 Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

Pollutant Source	Pollutant	Water Quality Indicator Constituent
LANDSCAPE PRODUCTS	FERTILIZERS	NITRATE PHOSPHATE
CLEANING PRODUCTS	SOLVENTS	ORGANIC COMPOUNDS
LANDSCAPE PRODUCTS	PESTICIDES	GLYPHOSPHATE
TREATED WOOD	CUPROUS NAPHTHENATE	COPPER
CONTAMINATED SOILS	DEISEL FUEL	HYDROCARBONS

#### 7.7.1.5 Sample Collection

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the SWPPP Drawings in Appendix B or in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in the Table, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants"

provided in Section 7.7.1.6. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

**7.7.1.6 Sample Analysis**

Samples shall be analyzed using the analytical methods identified in the Table 7.12.

Samples will be analyzed by:

Laboratory Name:

Street Address:

City, State Zip:

Telephone Number:

Point of Contact:

ELAP Certification  
Number:

Samples will be delivered to the laboratory by:

- |                                 |                          |     |                          |    |
|---------------------------------|--------------------------|-----|--------------------------|----|
| Driven by Contractor            | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Picked up by Laboratory Courier | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Shipped                         | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

Table 7.12 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Containers	Sample Preservation	Reporting Limit	Maximum Holding Time
VOC'S SOLVENTS	EPA 601/602	3X40ml	VOA GLASS	STORE @ 4 DEG C HCl TO Ph,2	1ug/L	14 Days
PESTICIDES	EPA 8081A	1x1 L	Glass amber	Store @ 4 deg C	0.1 ug/L	7 Days
HERBICIDES	EAP 8151A	1x1 L	Glass-amber	Store @ 4 deg C	Check Lab	7 Days
NITRATE	EAP 300.0	100 mL	Polypropylene	Store @ 4 deg C	0.1 mg/L	48 Hours
pH	EPA 150.1	1x100 mL	Polypropylene	None	unit less	Immediate
PESTICIDES	EPA 8081A	1x1 L	Glass amber	Store @ 4 deg C	0.1 ug/L	7 Days
VOC'S SOLVENTS	EPA 601/602	3X40ml	VOA GLASS	STORE @ 4 DEG C HCl TO Ph,2	1ug/L	14 Days
Notes:						

#### *7.7.1.7 Data Evaluation and Reporting*

The QSP shall complete an evaluation of the water quality sample analytical results.

Runoff/down gradient results shall be compared with the associated up gradient/unaffected results and any associated run-on results. Should the runoff/down gradient sample show an increased level of the tested analytic relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

The General Permit prohibits the storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Regional Water Board and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

Results of non-visible pollutant monitoring shall be reported in the Annual Report.

#### **7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges**

Sampling and analysis of runoff for pH and turbidity is required for this project. This Sampling and Analysis Plan describes the strategy for monitoring turbidity and pH levels of stormwater runoff discharges from the project site and run-on that may contribute to an exceedance of a Numeric Action Level (NAL).

Samples for turbidity will be collected from all drainage areas with disturbed soil areas and samples for pH will be collected from all drainage areas with a high risk of pH discharge.

##### *7.7.2.1 Sampling Schedule*

Stormwater runoff samples shall be collected for turbidity from all qualifying rain events that result in a discharge from the project site. At minimum, turbidity samples will be collected from each site discharge location draining a disturbed area. A minimum of three samples will be collected per day of discharge during a qualifying event. Samples should be representative of the total discharge from the project each day of discharge during the qualifying event. Typically representative samples will be spaced in time throughout the daily discharge event.

Stormwater runoff samples shall be collected for pH from all qualifying rain events that result in a discharge from the project site. At minimum, pH samples will be collected from each site discharge location during project phases and drainage areas with a high risk of pH discharge. A minimum of three samples will be collected per day of discharge during a qualifying event. Samples should be representative of the total discharge from the location each day of discharge during the qualifying event. Typically representative samples will be spaced in time throughout the daily discharge event.

Stored or collected water from a qualifying storm event when discharged shall be tested for turbidity and pH (when applicable). Stored or collected water from a qualifying event may be

sampled at the point it is released from the storage or containment area or at the site discharge location.

Run-on samples shall be collected whenever the QSP identifies that run-on has the potential to contribute to an exceedance of a NAL.

**7.7.2.2 Sampling Locations**

Sampling locations are based on the site runoff discharge locations and locations where run-on enters the site; accessibility for sampling; and personnel safety. Planned pH and turbidity sampling locations are shown on the Site Maps in Appendix B and include the locations identified in Table 7.13 and Table 7-14.

Due to the nature of the LUP Type 2 Pipeline Project sampling points will be changing as the construction proceeds. Therefore sampling points will be identified as the construction proceeds. However at the Construction Staging and Storage Areas sampling location(s) have been identified for the collection of runoff samples. Table 7.13 also provides an estimate of the site’s area that drains to each location.

**Table 7.13 Turbidity and pH Runoff Sample Locations**

<b>Sample Location Number</b>	<b>Sample Location</b>	<b>Estimate of Site Drainage Area</b>
S-1	Upstream of the Mid-Town Staging and Storage Area	2.0 Acres
S-2	Up Stream of the Pismo & South Bay Blvd Staging and Storage Area	4.0 Acres

Due to the nature of the LUP Type 2 Pipeline Project sampling points will be changing as the construction proceeds. Therefore sampling points will be identified as the construction proceeds. However at the Construction Staging and Storage Areas sampling location(s) have been identified for the collection of run-on samples where the run-on has the potential to contribute to an exceedance of a NAL.

**Table 7.14 Turbidity and pH Run-On Sample Locations**

<b>Sample Location Number</b>	<b>Sample Location</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>
S-1	Upstream of the Mid-Town Staging and Storage Area	35-18-46.48” N 120-50-18.51”W
S-2	Up Stream of the Pismo & South Bay Blvd Staging and Storage Area	35-19-24.88”N 120-49-19.70” W

7.7.2.3 *Monitoring Preparation*

Turbidity and pH samples will be collected and analyzed by:

Contractor           X Yes            No  
Consultant            Yes            No  
Laboratory            Yes            No

Samples on the project site will be collected by the following contractor sampling personnel:

Name/Telephone Number: \_\_\_\_\_

Alternate(s)/Telephone Number: \_\_\_\_\_

An adequate stock of monitoring supplies and equipment for monitoring turbidity and will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, field meters, extra batteries; clean powder-free nitrile gloves, sample collection equipment, appropriate sample containers, paper towels, personal rain gear, and *Effluent Sampling Field Log Sheets* and CoC forms provided in CSMP Attachment 3 “Example Forms”.

The contractor will obtain and maintain the field testing instruments, as identified in Section 7.7.2.6, for analyzing samples in the field by contractor sampling personnel.

Samples on the project site will be collected by the following

\_\_\_\_\_:

Company Name:

Street Address:

City, State, Zip:

Telephone Number:

Point of Contact:

Name of Sampler(s):

Name of Alternate(s):

The QSP or his/her designee will contact \_\_\_\_\_ 24 hours prior to a predicted rain event or for an unpredicted event, as soon as a rain event begins to ensure that adequate sample collection personnel, supplies for monitoring pH and turbidity are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

7.7.2.4 *Field Parameters*

Samples shall be analyzed for the constituents indicated in the table below “Sample Collection, and Analysis for Monitoring Turbidity and pH.”

**Table 7.15 Sample Collection and Analysis for Monitoring Turbidity and pH**

Parameter	Test Method	Minimum Sample Volume <sup>(1)</sup>	Sample Collection Container Type	Detection Limit (minimum)
Turbidity	Field meter/probe with calibrated portable instrument	500 mL	Polypropylene or Glass (Do not collect in meter sample cells)	1 NTU
pH	Field meter/probe with calibrated portable instrument or calibrated pH test kit	100 mL	Polypropylene	0.2 pH units
Notes: <sup>1</sup> Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions. L – Liter mL – Milliliter NTU – Nephelometric Turbidity Unit				

**7.7.2.5 Sample Collection**

Samples of discharge shall be collected at the designated runoff and run-on sampling locations shown on the SWPPP Drawings in Appendix B. Run-on samples shall be collected within close proximity of the point of run-on to the project.

Only personnel trained in water quality sampling and field measurements working under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

**7.7.2.6 Field Measurements**

Samples collected for field analysis, collection, analysis and equipment calibration shall be in accordance with the field instrument manufacturer’s specifications.

Immediately following collection, samples for field analysis shall be tested in accordance with the field instrument manufacturer’s instructions and results recorded on the *Effluent Sampling Field Log Sheet*.

The field instrument(s) listed in Table 7.16 will be used to analyze the following constituents:

**Table 7.16 Field Instruments**

Field Instrument (Manufacturer and Model)	Constituent
_____	pH
_____	Turbidity

The manufacturers' instructions are included in CSMP Attachment 4 "Field Meter Instructions". Field sampling staff shall review the instructions prior to each sampling event and follow the instructions in completing measurement of the samples.

- The instrument(s) shall be maintained in accordance with manufacturer's instructions.
- The instrument(s) shall be calibrated before each sampling and analysis event.
- Maintenance and calibration records shall be maintained with the SWPPP.

The QSP may authorize alternate equipment provided that the equipment meets the Construction General Permit's requirements and the manufacturers' instructions for calibration and use are added to CSMP Attachment 4 "Field Meter Instructions".

#### 7.7.2.7 Data Evaluation and Reporting

##### Numeric Action Levels

This project is subject to NALs for pH and turbidity (Table 7.17). Compliance with the NAL for pH and turbidity is based on a weighted daily average. Upon receiving the field log sheets, the QSP shall immediately calculate the weighted arithmetic average of the pH and turbidity samples to determine if the NALs, shown in the table below, have been exceeded.

**Table 7.17 Numeric Action Levels**

Parameter	Unit	Daily Average
pH	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	NTU	250 NTU

The QSP shall within 5 days of the sample collection submit copies of the completed *Effluent Sampling Field Log Sheets* to QSD and LRP.

In the event that the pH or turbidity NAL is exceeded, the QSP shall immediately notify QSD and LRP and investigate the cause of the exceedance and identify corrective actions.

Exceedances of NALs shall be electronically reported to the State Water Board by LRP through the SMARTs system within 10 days of the conclusion of the storm event. If requested by the Regional Board, a NAL Exceedance report will be submitted. The NAL Exceedance Report must contain the following information:

- Analytical method(s), method reporting unit(s), and MDL(s) of each parameter;
- Date, place, time of sampling, visual observation, and/or measurements, including precipitation; and
- Description of the current BMPs associated with the sample that exceeded the NAL and the proposed corrective actions taken.

#### 7.7.3 Additional Monitoring Following an NEL Exceedance

This project is not subject to NELs.

#### **7.7.4            *Sampling and Analysis Plan for Non-Stormwater Discharges***

This Sampling and Analysis Plan for non-stormwater discharges describes the sampling and analysis strategy and schedule for monitoring pollutants in authorized and unauthorized non-stormwater discharges from the project site in accordance with the requirements of the Construction General Permit.

Sampling of non-stormwater discharges will be conducted when an authorized or unauthorized non-stormwater discharge is observed discharging from the project site. In the event that non-stormwater discharges run-on to the project site from offsite locations, and this run-on has the potential to contribute to a violation of a NAL, the run-on will also be sampled.

The following authorized non-stormwater discharges identified in Section 2.7, have the potential to be discharged from the project site.

- de-chlorinated potable water sources such as: fire hydrant flushing
- irrigation of vegetative erosion control measures
- pipe flushing and testing
- water to control dust
- uncontaminated groundwater dewatering as long as it is either delivered to the Mid-Town Detention Basin or to Broderson Leach Field Site.

In addition to the above authorized stormwater discharges, some construction activities have the potential to result in an unplanned (unauthorized) non-stormwater discharge if BMPs fail. These activities include:

- Asphalt Grinding
- Concrete Cutting
- Dust Control
- Water Line Breaks

##### **7.7.4.1            *Sampling Schedule***

Samples of authorized or unauthorized non-stormwater discharges shall be collected when they are observed.

##### **7.7.4.2            *Sampling Locations***

Samples shall be collected from the discharge point of the construction site where the non-stormwater discharge is running off the project site. Due to the nature of the LUP Project specific sites are not identified except at the Staging and Storage Areas shown on the SWPPP Drawings in SWPPP Appendix A and include the locations identified below.

Two sampling location(s) on the project site and the contractor's yard have been identified where non-stormwater discharges may runoff from the project site.

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
S-1	Upstream of the Mid-Town Staging and Storage Area	35-18-46.48" N 120-50-18.51"W
S-2	Up Stream of the Pismo & South Bay Blvd Staging and Storage Area	35-19-24.88"N 120-49-19.70" W

No sampling locations have been identified for the collection of non-stormwater discharges that run-on to the project site.

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)

#### 7.7.4.3 Monitoring Preparation

Non-stormwater discharge samples will be collected by:

- Contractor            X Yes             No  
 Consultant             Yes             No  
 Laboratory             Yes             No

Samples on the project site will be collected by the following contractor sampling personnel:

Name/Telephone Number: \_\_\_\_\_

Alternate(s)/Telephone Number: \_\_\_\_\_

An adequate stock of monitoring supplies and equipment for monitoring non-stormwater discharges will be available on the project site. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Personnel trained in sampling will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder-free nitrile gloves, sample collection equipment, field meters, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and *Effluent Sampling Field Log Sheets* and CoC forms provided in CSMP Attachment 3 "Example Forms".

The contractor will obtain and maintain the field testing instruments, as identified in Section 7.7.2, for analyzing samples in the field by contractor sampling personnel.

In the event that the Contractor chooses to have a laboratory collect samples on the project site will be collected by the following \_\_\_\_\_:

Company Name:

Street Address:

City, State Zip:

Telephone Number:

Point of Contact:

Name of Sampler(s):

Name of Alternate(s):

The QSP or his/her designee will contact \_\_\_\_\_, 24 hours prior to a planned non-stormwater discharge or as soon as an unplanned non-stormwater discharge is observed to ensure that adequate sample collection personnel, supplies for non-stormwater discharge monitoring are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

#### 7.7.4.4 Analytical Constituents

All non-stormwater discharges that flow through a disturbed area shall, at minimum, be monitored for turbidity.

All non-stormwater discharges that flow through an area where they are exposed to pH altering materials shall be monitored for pH.

The QSP shall identify additional pollutants to be monitored for each non-stormwater discharge incident based on the source of the non-stormwater discharge. If the source of an unauthorized non-stormwater discharge is not known, monitoring for pH, turbidity, MBAS, TOC, and residual chlorine or chloramines is recommended to help identify the source of the discharge.

Non-stormwater discharge run-on shall be monitored, at minimum, for pH and turbidity. The QSP shall identify additional pollutants to be monitored for each non-stormwater discharge incident based on the source of the non-stormwater discharge. If the source of an unauthorized non-stormwater discharge is not known, monitoring for pH, turbidity, MBAS, TOC, and residual chlorine or chloramines is recommended to help identify the source of the discharge.

Table 7.21 lists the specific sources and types of potential non-visible pollutants on the project site and the water quality indicator constituent(s) for that pollutant.

**Table 7.21 Potential Non-Stormwater Discharge Pollutants and Water Quality Indicator Constituents**

<b>Pollutant Source</b>	<b>Pollutant</b>	<b>Water Quality Indicator Constituent</b>
Disturbed Areas	Sediment	Turbidity
Concrete Work	pH	pH
Batteries	Acid	pH
Landscape Products	Fertilizers	Nitrate Phosphate

**Table 7.21 Potential Non-Stormwater Discharge Pollutants and Water Quality Indicator Constituents**

<b>Pollutant Source</b>	<b>Pollutant</b>	<b>Water Quality Indicator Constituent</b>
Cleaning Products	Solvents	Organic Compounds

**7.7.4.5 Sample Collection**

Samples shall be collected at the discharge locations where the non-stormwater discharge is leaving the project site. Potential discharge locations are shown on the SWPPP Drawings in Appendix B and identified in Section 7.7.4.2.

Grab samples shall be collected and preserved in accordance with the methods identified in Table 7.22. Only personnel trained in water quality sampling under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

**7.7.4.6 Sample Analysis**

Samples shall be analyzed using the analytical methods identified in Table 7.22.

**7.7.4.7 Data Evaluation and Reporting**

The QSP shall complete an evaluation of the water quality sample analytical results.

Turbidity and pH results shall be evaluated for compliance with NALs as identified in Section 7.7.2.7.

Runoff results shall also be evaluated for the constituents suspected in the non-stormwater discharge. Should the runoff sample indicate the discharge of a pollutant which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

Non-storm water discharge results shall be submitted with the Annual Report.

The General Permit prohibits the non-storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Regional Water Board.

**Table 7.22 Sample Collection, Preservation and Analysis for Monitoring Pollutants in Non-Stormwater Discharges**

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
VOC'S SOLVENTS	EPA 601/602	3X40ml	VOA GLASS	STORE @ 4 DEG C HCl TO Ph,2	1ug/L	14 Days
PESTICIDES	EPA 8081A	1x1 L	Glass amber	Store @ 4 deg C	0.1 ug/L	7 Days
HERBICIDES	EAP 8151A	1x1 L	Glass-amber	Store @ 4 deg C	Check Lab	7 Days
NITRATE	EAP 300.0	100 mL	Polypropylene	Store @ 4 deg C	0.1 mg/L	48 Hours
pH	EPA 150.1	1x100 mL	Polypropylene	None	unit less	Immediate
PESTICIDES	EPA 8081A	1x1 L	Glass amber	Store @ 4 deg C	0.1 ug/L	7 Days
VOC'S SOLVENTS	EPA 601/602	3X40ml	VOA GLASS	STORE @ 4 DEG C HCl TO Ph,2	1ug/L	14 Days
Notes:						

**7.7.5 Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board**

The Regional Water Board has not specified monitoring for additional pollutants.

**7.7.6 Training of Sampling Personnel**

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring program (SWAMP) 2008 Quality Assurance Program Plan (QAPrP). Training records of designated contractor sampling personnel are provided in Appendix K.

The stormwater sampler(s) and alternate(s) have received the following stormwater sampling training:

<b>Name</b>	<b>Training</b>
_____	_____
_____	_____

The stormwater sampler(s) and alternates have the following stormwater sampling experience:

<b>Name</b>	<b>Experience</b>
_____	_____
_____	_____

**7.7.7 Sample Collection and Handling**

**7.7.7.1 Sample Collection**

Samples shall be collected at the designated sampling locations shown on the SWPPP Drawings and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the SWAMP 2008 Quality Assurance Program Plan (QAPrP).

Grab samples shall be collected and preserved in accordance with the methods identified in preceding sections.

To maintain sample integrity and prevent cross-contamination, sample collection personnel shall follow the protocols below.

- Collect samples (for laboratory analysis) only in analytical laboratory-provided sample containers;
- Wear clean, powder-free nitrile gloves when collecting samples;
- Change gloves whenever something not known to be clean has been touched;
- Change gloves between sites;
- Decontaminate all equipment (e.g. bucket, tubing) prior to sample collection using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water. (Dispose of wash and rinse water appropriately, i.e., do not discharge to storm drain or receiving water). Do not decontaminate laboratory provided sample containers;

- Do not smoke during sampling events;
- Never sample near a running vehicle;
- Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- Do not eat or drink during sample collection; and
- Do not breathe, sneeze, or cough in the direction of an open sample container.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

- i. For small streams and flow paths, simply dip the bottle facing upstream until full.
- ii. For larger stream that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the opening of the bottle is facing upstream as to avoid any contamination by the sampler.
- iii. For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.
- iv. Avoid collecting samples from ponded, sluggish or stagnant water.
- v. Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream, but filled indirectly from the collection container.

#### 7.7.7.2 *Sample Handling*

Turbidity and pH measurements must be conducted immediately. Do not store turbidity or pH samples for later measurement.

Samples for laboratory analysis must be handled as follows. Immediately following sample collection:

- Cap sample containers;
- Complete sample container labels;
- Sealed containers in a re-sealable storage bag;
- Place sample containers into an ice-chilled cooler;
- Document sample information on the *Effluent Sampling Field Log Sheet*; and
- Complete the CoC.

All samples for laboratory analysis must be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples must be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are well packaged to prevent breakage and secure cooler lids with packaging tape.

Ship samples that will be laboratory analyzed to the analytical laboratory right away. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The General Permit requires that samples be received by the analytical laboratory within 48 hours of the physical sampling (unless required sooner by the analytical laboratory).

Laboratory Name:

Address:

City, State Zip:

Telephone Number:

Point of Contact:

### 7.7.7.3 Sample Documentation Procedures

All original data documented on sample bottle identification labels, *Effluent Sampling Field Log Sheet*, and CoCs shall be recorded using waterproof ink. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

Duplicate samples shall be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the *Effluent Sampling Field Log Sheet*.

Sample documentation procedures include the following:

Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. Sample identification shall uniquely identify each sample location.

Field Log Sheets: Sampling personnel shall complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* for each sampling event, as appropriate.

Chain of Custody: Sampling personnel shall complete the CoC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the CoC when the sample(s) is turned over to the testing laboratory or courier.

## 7.8 Active Treatment System Monitoring

An Active Treatment System (ATS) will be deployed on the site?

Yes            X    No

This project does not require a project specific Sampling and Analysis Plan for an ATS because deployment of an ATS is not planned.

## 7.9 Bioassessment Monitoring

This project is not subject to bioassessment monitoring because it is not a Risk Level 3 project.

## 7.10 Watershed Monitoring Option

This project is not participating in a watershed monitoring option.

## 7.11 Quality Assurance and Quality Control

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- CoCs;
- QA/QC Samples; and
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

### **7.11.1 Field Logs**

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). Field measurements for pH and turbidity should also be recorded in the field log. A Visual Inspection Field Log, an Effluent Sampling Field Log Sheet, are included in CSMP Attachment 3 “Example Forms”.

### **7.11.2 Clean Sampling Techniques**

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. As discussed in Section 7.7.7, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

### **7.11.3 Chain of Custody**

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in CSMP Attachment 3 “Example Forms”.

### **7.11.4 QA/QC Samples**

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

- X Field Duplicates at a frequency of 5 percent or 1 duplicate minimum per sampling event. (Required for all sampling plans with field measurements or laboratory analysis)
- X Equipment Blanks at a frequency of 5 percent or 1 duplicate minimum per sampling event. (Only needed if equipment used to collect samples could add the pollutants to sample)
- X Field Blanks at a frequency of 5 percent or 1 duplicate minimum per sampling event. (Only required if sampling method calls for field blanks)

X Travel Blanks at a frequency of 5 percent or 1 duplicate minimum per sampling event. (Required for sampling plans that include VOC laboratory analysis)

#### 7.11.4.1 *Field Duplicates*

Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples shall be collected, handled, and analyzed using the same protocols as primary samples. The sample location where field duplicates are collected shall be randomly selected from the discharge locations. Duplicate samples shall be collected immediately after the primary sample has been collected. Duplicate samples must be collected in the same manner and as close in time as possible to the original sample. Duplicate samples shall not influence any evaluations or conclusion.

#### 7.11.4.2 *Equipment Blanks*

Equipment blanks provide verification that equipment has not introduced a pollutant into the sample. Equipment blanks are typically collected when:

- New equipment is used;
- Equipment that has been cleaned after use at a contaminated site;
- Equipment that is not dedicated for surface water sampling is used; or
- Whenever a new lot of filters is used when sampling metals.

#### 7.11.4.3 *Field Blanks*

Field blanks assess potential sample contamination levels that occur during field sampling activities. De-ionized water field blanks are taken to the field, transferred to the appropriate container, and treated the same as the corresponding sample type during the course of a sampling event.

#### 7.11.4.4 *Travel Blanks*

Travel blanks assess the potential for cross-contamination of volatile constituents between sample containers during shipment from the field to the laboratory. De-ionized water blanks are taken along for the trip and held unopened in the same cooler with the VOC samples.

### 7.11.5 **Data Verification**

After results are received from the analytical laboratory, the QSP shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the CoC and laboratory reports.  
*Make sure all requested analyses were performed and all samples are accounted for in the reports.*
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory.  
*Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP should especially note data that is an*

*order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.*

- Check laboratory QA/QC results.  
*EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.*
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.  
*Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.*

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

## **7.12 Records Retention**

All records of stormwater monitoring information and copies of reports (including Annual Reports) must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with CoCs, and other documentation related to the monitoring.

Records are to be kept onsite while construction is ongoing. Records to be retained include:

- The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- The individual(s) who performed the inspections, sampling, visual observation, and/or field measurements;
- The date and approximate time of field measurements and laboratory analyses;
- The individual(s) who performed the laboratory analyses;
- A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;

- Rain gauge readings from site inspections;
- QA/QC records and results;
- Calibration records;
- Visual observation and sample collection exemption records;
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections; and
- NAL Exedence Reports.

# CSMP Attachment 1: Weather Reports

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## CSMP Attachment 2: Monitoring Records

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## CSMP Attachment 3: Example Forms

---

For this section see forms provided below or by Caltrans on their Construction Forms Web Site at: <http://www.dot.ca.gov/hq/construc/forms.htm> or the Contractor may provide his own forms to be reviewed and approved by the Project QSD and LRP.



**LUP Type 2  
Visual Inspection Field Log Sheet**

Date and Time of Inspection:				Report Date:		
Inspection Type:	<input type="checkbox"/> Weekly	<input type="checkbox"/> Before predicted rain	<input type="checkbox"/> During rain event	<input type="checkbox"/> Following qualifying rain event	<input type="checkbox"/> Contained stormwater release	<input type="checkbox"/> Quarterly non-stormwater

**Site Information**

Construction Site Name:	
Construction stage and completed activities:	Approximate area of exposed site:

**Weather and Observations**

Date Rain Predicted to Occur:		Predicted % chance of rain:	
Estimate storm beginning: _____ (date and time)	Estimate storm duration: _____ (hours)	Estimate time since last storm: _____ (days or hours)	Rain gauge reading: _____ (inches)

Observations: If yes identify location

Odors	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Floating material	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Suspended Material	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Sheen	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Discolorations	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Turbidity	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**Site Inspections**

Outfalls or BMPs Evaluated	Deficiencies Noted
(add additional sheets or attached detailed BMP Inspection Checklists)	
Photos Taken:	Yes <input type="checkbox"/> No <input type="checkbox"/> Photo Reference IDs:

**Corrective Actions Identified (note if SWPPP/REAP change is needed)**

--

**Inspector Information**

Inspector Name:	Inspector Title:
Signature:	Date:

**LUP Type 2  
Effluent Sampling Field Log Sheets**

Construction Site Name:	Date:	Time Start:
-------------------------	-------	-------------

Sampler:

Sampling Event Type:	<input type="checkbox"/> Stormwater	<input type="checkbox"/> Non-stormwater	<input type="checkbox"/> Non-visible pollutant
----------------------	-------------------------------------	---	--

**Field Meter Calibration**

pH Meter ID No./Desc.:	Turbidity Meter ID No./Desc.:
Calibration Date/Time:	Calibration Date/Time:

**Field pH and Turbidity Measurements**

Discharge Location Description	pH	Turbidity	Time

**Grab Samples Collected**

Discharge Location Description	Sample Type	Time

Additional Sampling Notes:

Time End:

**Risk Level 3  
Effluent Sampling Field Log Sheets**

Construction Site Name:	Date:	Time Start:
-------------------------	-------	-------------

Sampler:

Sampling Event Type:	<input type="checkbox"/> Stormwater	<input type="checkbox"/> Non-stormwater	<input type="checkbox"/> Non-visible pollutant	<input type="checkbox"/> Post NEL Exceedance
----------------------	-------------------------------------	---	--	--

**Field Meter Calibration**

pH Meter ID No./Desc.:	Turbidity Meter ID No./Desc.:
Calibration Date/Time:	Calibration Date/Time:

**Field pH and Turbidity Measurements**

Discharge Location Description	pH	Turbidity	Time

**Grab Samples Collected**

Discharge Location Description	SSC	Other (specify)	Time

Additional Sampling Notes:

Time End:

**Risk Level 3  
Receiving Water Sampling Field Log Sheets**

Construction Site Name:	Date:	Time Start:
-------------------------	-------	-------------

Sampler:

**Receiving Water Description and Observations**

Receiving Water Name/ID:

Observations:

Odors                      Yes     No

Floating material      Yes     No

Suspended Material    Yes     No

Sheen                     Yes     No

Discolorations         Yes     No

Turbidity                Yes     No

**Field Meter Calibration**

pH Meter ID No./Desc.:	Turbidity Meter ID No./Desc.:
------------------------	-------------------------------

Calibration Date/Time:	Calibration Date/Time:
------------------------	------------------------

**Field pH and Turbidity Measurements and SSC Grab Sample**

**Upstream Location**

Type	Result	Time	Notes
pH			
Turbidity			
SSC	Collected Yes <input type="checkbox"/> No <input type="checkbox"/>		

**Downstream Location**

Type	Result	Time	Notes
pH			
Turbidity			
SSC	Collected Yes <input type="checkbox"/> No <input type="checkbox"/>		

Additional Sampling Notes:

Time End:

NAL or NEL Exceedance Evaluation Summary Report		Page __ of __
Project Name		
Project WDID		
Project Location		
Date of Exceedance		
Type of Exceedance	NAL Daily Average <input type="checkbox"/> pH <input type="checkbox"/> Turbidity NEL Daily Average <input type="checkbox"/> pH <input type="checkbox"/> Turbidity  <input type="checkbox"/> Other (specify) _____	
Measurement or Analytical Method	<input type="checkbox"/> Field meter (Sensitivity: _____) <input type="checkbox"/> Lab method (specify) _____ (Reporting Limit: _____) (MDL: _____)	
Calculated Daily Average	<input type="checkbox"/> pH _ pH units <input type="checkbox"/> Turbidity __ NTU	
Rain Gauge Measurement	_____ inches	
Compliance Storm Event	_____ inches (5-year, 24-hour event)	
Visual Observations on Day of Exceedance		

<p><b>Description of BMPs in Place at Time of Event</b></p>	
<p><b>Initial Assessment of Cause</b></p>	
<p><b>Corrective Actions Taken (deployed after exceedance)</b></p>	
<p><b>Additional Corrective Actions Proposed</b></p>	
<p><b>Report Completed By</b></p>	<p>_____</p> <p><b>(Print Name, Title)</b></p>
<p><b>Signature</b></p>	<p>_____</p>

**CHAIN-OF-CUSTODY**

**DATE:**

**Lab ID:**

<b>DESTINATION LAB:</b>		<b>REQUESTED ANALYSIS</b>		<b>Notes:</b>	
ATTN:					
<b>ADDRESS:</b>					
Office Phone:					
Cell Phone:					
<b>SAMPLED BY:</b>					
Contact:					
<b>Project Name</b>					
Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container	
				#	Type
					Pres.
<b>SENDER COMMENTS:</b>					
<b>RELINQUISHED BY</b>					
Signature:					
Print:					
Company:					
Date:				TIME:	
<b>LABORATORY COMMENTS:</b>					
<b>RECEIVED BY</b>					
Signature:					
Print:					
Company:					
Date:				TIME:	

## CSMP Attachment 4: Field Meter Instructions

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Contractor shall provide all instructions for their Field Meter(s) in this section:

## CSMP Attachment 5: Supplemental Information

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Documents that are a part of this SWPPP are as follows:

1. Soils Reports and/or other documents referenced in the Construction Documents.
2. Dewatering Plan by CDM Smith that is a part of the Construction Documents.
3. Letter from the RWQCB Central Coast Region pertaining to Construction Dewatering Dated May 27, 2011 attached as Appendix O.

## Section 8    References

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Project Plans and Specifications dated March 14, 2012 prepared by CDM Smith, Inc.

State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).

State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).

1.     Soils Reports and/or other documents referenced in the Construction Documents.
2.     Dewatering Plan by CDM Smith that is a part of the Construction Documents.
3.     Letter from the RWQCB Central Coast Region pertaining to Construction Dewatering Dated May 27, 2011 (attached).

CASQA 2009, *Stormwater BMP Handbook Portal: Construction*, November 2009, [www.casqa.org](http://www.casqa.org)

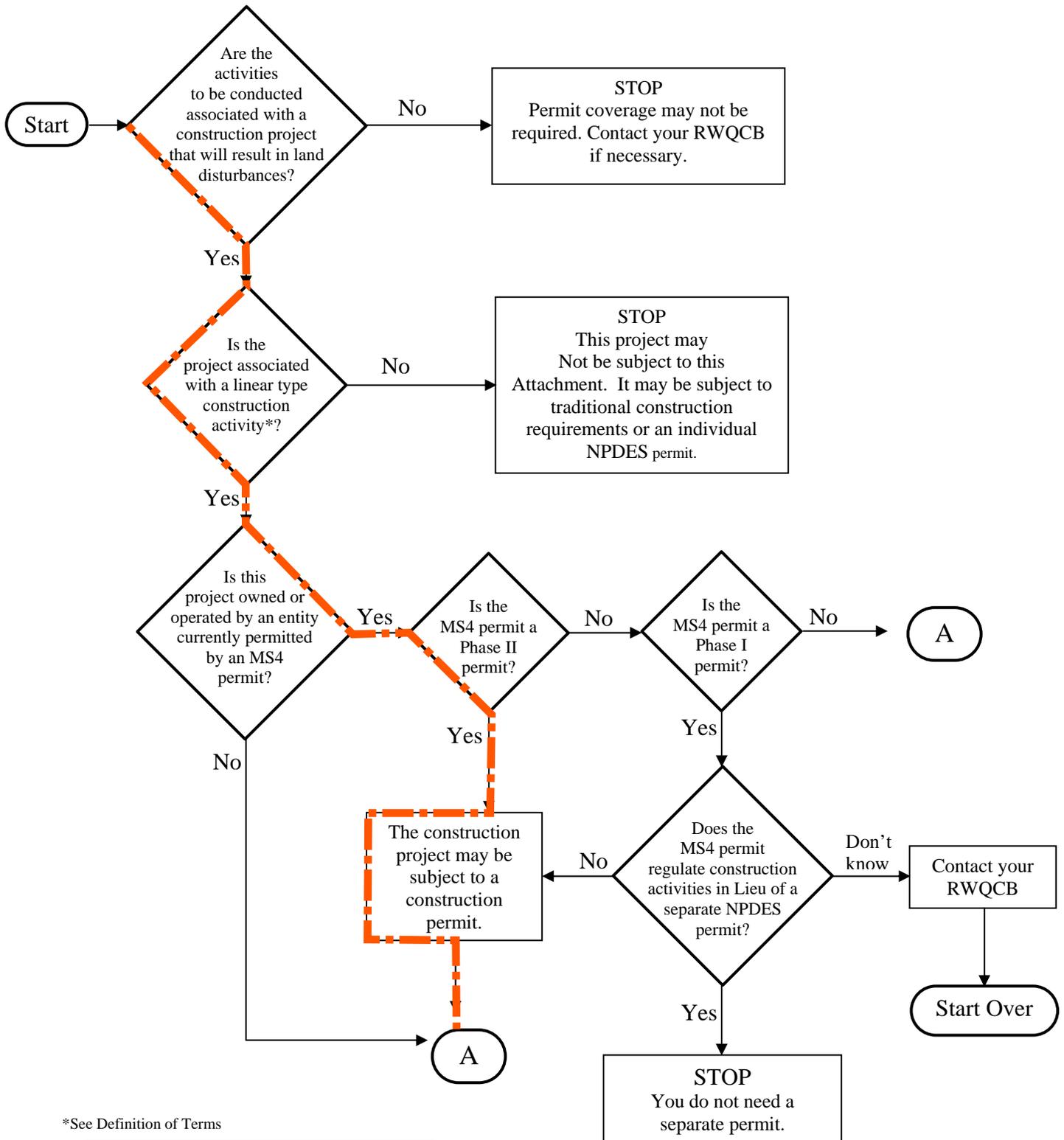
## *Appendix A: Calculations*

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# LINEAR UNDERGROUND/OVERHEAD PROJECT FLOWCHARTS

Chart Number I

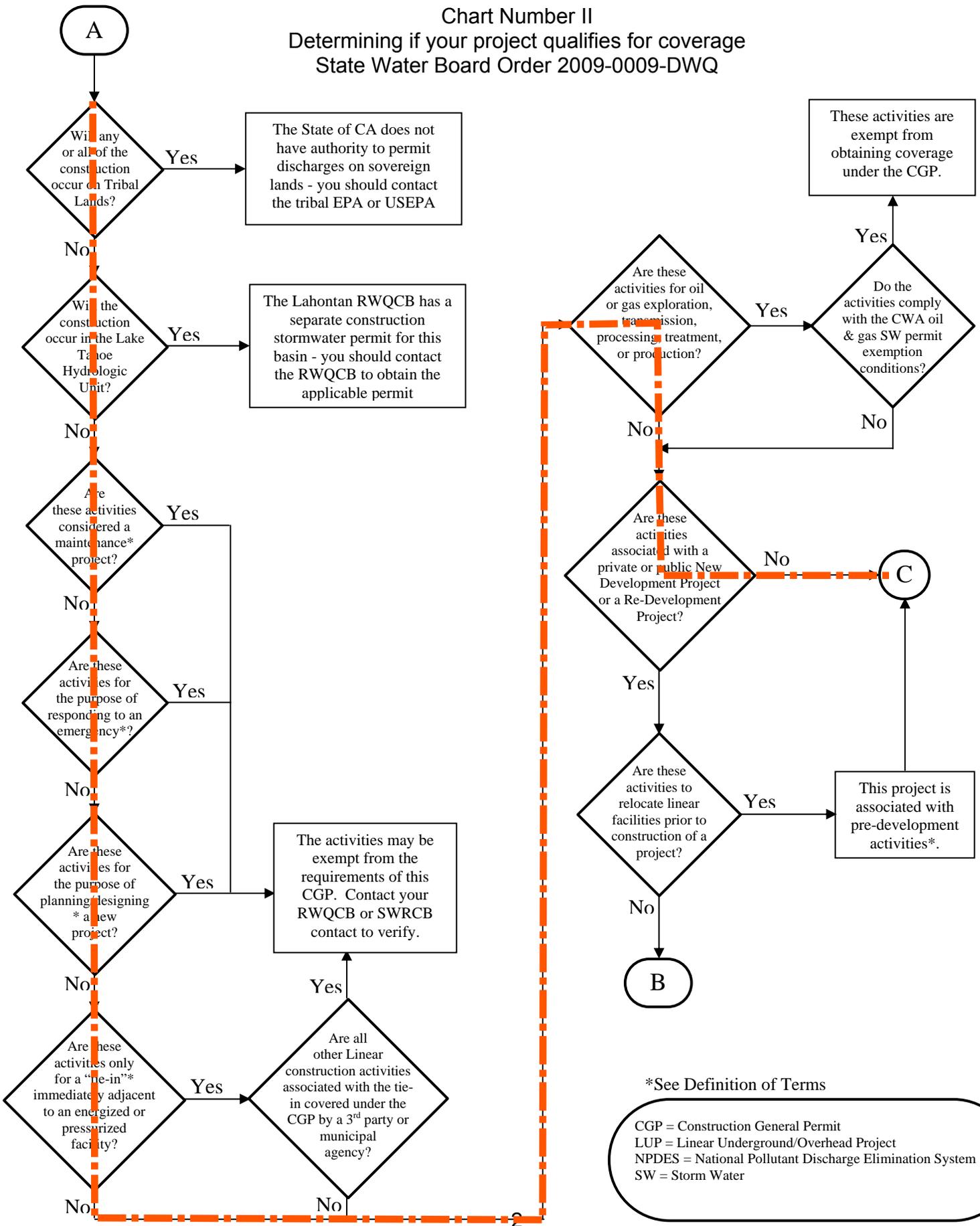
Determining if your project qualifies for coverage  
State Water Board Order 2009-0009-DWQ



\*See Definition of Terms

MS4 = Municipal Separate Storm Sewer System  
RWQCB = Regional Water Quality Control Board  
NPDES = National Pollutant Discharge Elimination System

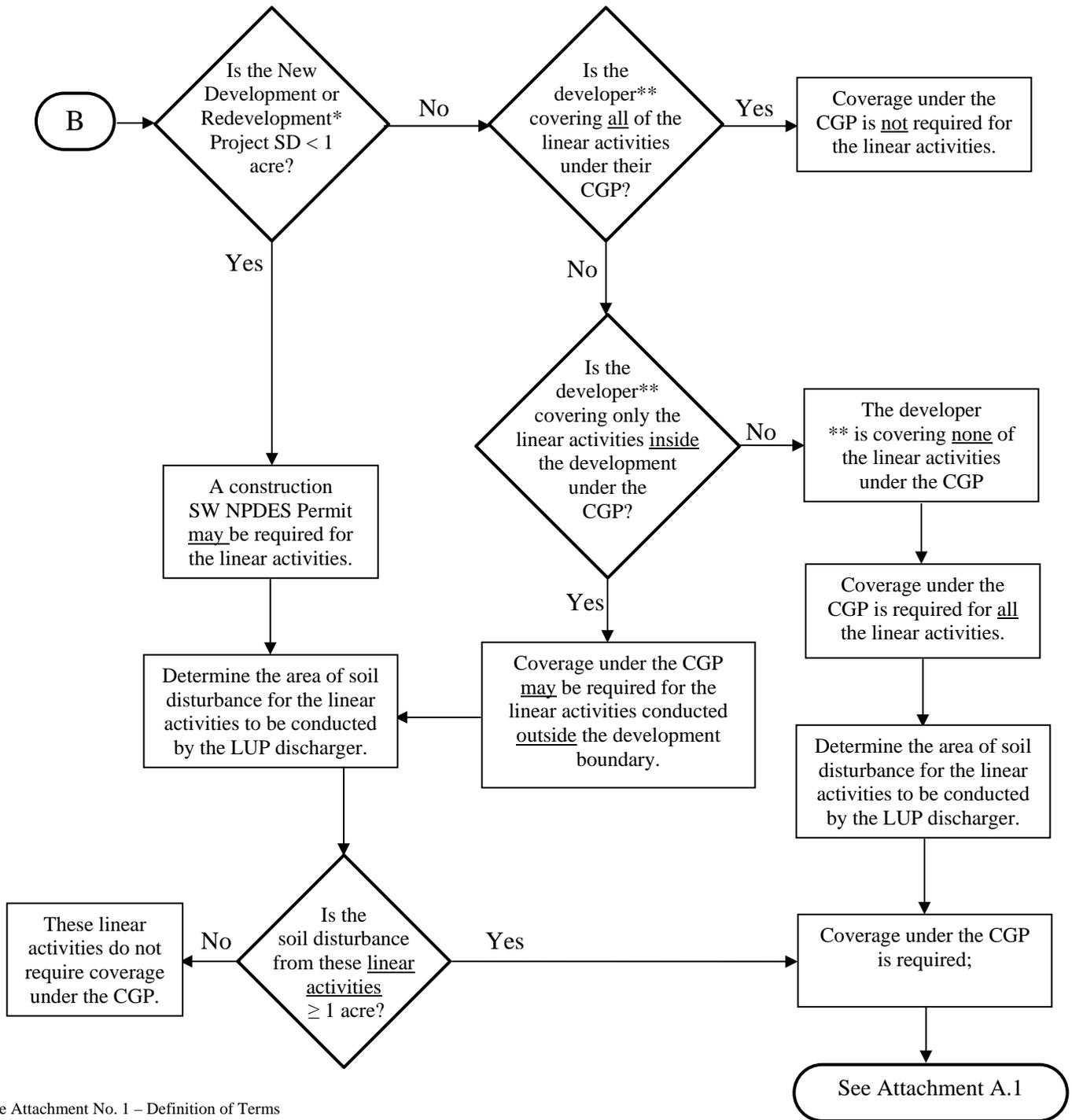
Chart Number II  
 Determining if your project qualifies for coverage  
 State Water Board Order 2009-0009-DWQ



\*See Definition of Terms

- CGP = Construction General Permit
- LUP = Linear Underground/Overhead Project
- NPDES = National Pollutant Discharge Elimination System
- SW = Storm Water

**Chart Number III**  
**Determining if your project qualifies for coverage**  
**State Water Board Order 2009-0009-DWQ**

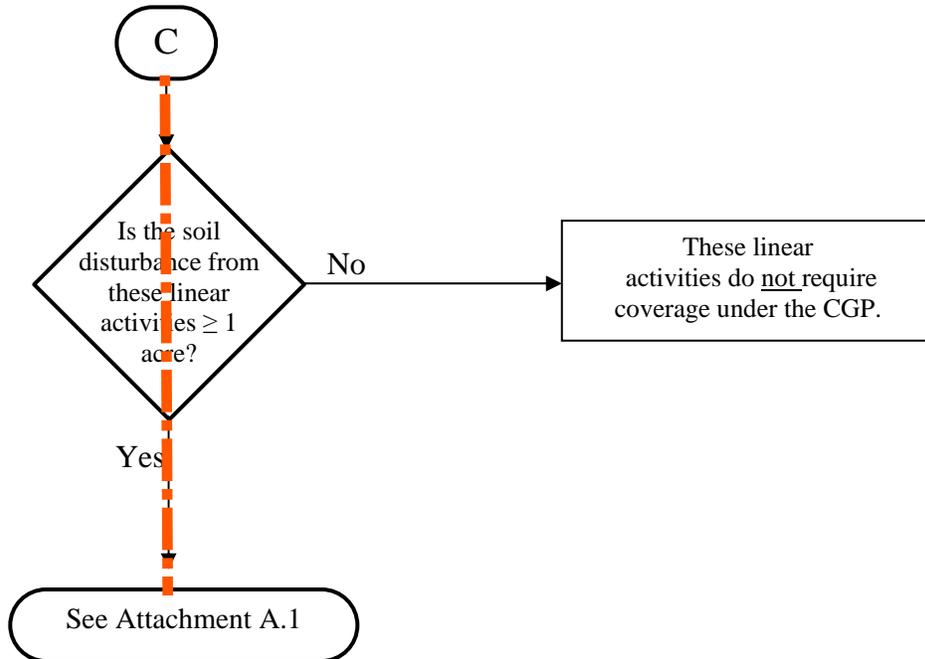


\* See Attachment No. 1 – Definition of Terms  
 \*\* Note: The “developer” is associated with the New Development Project or Redevelopment Project\* and the CGP is the Construction General Permit issued by the State Water Board.

CGP = Construction General Permit  
 LUP = Linear Underground/Overhead Project  
 NPDES = National Pollutant Discharge Elimination System  
 SD = Soil Disturbance  
 SW = Storm Water

Chart Number IV  
Determining if your project qualifies for coverage  
State Water Board Order 2009-0009-DWQ

Linear Only Projects  
and  
Relocations Prior to New Development Projects or  
Redevelopment Projects\*



\* See Definition of Terms

CGP = Construction General Permit  
NPDES = National Pollutant Discharge Elimination System  
SW = Storm Water

LUP Flowcharts - Definition of Terms  
Determining if your project qualifies for coverage  
State Water Board Order 2009-0009-DWQ

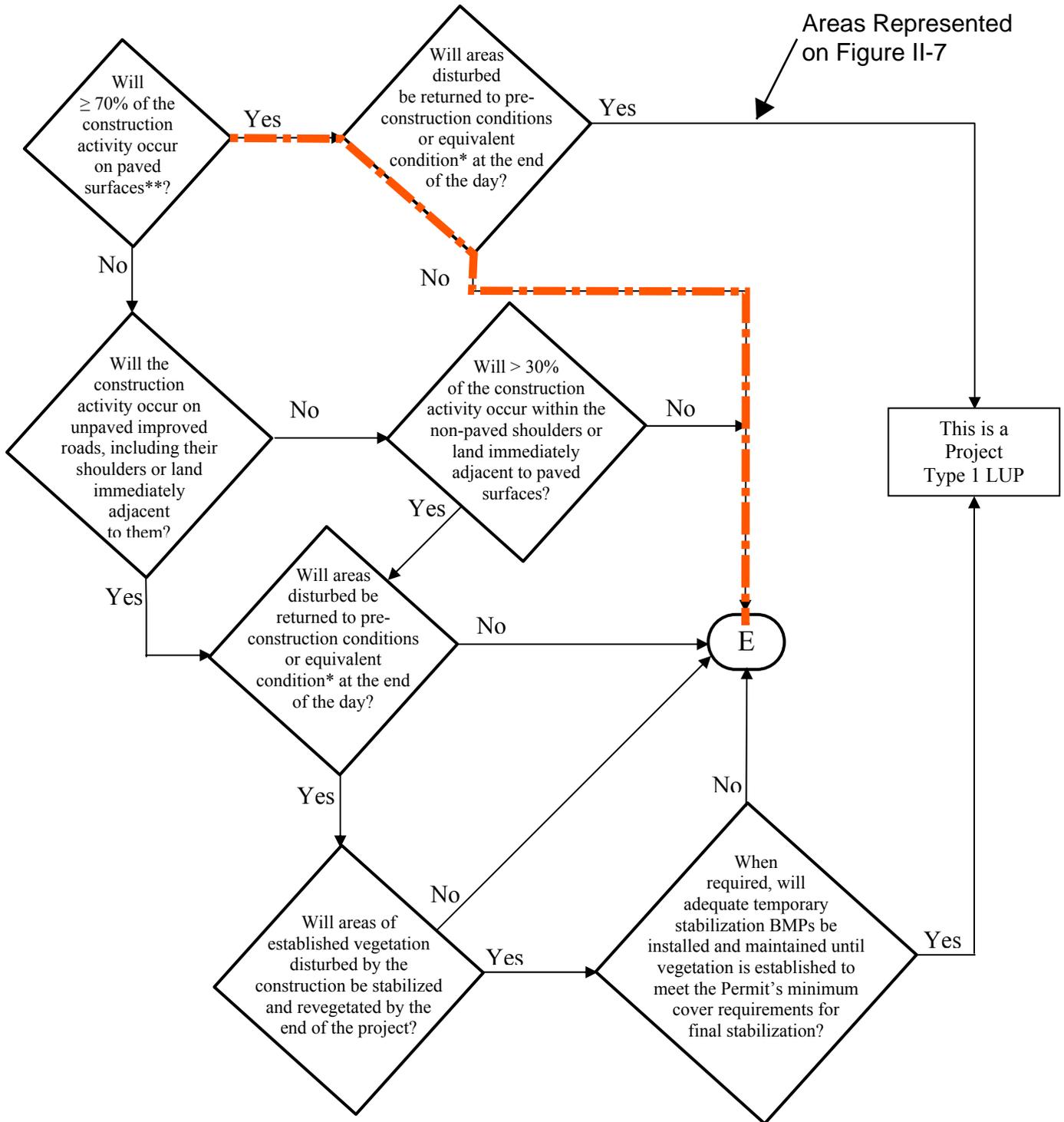
1. **Emergency Activities** – These are activities associated with responding to emergencies to protect public health and safety and restoration of public services after natural or manmade disasters.
2. **Linear Construction Activity** – Linear construction activity consists of underground/ overhead facilities that typically include, but are not limited to, any conveyance, pipe or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/ tower pad and cable/ wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/ borrow locations.
3. **Planning/ Designing Activities** – These are field activities associated with the planning and design of a project (e.g., activities associated with route selection). These could include, but are not limited to, potholing, sediment coring, and limited excavations to verify conflicts or contaminated soils.
4. **Pre-Development Activities** – These are construction activities associated with LUPs conducted by a discharger or its authorized representative to remove and/or relocate lines and facilities prior to the start of construction for new development and redevelopment projects that are owned or operated by third parties or municipal agencies. Soil disturbances from preconstruction projects are considered separately from the development or redevelopment projects for the purposes of determining if they meet minimum threshold requirements for areas of soil disturbance that would require coverage by a construction storm water permit.
5. **Redevelopment Projects** – Involve construction activities associated with LUPs constructed by the discharger to relocate lines or convert facilities from overhead to underground as a result of a redevelopment project owned or operated by a third party or municipal agency.
6. **Routine Maintenance Activities** – Activities associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-ways, easements, franchise agreements, or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects conducted to:
  - a. Maintain the original purpose of the facility or hydraulic capacity.
  - b. Update existing lines<sup>1</sup> and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
  - c. Repairing leaksRoutine maintenance does not include construction of new<sup>2</sup> lines or facilities resulting from compliance with applicable coders, standards, and regulations. Routine maintenance does not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements.
7. **Tie-in Activities** – Activities conducted immediately adjacent to “energized” or “pressurized” facilities by the discharger or their authorized representative and are not considered small construction activities where all other LUP construction activities associated with the tie-in are covered by an NOI and SWPPP of a third party or municipal agency.

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<sup>1</sup> Update existing lines includes replacing existing lines with new materials or pipes.

<sup>2</sup> New lines are those not associated with existing facilities and are not part of a project to update or replace existing lines.

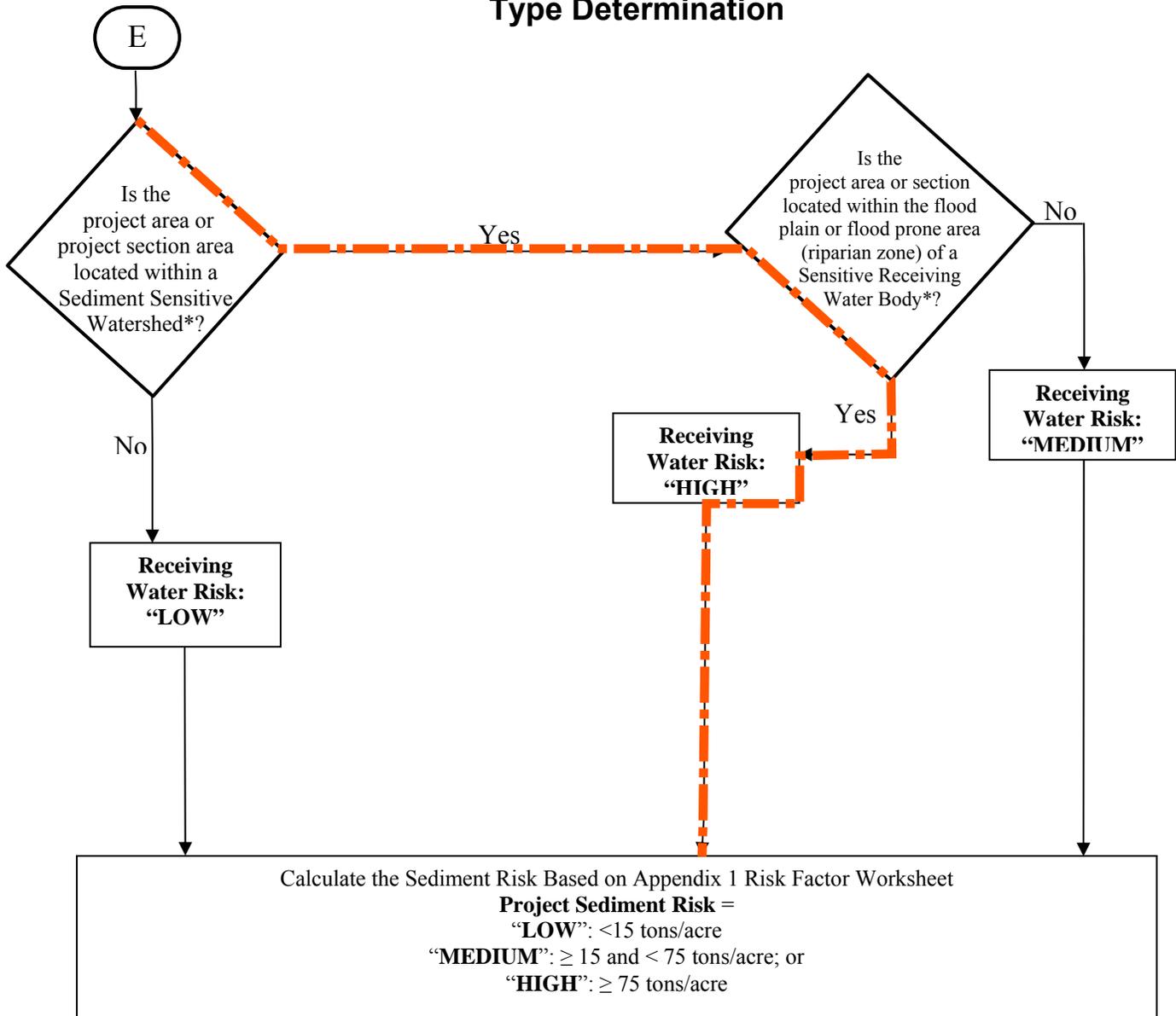
## ATTACHMENT A.1 LUP Project Area or Project Section Area Type Determination



\*See Definition of Terms

\*\* Or: "Will < 30% of the soil disturbance occur on unpaved surfaces?"

## ATTACHMENT A.1 LUP Project Area or Project Section Area Type Determination



\* See Definition of Terms

### PROJECT SEDIMENT RISK

**RECEIVING WATER RISK**

	<b>LOW</b>	<b>MEDIUM</b>	<b>HIGH</b>
<b>LOW</b>	Type 1	Type 1	Type 2
<b>MEDIUM</b>	Type 1	Type 2	Type 3
<b>HIGH</b>	Type 2	Type 3	Type 3

## ATTACHMENT A.1 Definition of Terms

1. **Equivalent Condition** – Means disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.
2. **Linear Construction Activity** – Linear construction activity consists of underground/ overhead facilities that typically include, but are not limited to, any conveyance, pipe or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/ tower pad and cable/ wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/ borrow locations.
3. **Sediment Sensitive Receiving Water Body** – Defined as a water body segment that is listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or is designated with beneficial uses of SPAWN, MIGRATORY, and COLD.
4. **Sediment Sensitive Watershed** – Defined as a watershed draining into a receiving water body listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or a water body designated with beneficial uses of SPAWN, MIGRATORY, and COLD.

**Los Osos Wastewater Project  
Disturbed Area Calculations**

**Linear Underground Project (LUP) Activities - Sewer Collection System**

Description	Average Width of Disturbance	Linear Footage	Area of Disturbance (SF)
Sewer Pipeline	10.00	217,897	2,178,970
Sewer Lateral (4769 LATERALS) 20' EA	6.00	95,380	572,280
Mid Town Staging Area and Temporary Material Stockpile Area (0.8 & 1.2 Acres)			87,120
Pismo & South Bay Staging Area and Temporary Materials Stockpile Area ( 4 Acres)			174,240
		Total Area (SF):	3,012,610
		Disturbed Area (Acres):	69.2
<b>Ancillary Facilities:</b>			
Mountain View Pump Station (PS)			1350
Mountain View Stand by Power (SBP)			4382
Sunny Oaks PS / SBP			5668
Mid Town PS			6635
Mid Town SBP			1610
Solano PS and SBP			5056
Lupine PS			1500
Lupine SBP			3108
East Paso PS & SBP			11150
East Isabel PS & SBP			9570
West Paso PS			5819
Baywood PS			1925
West Paso / Baywood SBP			3174
		Total Area (SF):	60,947
		Disturbed Area (Acres):	1.4
		<b>Total Disturbed Area (Acres)</b>	<b>70.6</b>
		Percentage of Ancillary Facilities	2%

**Broderson Disposal Area - Standard SWPPP**

Broderson Disposal Area Disturbed Area (SF)	339,768
	Total Area (SF):
	339,768
	<b>Total Disturbed Area (Acres):</b>
	<b>7.8</b>

NOTE: All area calculations are approximate and based on the plans provided.

	A	B	C
1	<b>Sediment Risk Factor Worksheet</b>		<b>Entry</b>
2	<b>A) R Factor</b>		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	<a href="http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm">http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm</a>		
5	<b>R Factor Value</b>		120
6	<b>B) K Factor (weighted average, by area, for all site soils)</b>		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	<a href="#">Site-specific K factor guidance</a>		
9	<b>K Factor Value</b>		0.1
10	<b>C) LS Factor (weighted average, by area, for all slopes)</b>		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	<a href="#">LS Table</a>		
13	<b>LS Factor Value</b>		1.23
14			
15	<b>Watershed Erosion Estimate (=RxKxLS) in tons/acre</b>		14.76
16	<b>Site Sediment Risk Factor</b>		<b>Low</b>
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
<p><b>A. Watershed Characteristics</b></p> <p>A.1. Does the disturbed area discharge (either directly or indirectly) to a <b>303(d)-listed waterbody impaired by sediment</b>? For help with impaired waterbodies please check the attached worksheet or visit the link below:</p> <p><a href="http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml">2006 Approved Sediment-impaired WBs Worksheet</a>  <a href="http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml">http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml</a></p> <p><b>OR</b></p> <p>A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN &amp; COLD &amp; MIGRATORY?</p> <p><a href="http://www.ice.ucdavis.edu/geowbs/asp/wbquse.asp">http://www.ice.ucdavis.edu/geowbs/asp/wbquse.asp</a></p>	<p>YES</p> <p>YES</p>	<p>High</p>

## Combined Risk Level Matrix

		<u>Sediment Risk</u>		
		Low	Medium	High
<u>Receiving Water Risk</u>	Low	Level 1	Level 2	
	High	Level 2		Level 3

Project Sediment Risk: **Low**

Project RW Risk: **High**

Project Combined Risk: **Level 2**

## *Query Result*

### California State

AN EROSION INDEX VALUE OF **120.00** HAS BEEN DETERMINED  
FOR THE CONSTRUCTION PERIOD OF **7/1/2012 - 7/1/2014**.

An erosion index of 5.0 or less is in compliance with the EPA standard and qualifies  
for a permitting waiver.

An erosion index exceeding 5.0 is **NOT IN COMPLIANCE** with the EPA standard  
which requires that you submit an application for a construction permit.

Do you wish to change the period of construction if not in compliance?  Yes  No

[PRINT THIS PAGE FOR YOUR RECORDS](#)

NEXT

Appendix B: SWPPP Drawings



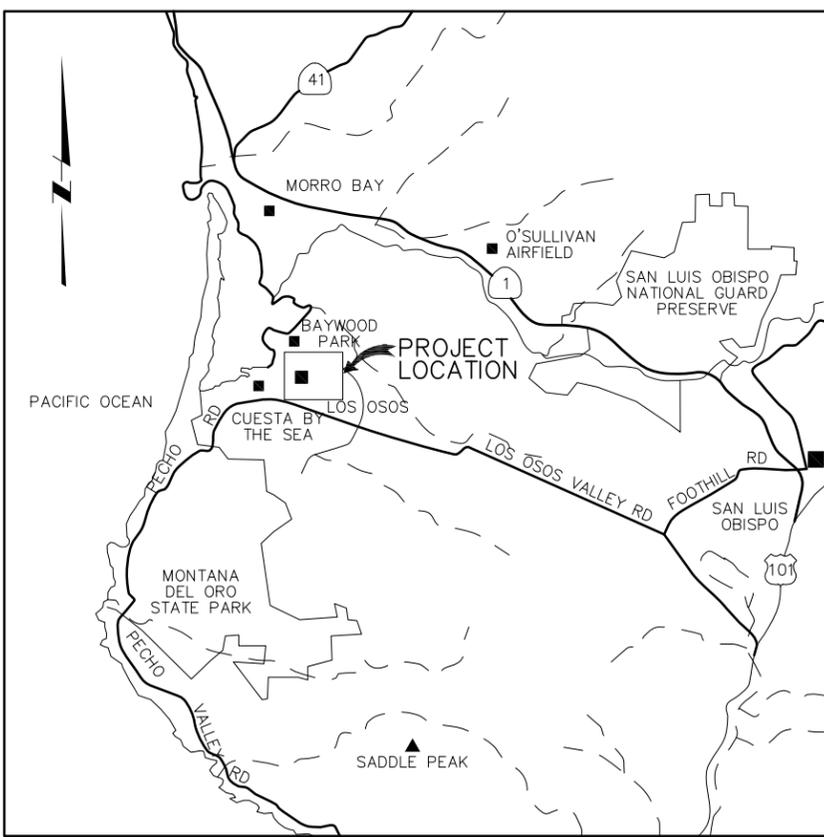
# County of San Luis Obispo Los Osos, California

## Los Osos Wastewater Collection System Project

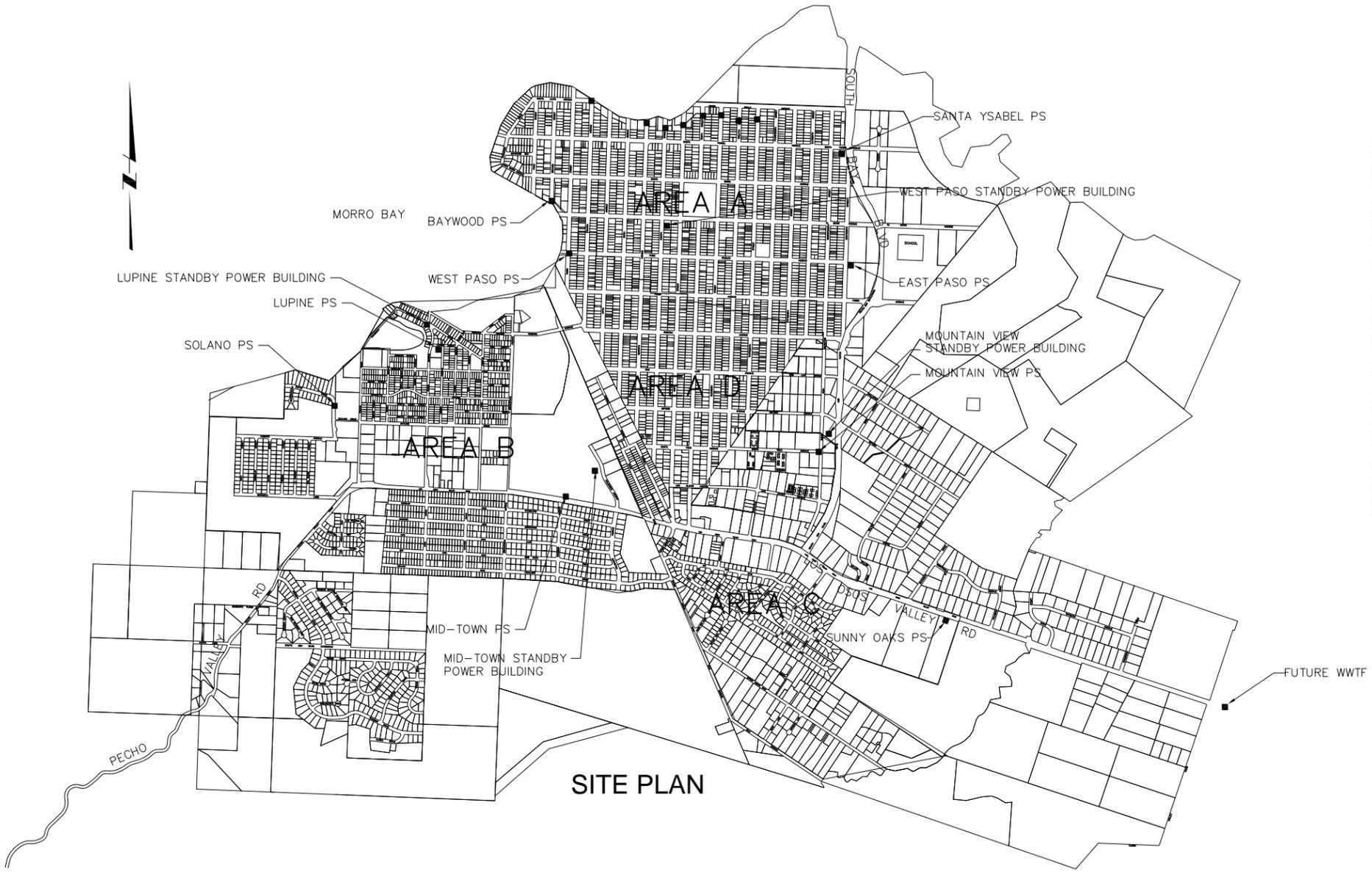
### LINEAR UNDERGROUND PROJECT SWPPP DRAWING



LOCATION MAP



VICINITY MAP



SITE PLAN

SHEET INDEX

- SWPPP-000 TITLE SHEET
- SWPPP-001 VICINITY MAP
- SWPPP-002 GENERAL NOTES
- SWPPP-003 GENERAL NOTES
- SWPPP-004 DETAIL SHEET
- SWPPP-005 DETAIL SHEET
- SWPPP-006 DETAIL SHEET
- SWPPP-007 DI & RIPARIAN LOCATIONS
- SWPPP-008 CONSTRUCTION TRAIN
- SWPPP-009 AREA A KEY MAP
- SWPPP-010 A-D STAGING AREA PISMO & S. BAY BLVD.
- SWPPP-011 BAYWOOD PS
- SWPPP-012 WEST PASO PS
- SWPPP-013 BAYWOOD / WEST PASO SBP
- SWPPP-014 EAST PASO PS
- SWPPP-015 EAST YSABEL PS
- SWPPP-016 AREA D KEY MAP
- SWPPP-017 MOUNTAN VIEW PS
- SWPPP-018 MOUNTAN VIEW SBP
- SWPPP-019 AREA B KEY MAP
- SWPPP-020 B-C STAGING AREA MID TOWN SITE
- SWPPP-021 LUPINE PS
- SWPPP-022 MID TOWN PS & SBP
- SWPPP-023 SOLANO PS
- SWPPP-024 AREA C KEY MAP
- SWPPP-025 SUNNY OAKS PS
- SWPPP-026 LOVR BRIDGE CROSSING

consultant:  
**groundUP**  
 Design & Construction Management  
 Robert W. Carnes  
 Registered Construction Inspector RC #5291  
 5000 BOX 1385 PISMO CALIF. 93447  
 PH & FAX 805-227-4159  
 CELL 440-9968  
 email: rwcarnes@earthlink.net



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: BJC  
 DRAWN BY: WKT  
 CHECKED BY: MDM  
 DATE: JANUARY 2012



0 1/2 1  
 IF THIS BAR DOES NOT MEASURE 1" THEN ADJUST SCALE ACCORDINGLY



LOS OSOS WASTEWATER COLLECTION SYSTEM  
**VICINITY MAP**

SHEET NO.  
**SWPPP-001**

S:\Los Osos\Walnut Creek\G (general All Area's)\A-G-002 01/15/12 13:05 bullockll XREES: LosOsos-bdr, CA-BJC, LOC\_MDL\_KEYPLAN, vicinity, boundary

GENERAL EROSION CONTROL NOTES:

1. PROHIBITION OF MOST NON-STORM WATER DISCHARGES

ONLY STORM WATER FROM THE PROJECT SITE SHALL BE ALLOWED TO FLOW INTO THE PUBLIC STREET SYSTEM. CLEAN, NON-CHLORINATED WATER FROM THE FLUSHING OF FIRE HYDRANTS, WATER MAINS, AND STORM DRAINS MAY BE DISCHARGED TO THE STREET IF IT IS NOT ALLOWED TO COLLECT DIRT, DEBRIS AND TRASH WHILE FLOWING TO THE STREET.

2. SOURCES OF STORM WATER POLLUTANTS

STORM WATER POLLUTANTS INCLUDE SOIL SEDIMENT AND NUTRIENTS, OIL, GREASE, TOXIC POLLUTANTS, HEAVY METALS, PAINT, AND BUILDING MATERIALS. SOURCES OF STORM WATER POLLUTANTS INCLUDE SOIL EROSION BY WATER AND/OR WIND; CLEARING OF VEGETATION; GRADING; VEHICLE AND EQUIPMENT REFUELING AND MAINTENANCE; WASHING OF CONCRETE TRUCKS, MIXERS AND HANDLING REQUIREMENT; PAINTS, SOLVENTS, ADHESIVES; LANDSCAPING WORK; ROOFING AND BUILDING MATERIALS; AND PETROLEUM PRODUCTS.

3. EROSION AND SEDIMENT CONTROLS

A. COVER EXPOSED STOCKPILES OF SOILS, CONSTRUCTION MATERIALS, AND LANDSCAPING MATERIALS WITH HEAVY PLASTIC SHEETING OR NON-WOVEN GEOTEXTILES AND STABILIZE IN PLACE WITH SAND BAG AND ROPE OR OTHER MEANS.

B. IN LANDSCAPING AREAS WHERE THE VEGETATION HAS NOT ESTABLISHED GROWTH AND TAKEN HOLD, CONSTRUCT SANDBAG OR DIRT BERM'S OR SILT FENCES AROUND THEIR PERIMETER TO INSURE THAT WATER WILL BE CONTAINED INSIDE THE LANDSCAPING AREA AND THAT IT WILL NOT BE CONVEYED TO A STORM DRAIN INLET.

C. RE-VEGETATE AREAS WHERE LANDSCAPING HAS DIED OR NOT TAKEN HOLD.

D. DIVERT STORM WATER RUNOFF AROUND DISTURBED SOILS WITH BERM'S, DIRT SWALES GRAVEL BAG BARRIERS.

4. OTHER CONTROLS

A. WASTE DISPOSAL

1. KEEP SOLID WASTE DISPOSAL CONTAINERS COVERED TO PREVENT ENTRY OF STORM WATER AND DEBRIS FROM BEING BLOWN FROM CONTAINERS. CONTAINERS WILL BE WATER TIGHT.

2. PROVIDE FOR THE WEEKLY (OR MORE FREQUENT, AS NECESSARY) DISPOSAL OF WASTE CONTAINERS.

3. PROVIDE CONTAINERS AT CONVENIENT LOCATIONS AROUND THE SITE.

B. SWEEPING OF SITE

1. PROVIDE WEEKLY (OR MORE FREQUENT, AS NECESSARY) SWEEPING BY HAND OR MECHANICAL MEANS TO KEEP THE PAVED AREAS OF THE SITE FREE OF DUST, DIRT, AND DEBRIS.

2. DISPOSE OF ACCUMULATED SWEEPING IN WASTE CONTAINERS, OR HAUL IT OFF THE SITE TO A LANDFILL.

C. SANITARY SEPTIC DISPOSAL

1. PORTABLE TOILETS AND OTHER SANITARY FACILITIES SHALL BE SERVICED WEEKLY (OR MORE FREQUENT, AS NECESSARY) AND PUMPED CLEAN BY A WASTE DISPOSAL COMPANY. NO TOXIC OR HAZARDOUS WASTES SHALL BE DISPOSED OF IN A PORTABLE TOILET OR IN THE ON-SITE SANITARY SEWER. PORTABLE TOILETS SHALL BE PROVIDED IN CONTAINMENT FOR SPILL PREVENTION.

D. SPILLS

1. STORE ADEQUATE ABSORBENT MATERIAL, RAGS, BROOMS, SHOVELS, AND WASTE CONTAINERS ON THE SITE TO CLEAN-UP SPILLS OR MATERIALS SUCH AS FUEL, PAINT SOLVENTS, OR CLEANERS. CLEAN UP MINOR SPILLS IMMEDIATELY.

2. FOR REPORTABLE QUANTITIES OF A HAZARDOUS OR TOXIC SUBSTANCES, SECURE THE SERVICES OF QUALIFIED PERSONNEL FOR CLEAN-UP AND DISPOSAL.

E. CONTROL OF ALLOWABLE NON-STORM WATER DISCHARGES

LANDSCAPING IRRIGATION, EROSION CONTROL MEASURES, PIPE FLUSHING AND TESTING PAVEMENT WASHING, AND DE-WATERING ARE ALLOWED IF THEY CANNOT FEASIBLY BE ELIMINATED, COMPLY WITH THIS PLAN, DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS, AND ARE NOT REQUIRED TO BE PERMITTED BY THE LOCAL REGIONAL WATER QUALITY CONTROL BOARD.

F. VEHICLES AND EQUIPMENT

1. FIX LEAKS OF FUEL, OIL, AND OTHER SUBSTANCES IMMEDIATELY.

2. PERFORM REFUELING AND SERVICE OF VEHICLES OR EQUIPMENT OFF-SITE WHEN POSSIBLE. IF REFUELING OR SERVICE OF EQUIPMENT IS PERFORMED ON-SITE, THEN PROVIDE AN IMPERVIOUS, CONTAINED AREA WHERE ANY SPILLS CAN BE CONTAINED WITHOUT FLOWING TO A STORM WATER INLET OR ONTO THE GROUND.

3. USE DRIP PANS TO CATCH LEAKS AND SMALL SPILLS.

G. CONCRETE TRUCKS, MIXERS, AND HAULING EQUIPMENT

1. DISPOSE OF WASHOUT FROM THE WASHING OF CONCRETE TRUCKS AT ASSIGNED WASHOUT AREAS.

2. PROVIDE A HOLDING TANK TO RECEIVE ANY WASHOUT FROM CONCRETE EQUIPMENT. DISPOSAL OF TANK CONTENTS SHOULD BE CONDUCTED BY A WASTE HAULING FIRM.

3. PROVIDE A DESIGNATED AREA FOR WASHING ANY VEHICLES OR EQUIPMENT; DRAINAGE FROM THIS AREA SHOULD FLOW TO THE HOLDING TANK.

H. LANDSCAPING OPERATIONS

1. USE ONLY THE MINIMUM AMOUNT OF LANDSCAPING FERTILIZERS, NUTRIENTS, AND OTHER CHEMICALS THAT ARE NEEDED.

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2. DO NO OVER WATER FERTILIZED OR TREATED LANDSCAPE AREAS, MINIMIZE RUNOFF OF IRRIGATION WATER FROM LANDSCAPING.

I. STORM WATER INLETS

KEEP ALL ON-SITE STORM WATER INLETS CLEAN AND FREE OF DIRT, SILT, AND DEBRIS, ETC. IN THE EVENT THAT SEDIMENT AND DEBRIS MAY FLOW TO AN INLET, PROVIDE A 6-INCH (MINIMUM) SANDBAG BERM AROUND THE INLET TO TRAP THE DIRT AND DEBRIS AND ALLOW ONLY CLEAN STORM WATER TO ENTER THE INLET (EROSION CONTROL PLAN).

5. INSPECTION BY CONTRACTOR & ENGINEER OF RECORD

A. REGULAR INTERVAL INSPECTION AND INSPECTION BEFORE AND AFTER STORM

1. VISUALLY INSPECT THE SITE WEEKLY TO INSURE THAT STORM WATER INLETS ARE FREE OF DIRT AND DEBRIS.

2. BEFORE A STORM, INSPECT THE SITE TO INSURE THAT STORM WATER POLLUTION CONTROL MEASURES ARE IN PLACE.

3. AFTER A STORM, INSPECT ALL STORM WATER INLETS TO INSURE THAT THEY ARE CLEAR OF DIRT AND DEBRIS. CLEAN THOSE STORM WATER INLETS THAT ARE NOT CLEAR AND FREE OF DEBRIS.

4. THE REGIONAL WATER BOARD MAY REQUIRE THE DISCHARGER TO CONDUCT ADDITIONAL SITE INSPECTIONS, SUBMIT REPORTS AND CERTIFICATIONS, OR TO PERFORM SAMPLING AND ANALYSIS.

5. THE DISCHARGER (PERMITTEE) IS REQUIRED TO CONDUCT INSPECTION OF THE CONSTRUCTION SITE PRIOR TO ANTICIPATED STORM EVENTS AND AFTER ACTUAL STORM EVENTS TO IDENTIFY AREAS CONTRIBUTING TO A STORM WATER DISCHARGE AND TO EVALUATE WHETHER MEASURES TO REDUCE POLLUTANT LOADINGS IDENTIFIED IN THE SWPPP ARE ADEQUATE AND PROPERLY IMPLEMENTED IN ACCORDANCE WITH THE TERMS OF THE GENERAL PERMIT AND WHETHER ADDITIONAL CONTROL PRACTICES ARE NEEDED.

6. MAINTENANCE OF CONTROLS

A. MAINTENANCE AND REPAIR

ALL CONTROLS AND MEASURES INDICATED ON THIS PLAN SHOULD BE MAINTAINED IN GOOD AND EFFECTIVE CONDITION BY THE CONTRACTOR. IF ANY CONTROL OF MEASURES ARE DAMAGED OR REMOVED, THEY SHOULD BE PROMPTLY REPAIRED OR RESTORED.

B. PLAN REVISIONS

IF CONSTRUCTION ACTIVITY OR CONDITIONS CHANGE FROM THOSE SHOWN IN THIS PLAN THEN THIS PLAN SHOULD BE REVISED TO REFLECT THE CURRENT CONDITIONS.

7. FINAL STABILIZATION AND POST-CONSTRUCTION CONTROLS

A. AFTER CONSTRUCTION HAS BEEN COMPLETED, THE SITE SHALL BE SWEEPED CLEAN, STORM WATER INLETS (GRATES AND BASIN) SHALL BE CLEANED, AND ALL WASTE AND LEFTOVER MATERIALS SHALL BE REMOVED FROM THE SITE.

B. ALL LANDSCAPING AND PLANTING AREAS SHOULD BE WELL MAINTAINED TO PREVENT EROSION. AVOID OVER-WATERING OF LANDSCAPING.

C. ALL PAVED AREAS SHOULD BE SWEEPED WEEKLY EITHER BY HAND OR BY MECHANICAL MEANS TO KEEP THE SITE CLEAR OF DIRT, DUST, AND DEBRIS.

D. WASTE MATERIALS ON-SITE SHOULD BE STORED IN COVERED CONTAINERS WHICH ARE CLEANED OUT REGULARLY.

E. TESTING OF FIRE HYDRANTS ON-SITE SHALL NOT BE CONDUCTED UNTIL THE AREA WHERE THE WATER DISCHARGES HAS BEEN SWEEPED CLEAN OF DIRT AND DEBRIS.

F. STORM DRAIN LINES SHOULD BE CHECKED AND CLEANED ANNUALLY TO KEEP THEM CLEAN AND CLEAR OF DEBRIS.

G. ALL ON-SITE STORM WATER INLETS SHOULD BE CLEARLY MARKED WITH 4" BLUE LETTERS ON WHITE FIELD "STORM WATER ONLY, THIS DRAINS TO THE OCEAN".

8. ALL CONSTRUCTION ACTIVITIES INCLUDING GRADING, VEGETATION REMOVAL, STOCKPILING, EQUIPMENT STORAGE ETC. SHALL REMAIN OUTSIDE OF THE 20-FOOT CREEK SETBACK LINE AT ALL TIMES UNLESS AN EXCEPTION FOR SUCH CONSTRUCTION HAS BEEN APPROVED BY THE COMMUNITY DEVELOPMENT DEPARTMENT. THE CREEK SETBACK LINE SHALL BE ESTABLISHED BY THE CITY'S NATURAL RESOURCE MANAGER AND MARKED IN THE FIELD. THE SETBACK AREA SHALL BE FENCED WITH ORANGE CONSTRUCTION FENCING, AND SHALL BE IN PLACE PRIOR TO THE BEGINNING OF CONSTRUCTION AND THROUGHOUT THE DURATION OF CONSTRUCTION.

**SWPPP PLAN NOTES:**

1. ALL EROSION CONTROL NOTES ON SWPPP SHEETS SHALL APPLY TO THIS PLAN.

2. ALL PERIMETER PROTECTIONS I.E. SILT FENCING AND FIBER ROLLS ARE CONSIDERED PHASE ONE CONTROLS AND SHALL BE INSTALLED PRIOR TO THE BEGINNING OF WORK ON THE SITE AS PRACTICABLE.

3. GRAVEL BAGS AND FIBER ROLLS IN GRADED AREAS SHALL BE INSTALLED AS PRACTICABLE AND IN CONFORMANCE WITH RAIN CONDITIONS.

4. HYDROSEED, MULCH AND WIND PROTECTION MEASURES SHALL BE APPLIED IF AREAS ARE NOT TO RECEIVE FURTHER WORK WITH IN 14 DAYS.

5. HYDROMULTCH SHALL BE APPLIED AFTER ALL GRADING WORK IS PERFORMED AND DEEMED COMPLETE. FIBER ROLLS MAY REMAIN IN PLACE AFTER WORK COMPLETION.

6. FOR RESPONSIBLE CHARGE OF EROSION CONTROL DEVICES SEE SWPPP BOOK SECTION 6.1.

7. ALL DETAILS FOR EROSION DEVICES ARE SHOWN ON DETAIL SHEETS AND IN APPENDIX H.

8. HYDROMULCH, HYDROSEED AND OR WIND EROSION PREVENTION MEASURES PER BMP'S EC-3, 4 , 6 OR WE-1 SHALL BE PUT IN PLACE AS SOON AS PRACTICABLE.

9. SAMPLING POINT ARE AS SHOWN ON PUMP STATION PLANS AND SHALL BE DETERMINED IN THE FIELD ON THE LINEAR CONSTRUCTION AT APPROPRIATE LOCATIONS.

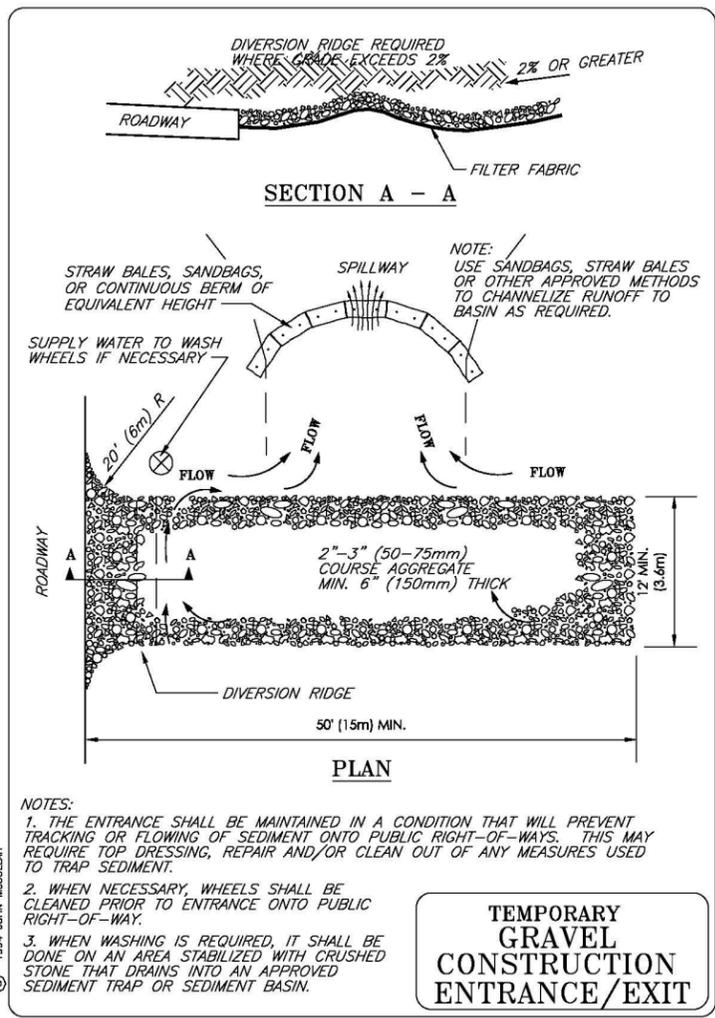
10. DETENTION RETENSION FACILITIES ARE TO BE CLEANED OF DEBRIS AND SOIL AS NECESSARY AND PRACTICABLE.

consultant:

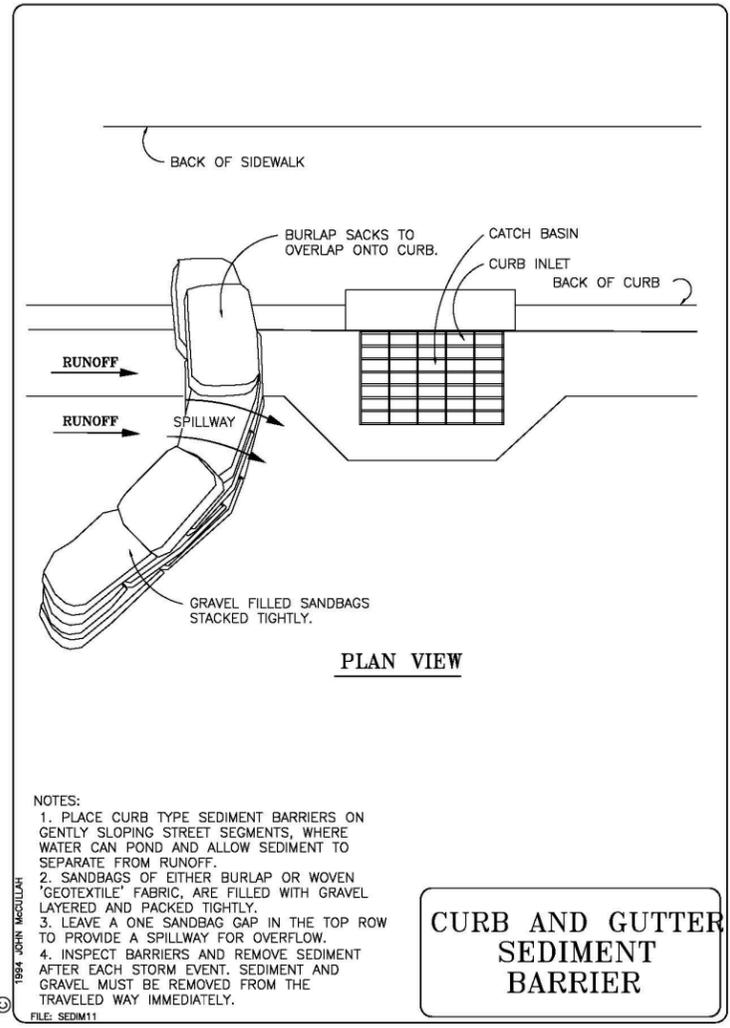


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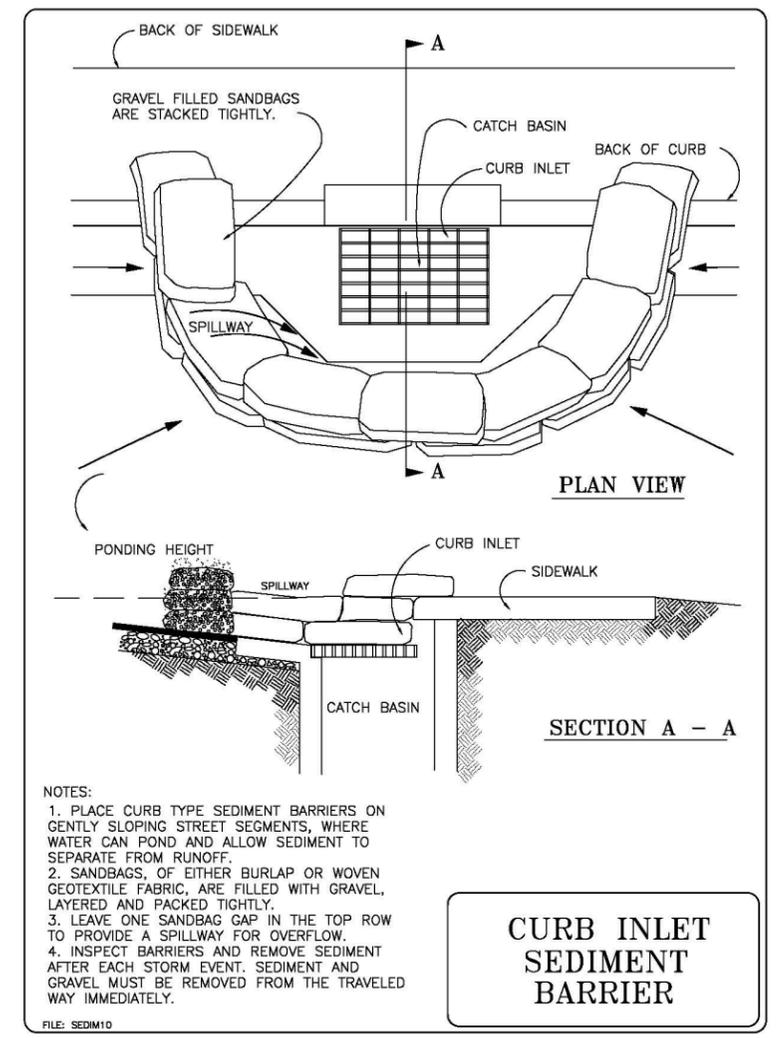




**TC-1 STABILIZED CONSTRUCTION ENTRANCE**



**SE-10 STORM DRAIN INLET PROTECTION**



**SE-10 STORM DRAIN INLET PROTECTION**

**FOR ADDITIONAL BMP DETAILS AND INFORMATION SEE SWPPP APPENDIX H.**

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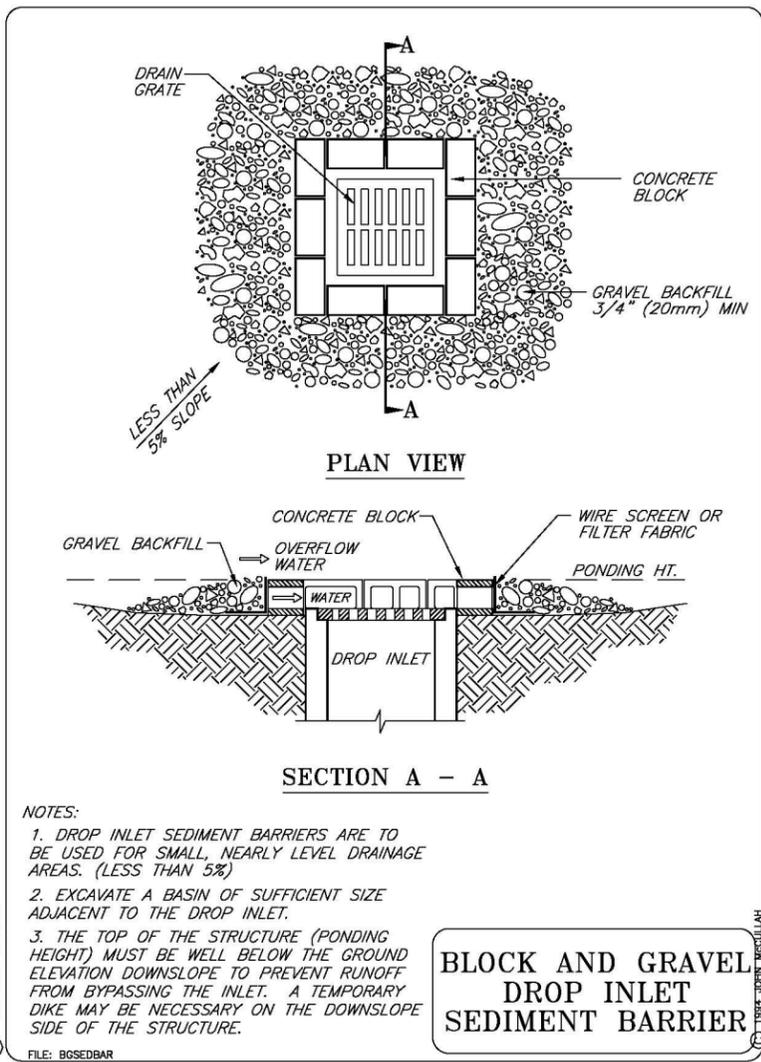
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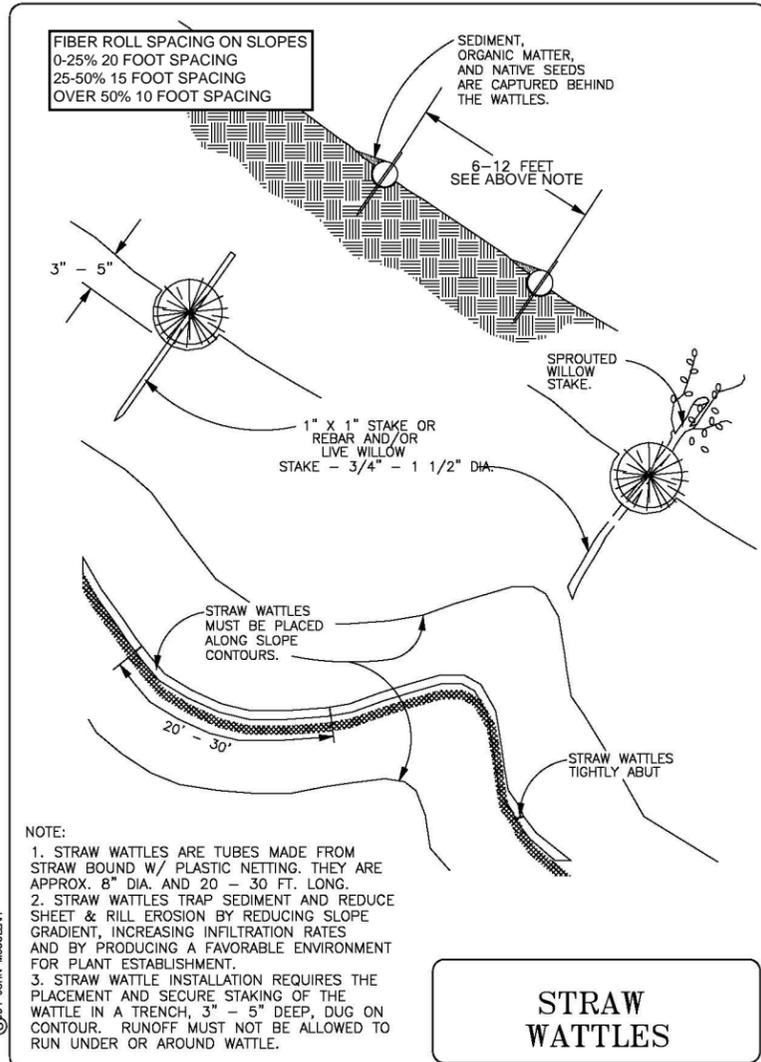
LOS OSOS WASTEWATER COLLECTION SYSTEM

**SWPPP DETAILS**

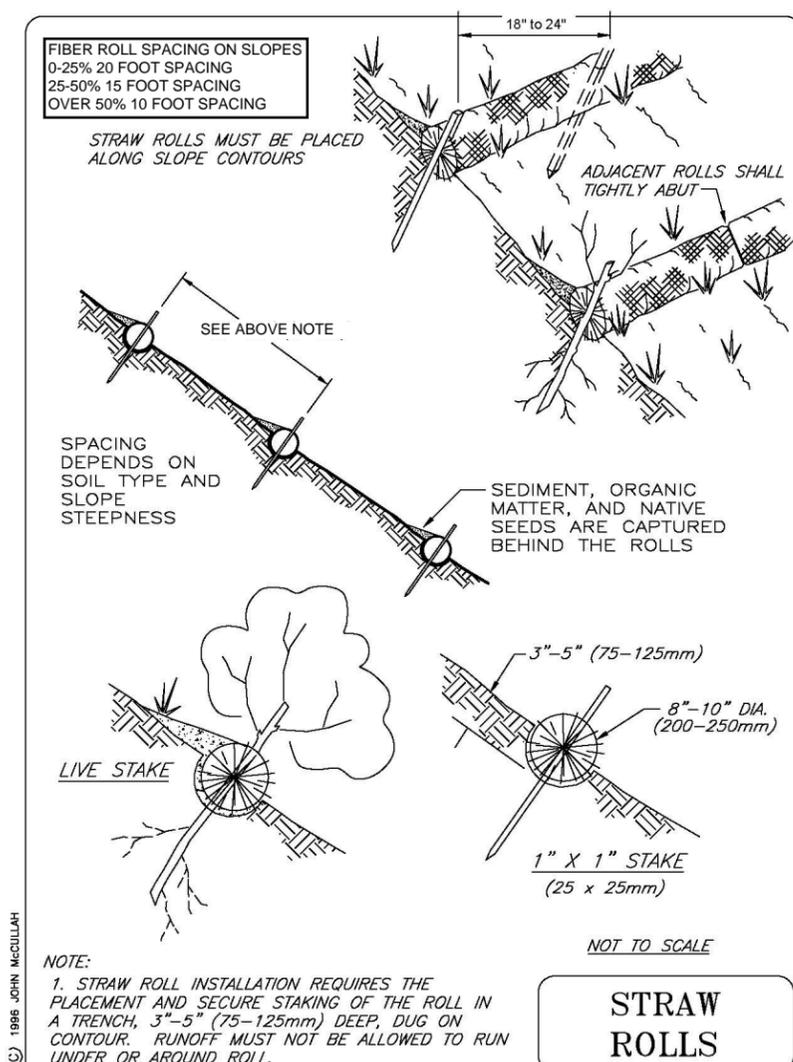
SWPPP-004



SE-10 STORM DRAIN INLET PROTECTION



SE-5 FIBER ROLL INSTALLATION



SE-5 FIBER ROLL INSTALLATION

FOR ADDITIONAL BMP DETAILS AND INFORMATION SEE SWPPP APPENDIX H.

LOS OSOS WASTEWATER COLLECTION SYSTEM

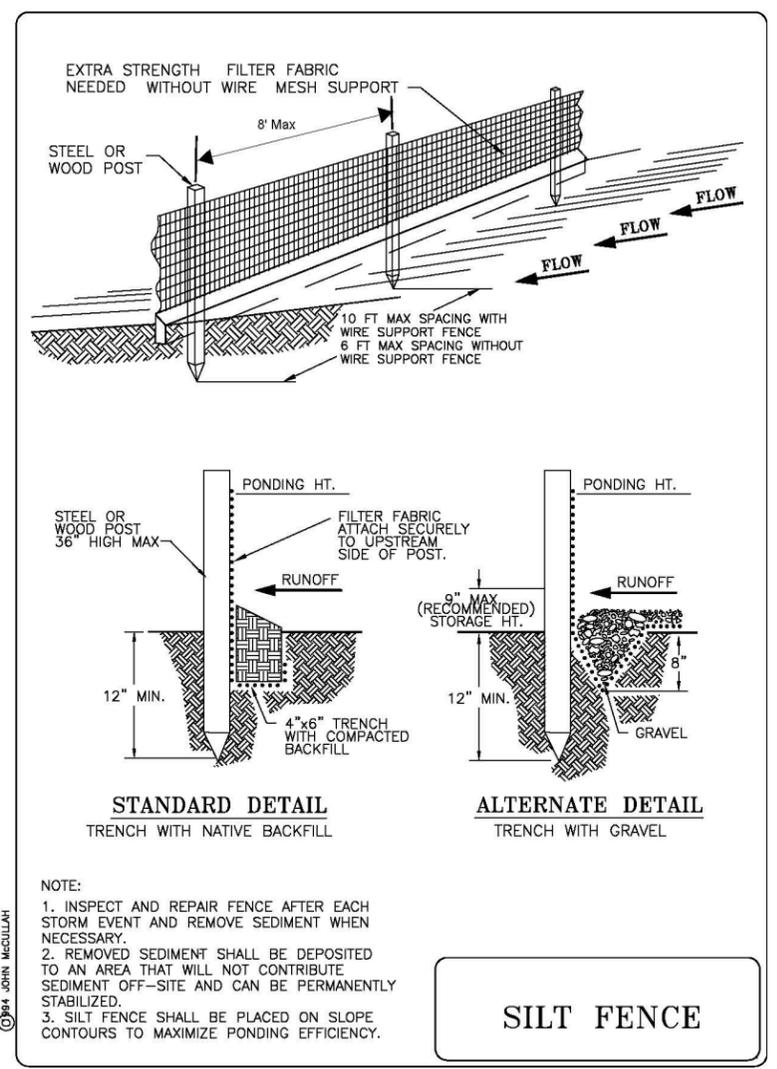
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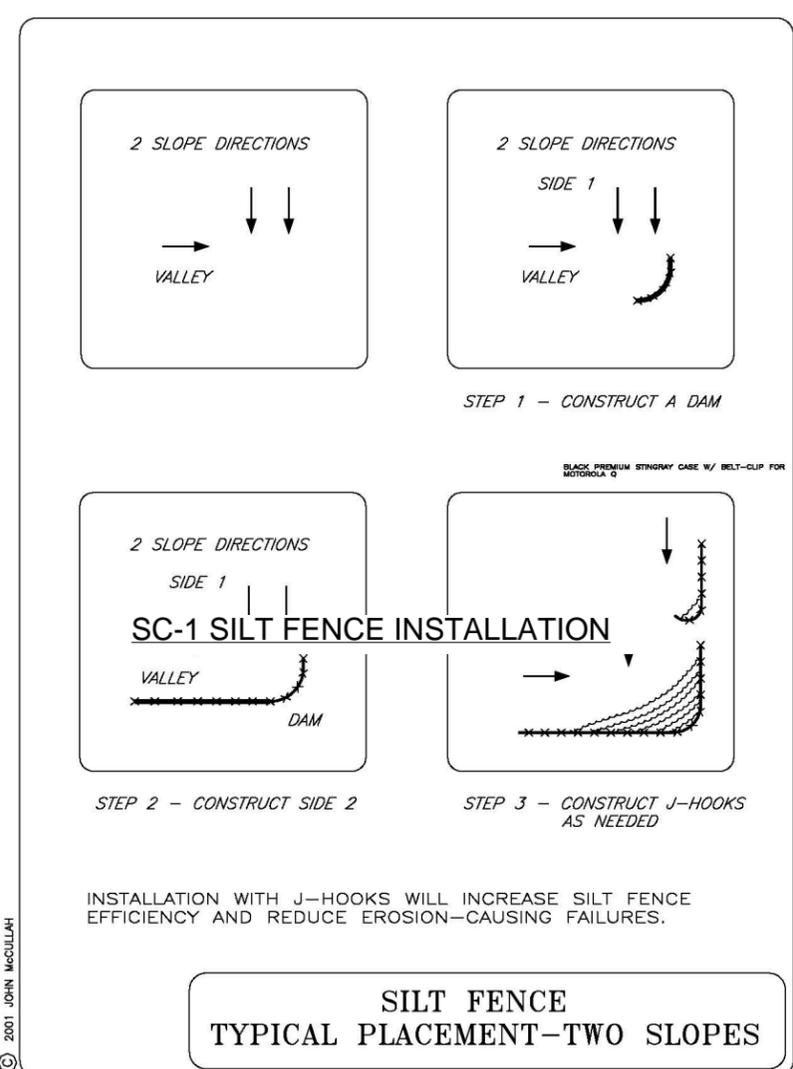
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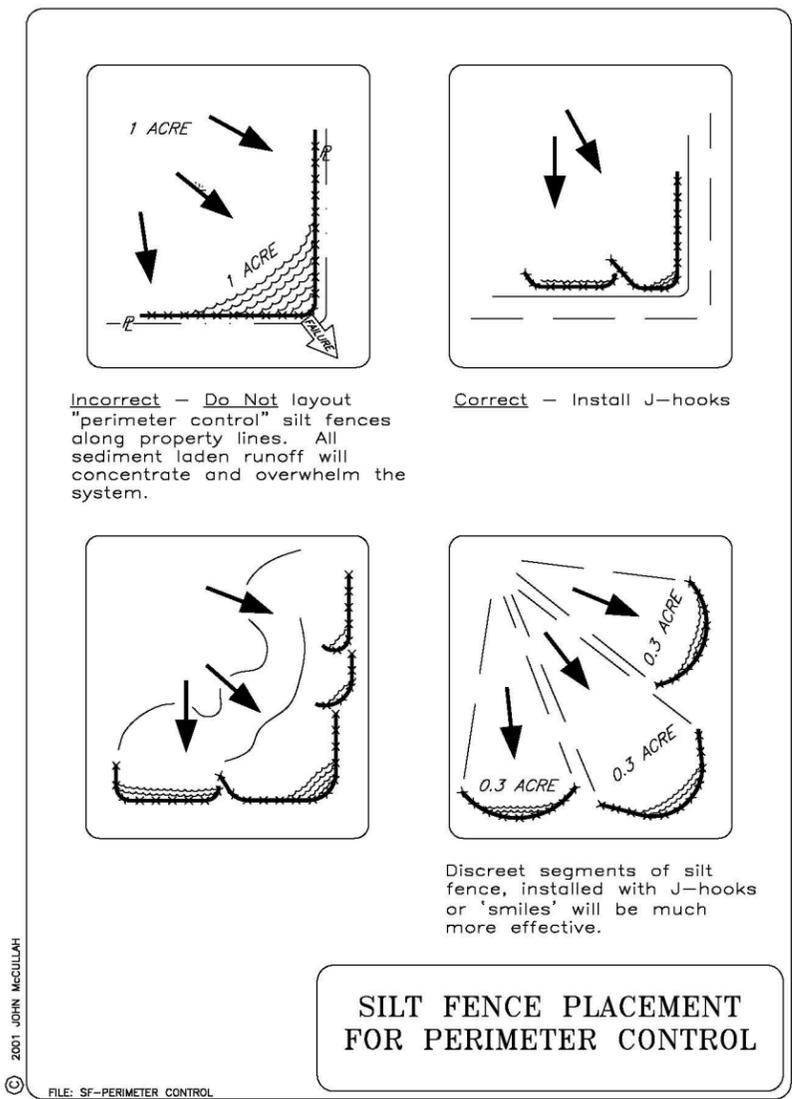
**SE-1 SILT FENCE INSTALLATION**



**SE-1 & SE-5 SILT FENCE & FIBER ROLL SLOPE PLACEMENT**

**FOR ADDITIONAL BMP DETAILS AND INFORMATION SEE SWPPP APPENDIX H.**

LOS OSOS WASTEWATER COLLECTION SYSTEM



**SE-1 & SE-5 SILT FENCE & FIBER ROLL SLOPE PLACEMENT**

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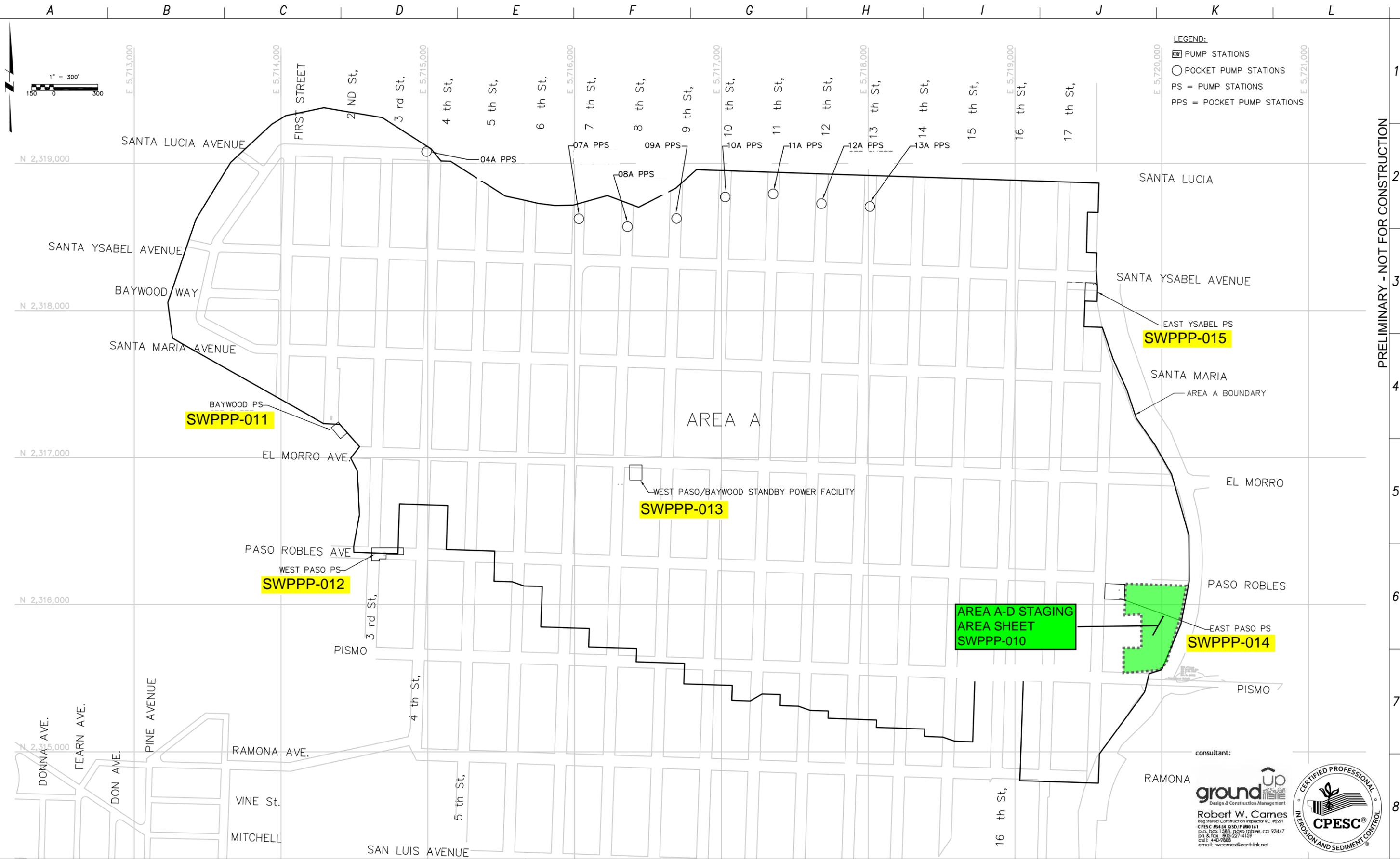


**SWPPP DETAILS**

SWPPP-006







PRELIMINARY - NOT FOR CONSTRUCTION

LOS OSOS WASTEWATER COLLECTION SYSTEM

# AREA A KEY MAP

SWPPP-009

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- SWPPP PLAN NOTES:**
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  2. ALL PERIMETER PROTECTIONS I.E. SILT FENCING AND FIBER ROLLS ARE CONSIDERED PHASE ONE CONTROLS AND SHALL BE INSTALLED PRIOR TO THE BEGINNING OF WORK ON THE SITE AS PRACTICABLE.
  3. GRAVEL BAGS AND FIBER ROLLS IN GRADED AREAS SHALL BE INSTALLED AS PRACTICABLE AND IN CONFORMANCE WITH RAIN CONDITIONS.
  4. HYDROSEED, MULCH AND WIND PROTECTION MEASURES SHALL BE APPLIED IF AREAS ARE NOT TO RECEIVE FURTHER WORK WITH IN 14 DAYS.
  5. HYDROMULCH SHALL BE APPLIED AFTER ALL GRADING WORK IS PERFORMED AND DEEMED COMPLETE. FIBER ROLLS MAY REMAIN IN PLACE AFTER WORK COMPLETION.
  6. FOR RESPONSIBLE CHARGE OF EROSION CONTROL DEVICES SEE SWPPP BOOK SECTION 6.1.
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  10. DETENTION RETENSION FACILITIES ARE TO BE CLEANED OF DEBRIS AND SOIL AS NECESSARY AND PRACTICABLE.

**LEGEND**

TC-1 STABILIZED CONSTRUCTION ENTRANCE	
SE-1 SILT FENCE	
SE-5 FIBER ROLL	
SE-6 GRAVEL BAG BARRIERS	
SE-7 STREET SWEEPING AND VACUUMING	
WM-8 CONCRETE WASH OUT	
SAMPLING POINT	

SC-5 FIBER ROLL INSIDE A SC-1 SILT FENCE TYPICAL ALONG THE TOE OF SLOPE WITH NO MORE THAN 4 VERTICAL FEET UP STREAM.

**THE CONTRACTOR SHALL PROVIDE A DETAILED STAGING AREA SWPPP PLAN SHOWING THE LOCATION OF THEIR CONSTRUCTION TRAILER, STOCKPILE AREAS, STORAGE AREAS, FUELING ETC, WITH SWPPP MEASURES FOR REVIEW AND APPROVAL BY THE PROJECT QSD AND LRP AND TO AMEND TO THE SWPPP AND THE SMART SYSTEM**

**STAGING AREA SHOWN IS APPROXIMATELY 4 ACRES, FOR LEGAL DESCRIPTION OF STAGING AREA SEE CIVIL PLAN.**

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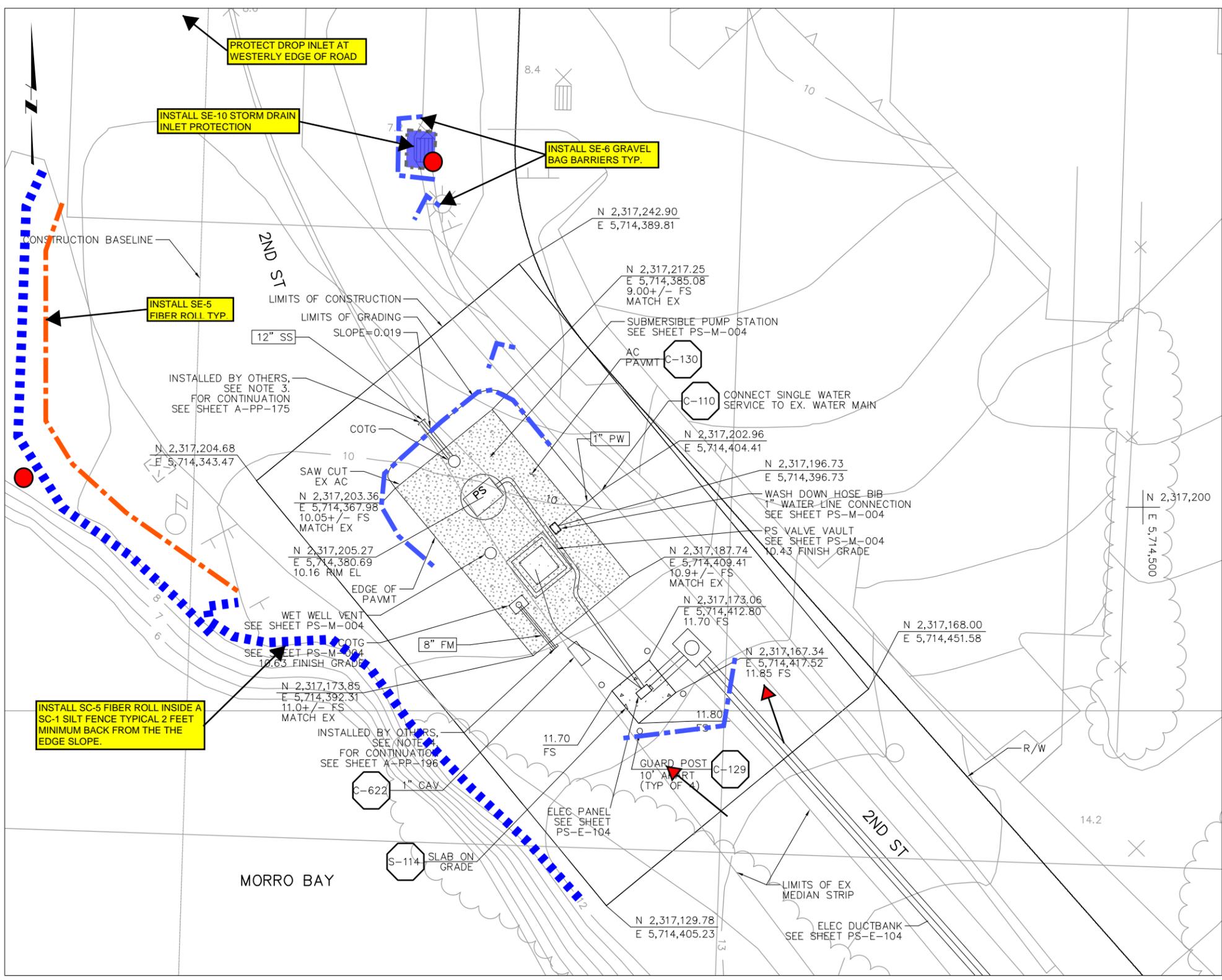
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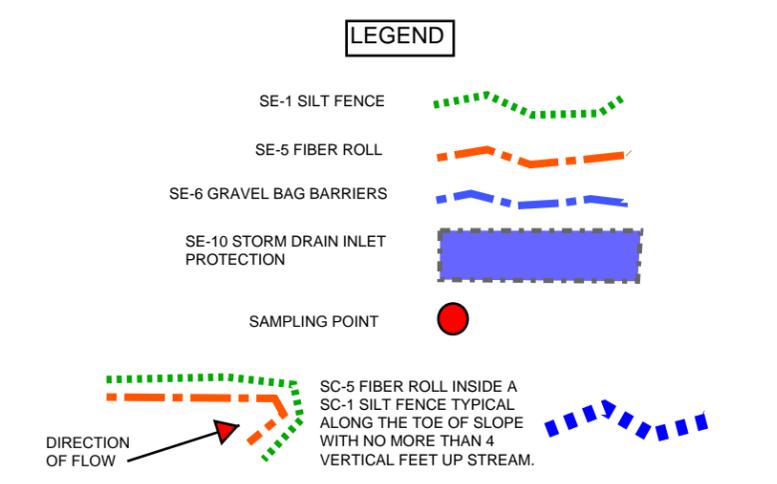
LOS OSOS WASTEWATER COLLECTION SYSTEM

# AREA A-D, PS STAGING AREA SWPPP

SWPPP-010



- SWPPP PLAN NOTES:**
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- SHEET NOTES:**
1. ALL STOCKPILED MATERIAL SHALL BE REMOVED PRIOR TO ANY RAIN EVENTS AT THIS LOCATION.
  2. STREETS SHALL BE SWEEP AS NECESSARY TO PREVENT TRACKING OF MATERIAL AND SEDIMENT TRANSFER.
  3. CONCRETE WASHOUT SHALL BE PERFORMED AT A REMOTE LOCATION FROM THIS SITE.
  4. PROJECT SAMPLING POINT IS THE CULVERT OUTLET TO THE WEST OF THE WORK AREA AND AS SHOWN ON THIS PLAN.
  5. RESTORE AC PAVING AS SOON AS PRACTICABLE.



**BAYWOOD PUMP STATION**  
**PLAN**  
1" = 10'  
5 0 10

LOS OSOS WASTEWATER COLLECTION SYSTEM

**BAYWOOD PS SWPPP**

SWPPP-011

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EROSION AND SEDIMENT CONTROL

PRELIMINARY - NOT FOR CONSTRUCTION

**LEGEND**

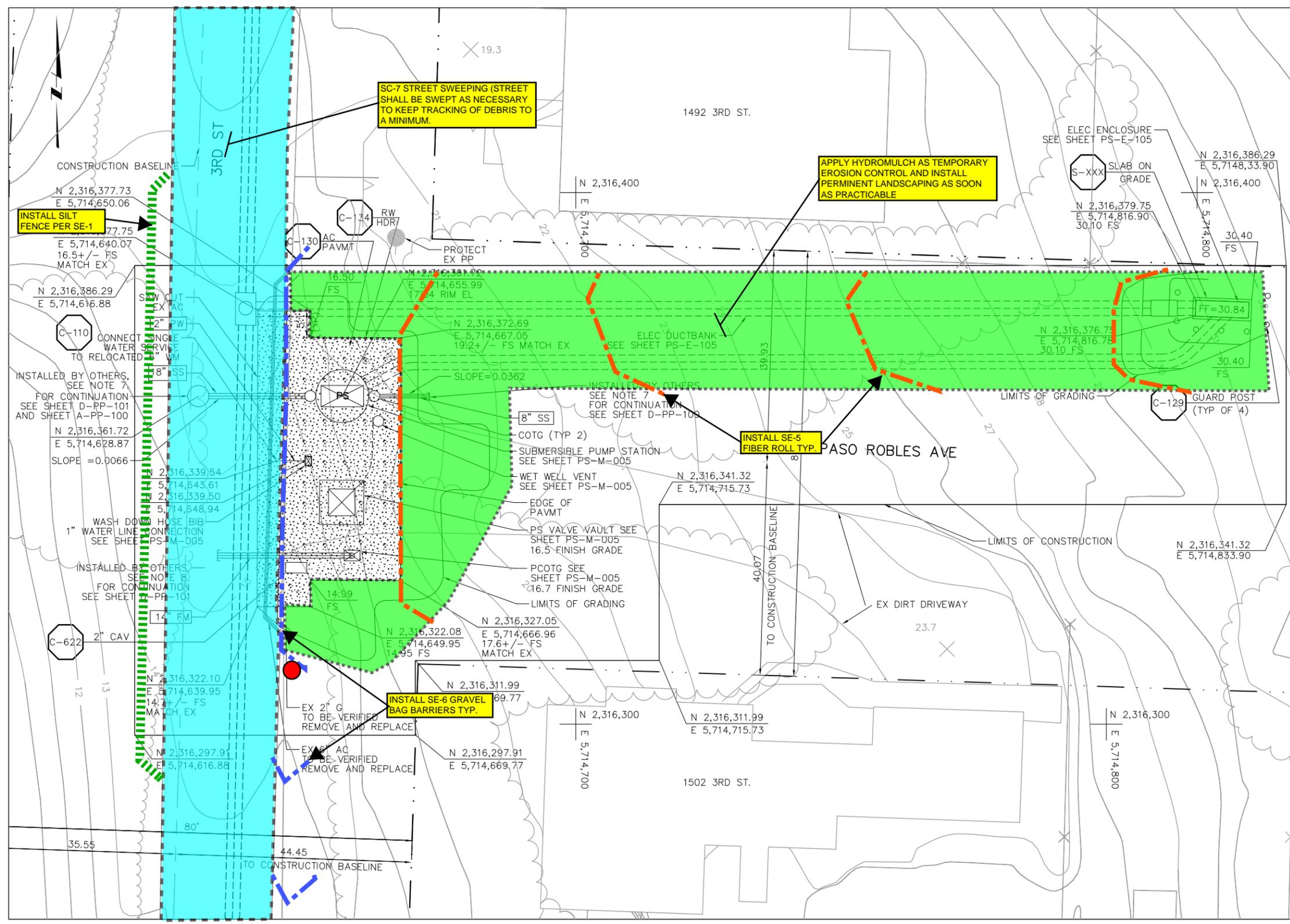
- TC-1 STABILIZED CONSTRUCTION ENTRANCE 
- SE-1 SILT FENCE 
- SE-5 FIBER ROLL 
- SE-6 GRAVEL BAG BARRIERS 
- SE-7 STREET SWEEPING AND VACUUMING 
- SE-10 STORM DRAIN INLET PROTECTION 
- EC-3 / 6 HYDRAULIC MULCH, STRAW AND/OR WE-1 WIND EROSION PREVENTION 
- SAMPLING POINT 

**SWPPP PLAN NOTES:**

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10. DETENTION RETENTION FACILITIES ARE TO BE CLEANED OF DEBRIS AND SOIL AS NECESSARY AND PRACTICABLE.

**SHEET NOTES:**

1. CONTRACTOR SHALL PAY SPECIAL ATTENTION TO TRACKING OF MATERIAL DUE TO LACK OF AN AREA TO ESTABLISH A CONSTRUCTION ENTRANCE AT THIS SITE.
2. NO CONCRETE WASHOUT WILL BE ALLOWED AT THIS SITE. CONCRETE WASHOUT SHALL BE DONE REMOTELY.



SC-7 STREET SWEEPING (STREET SHALL BE SWEEPED AS NECESSARY TO KEEP TRACKING OF DEBRIS TO A MINIMUM.)

APPLY HYDROMULCH AS TEMPORARY EROSION CONTROL AND INSTALL PERMINENT LANDSCAPING AS SOON AS PRACTICABLE

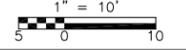
INSTALL SILT FENCE PER SE-1

INSTALL SE-5 FIBER ROLL TYP.

INSTALL SE-6 GRAVEL BAG BARRIERS TYP.

WEST PASO PUMP STATION

**PLAN**



LOS OSOS WASTEWATER COLLECTION SYSTEM

**WEST PASO PS SWPPP**

SWPPP-012

consultant:

**groundUP**  
Design & Construction Management

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email: rwcarnes@earthlink.net

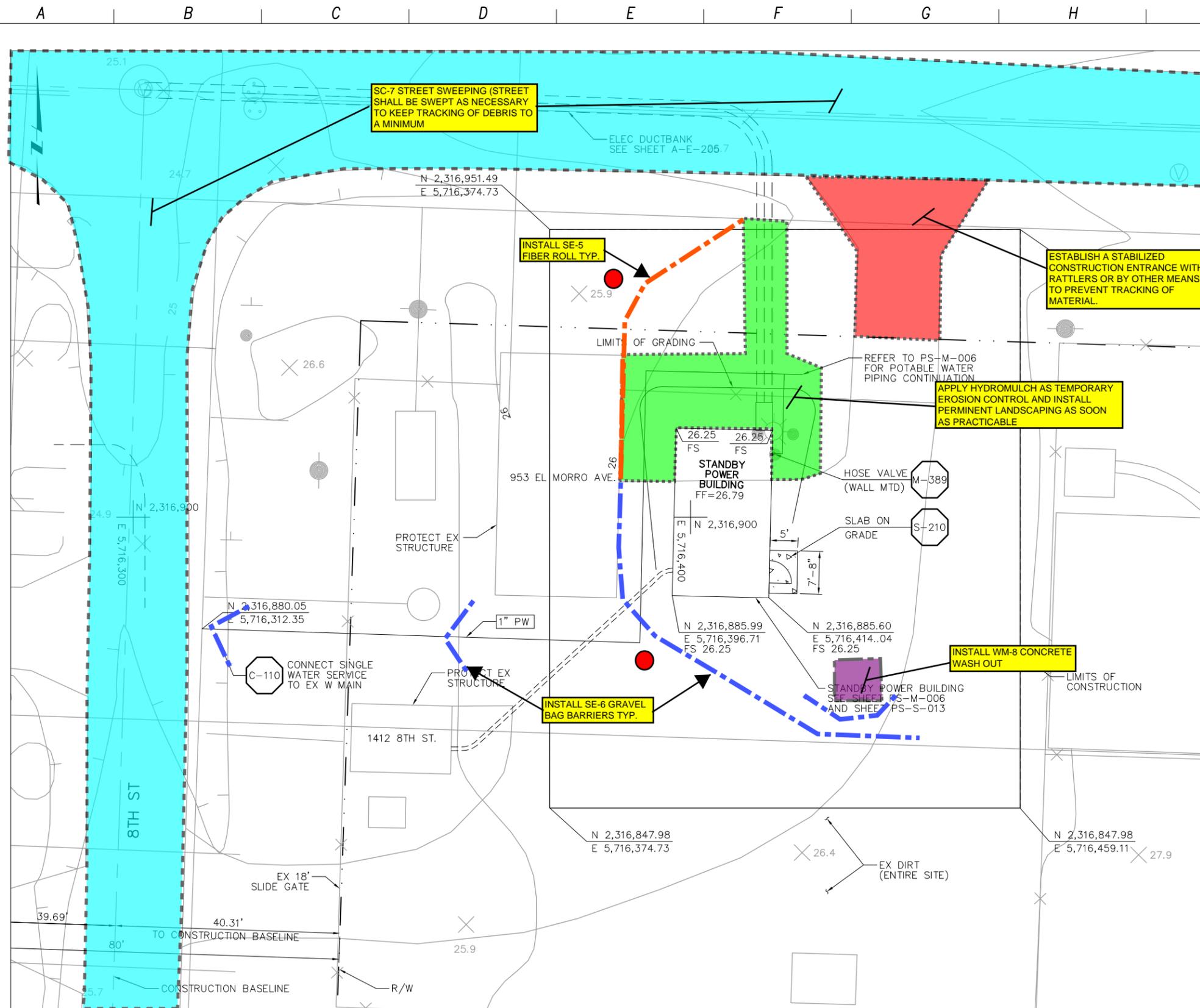
**CPESC**  
CERTIFIED PROFESSIONAL  
EROSION AND SEDIMENT CONTROL

**SWPPP PLAN NOTES:**

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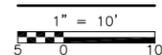
**LEGEND**

- TC-1 STABILIZED CONSTRUCTION ENTRANCE 
- SE-1 SILT FENCE 
- SE-5 FIBER ROLL 
- SE-6 GRAVEL BAG BARRIERS 
- SE-7 STREET SWEEPING AND VACCUMING 
- EC-3 / 6 HYDRAULIC MULCH / STRAW, EC-4 HYDROSEED AND/OR WE-1 WIND EROSION PREVENTION 
- WM-8 CONCRETE WASH OUT 
- SAMPLING POINT 



BAYWOOD/WEST PASO STANDBY POWER

**PLAN**



LOS OSOS WASTEWATER COLLECTION SYSTEM

**BAYWOOD/WEST PASO SBP SWPPP**

SWPPP-013

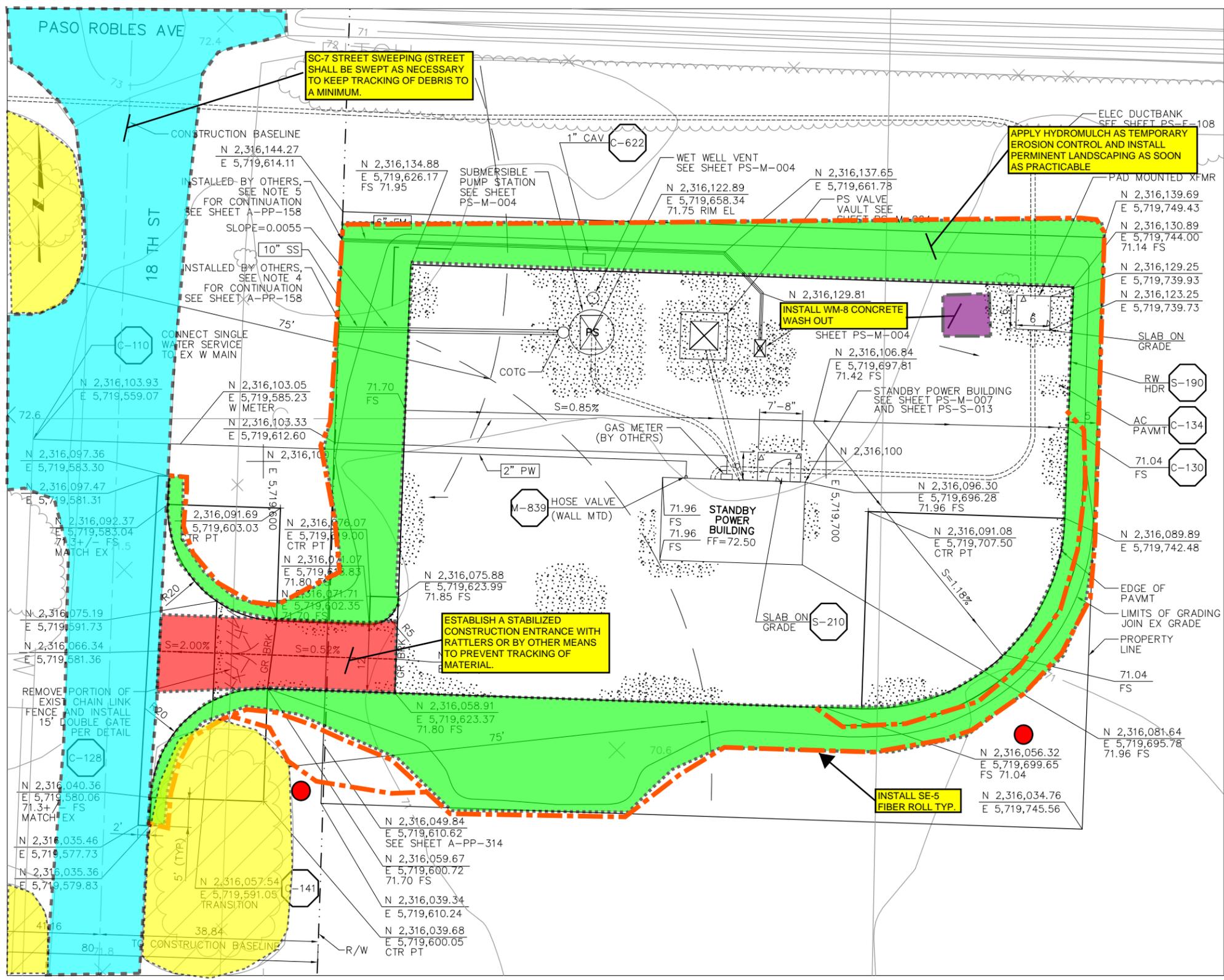
consultant:



**Robert W. Carnes**  
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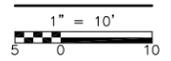
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**LEGEND:**

	WETLANDS		TC-1 STABILIZED CONSTRUCTION ENTRANCE
			SE-1 SILT FENCE
			SE-5 FIBER ROLL
			SE-6 GRAVEL BAG BARRIERS
			SE-7 STREET SWEEPING AND VACCUMING
			EC-3 / 6 HYDRAULIC MULCH, STRAW AND/OR WE-1 WIND EROSION PREVENTION
			WM-8 CONCRETE WASH OUT
			SAMPLING POINT

EAST PASO PUMP STATION

PLAN



LOS OSOS WASTEWATER COLLECTION SYSTEM

EAST PASO PS SWPPP

SWPPP-014

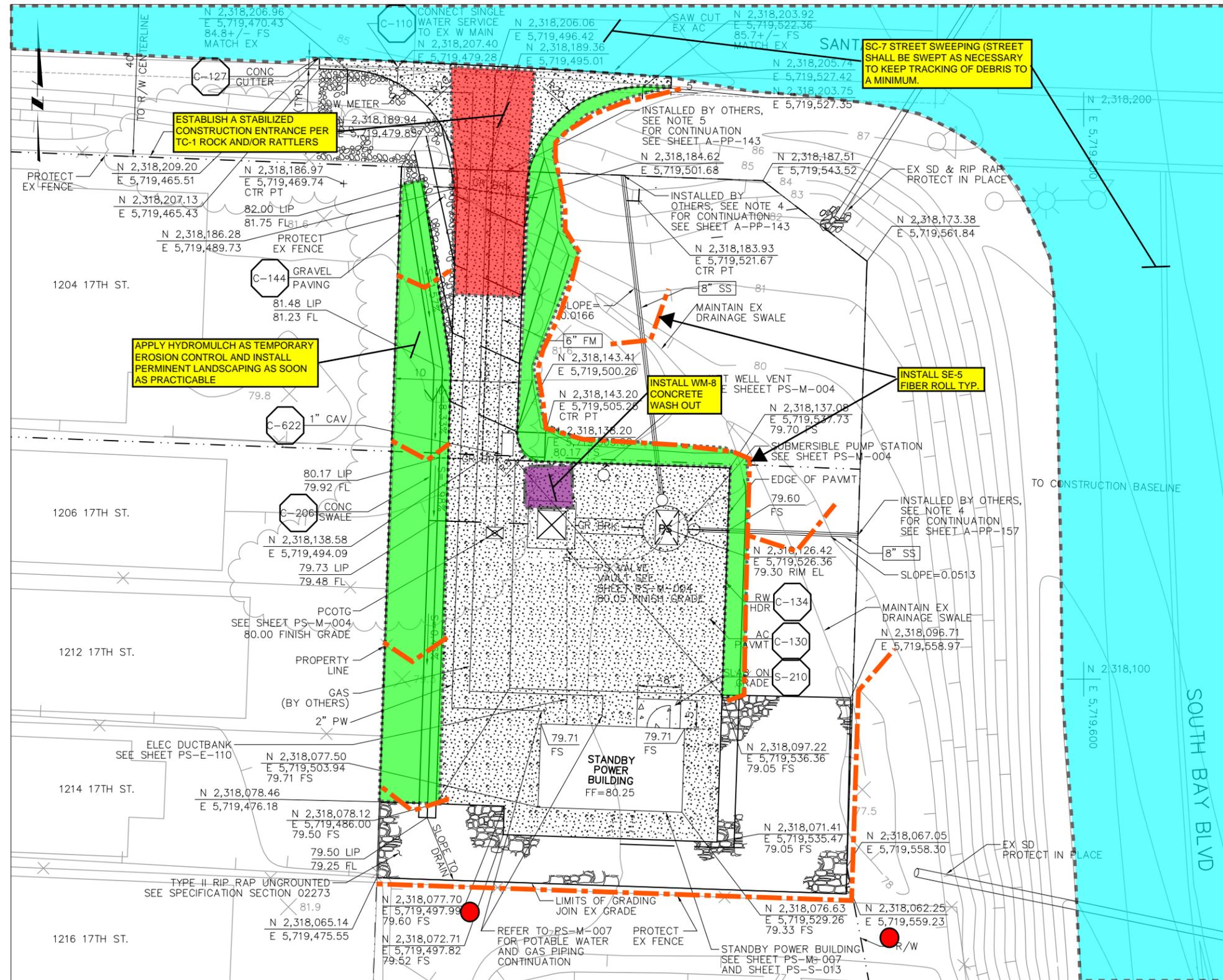
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Design & Construction Management

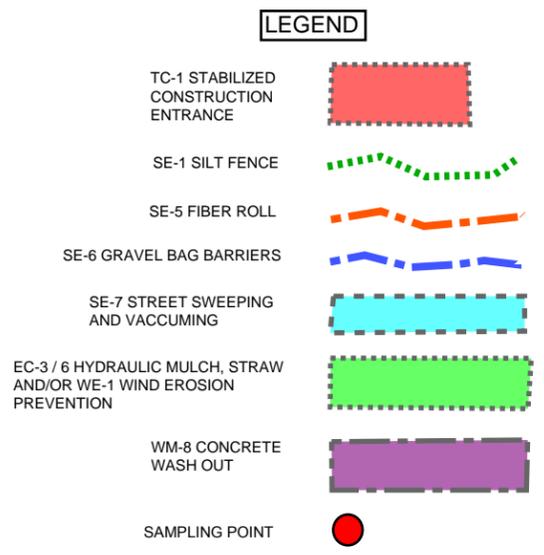
Robert W. Carnes  
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**CERTIFIED PROFESSIONAL**  
EROSION AND SEDIMENT CONTROL  
**CPESC**

PRELIMINARY - NOT FOR CONSTRUCTION

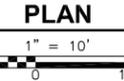


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PRELIMINARY - NOT FOR CONSTRUCTION

EAST YSABEL PUMP STATION



LOS OSOS WASTEWATER COLLECTION SYSTEM

**EAST YSABEL PS SWPPP**

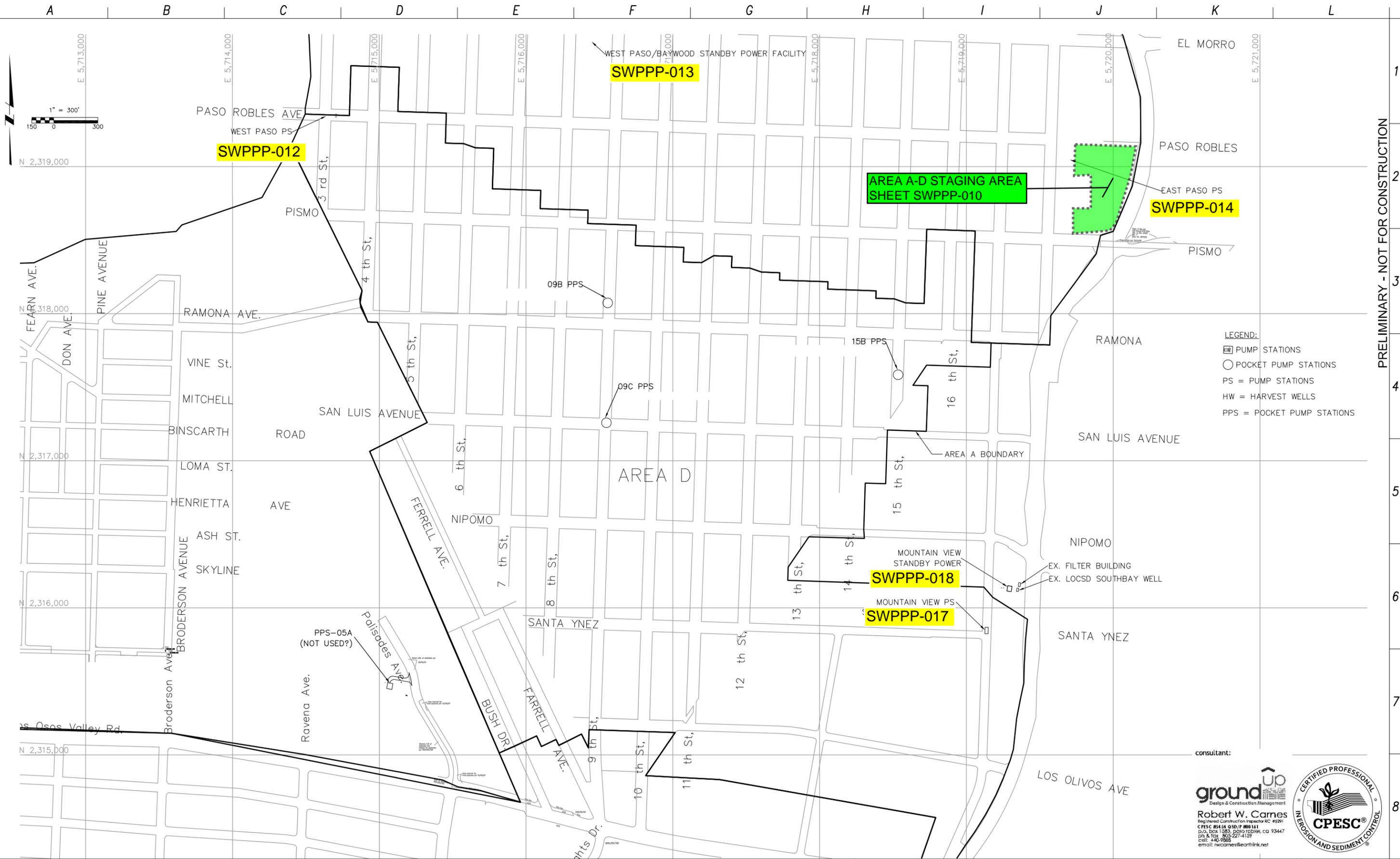
SWPPP-015

consultant:

**groundUP**  
Design & Construction Management

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**CPESC**  
EROSION AND SEDIMENT CONTROL



PRELIMINARY - NOT FOR CONSTRUCTION

- LEGEND:**
- PUMP STATIONS
  - POCKET PUMP STATIONS
  - PS = PUMP STATIONS
  - HW = HARVEST WELLS
  - PPS = POCKET PUMP STATIONS

consultant:



**groundUP**  
Design & Construction Management

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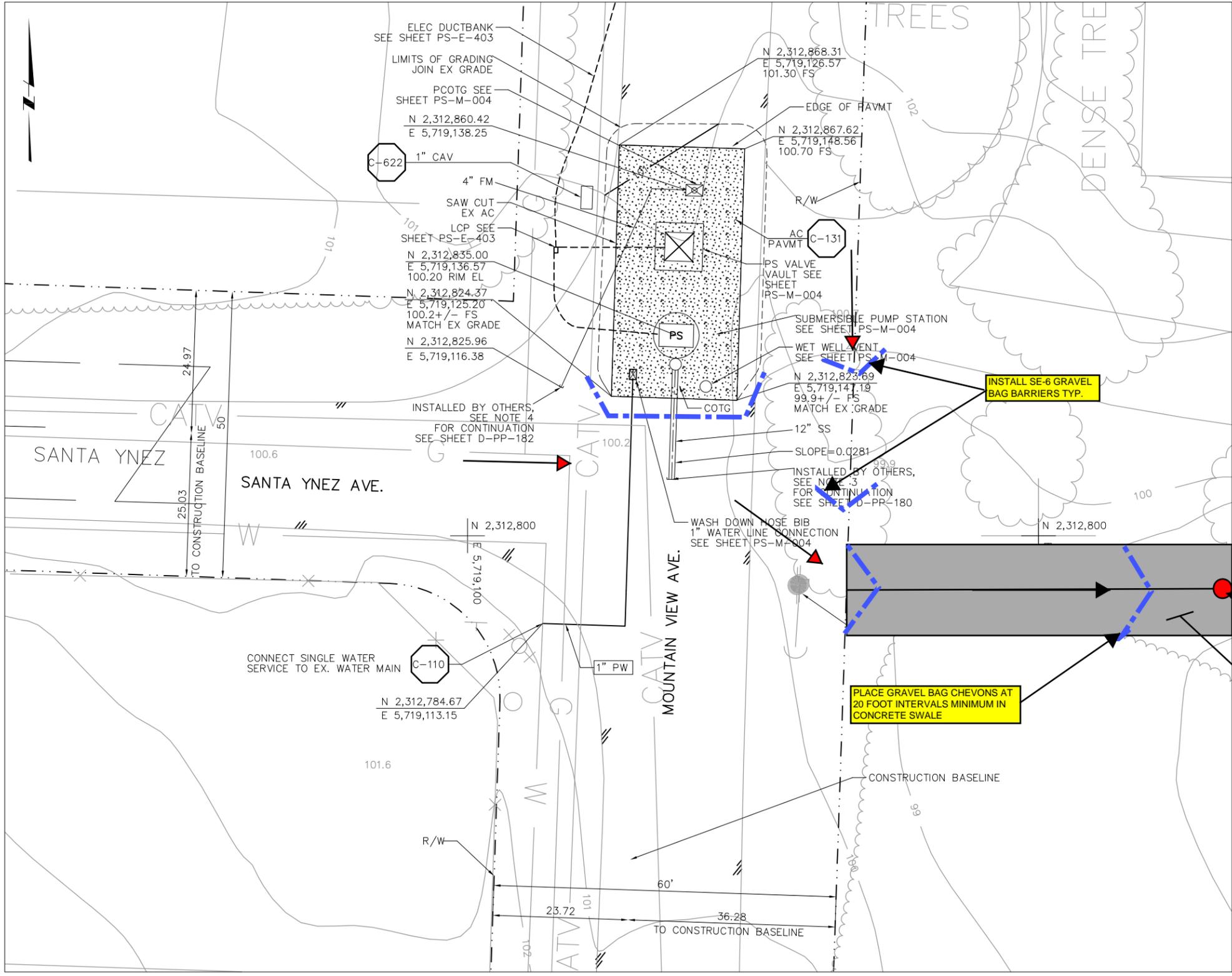


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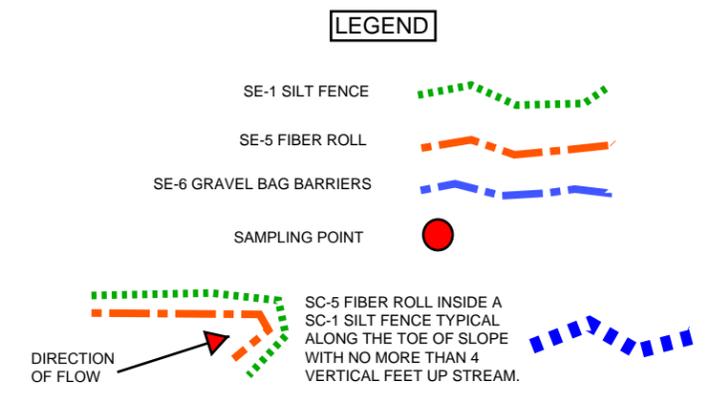
LOS OSOS WASTEWATER COLLECTION SYSTEM

# AREA D KEY MAP

SWPPP-016



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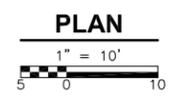


SAMPLING POINT SHALL BE LOCATED AT END OF DRAINAGE SWALE OR APPROVED WITH PROJECT QSD PRIOR TO SWPPP IMPLEMENTATION IN THIS AREA.

PLACE GRAVEL BAG CHEVONS AT 20 FOOT INTERVALS MINIMUM IN CONCRETE SWALE

EXISTING CONCRETE SWALE NOT SHOWN ON PLANS

MOUNTAIN VIEW PUMP STATION



LOS OSOS WASTEWATER COLLECTION SYSTEM

**MOUNTAIN VIEW PS SWPPP**

SWPPP-017

consultant:

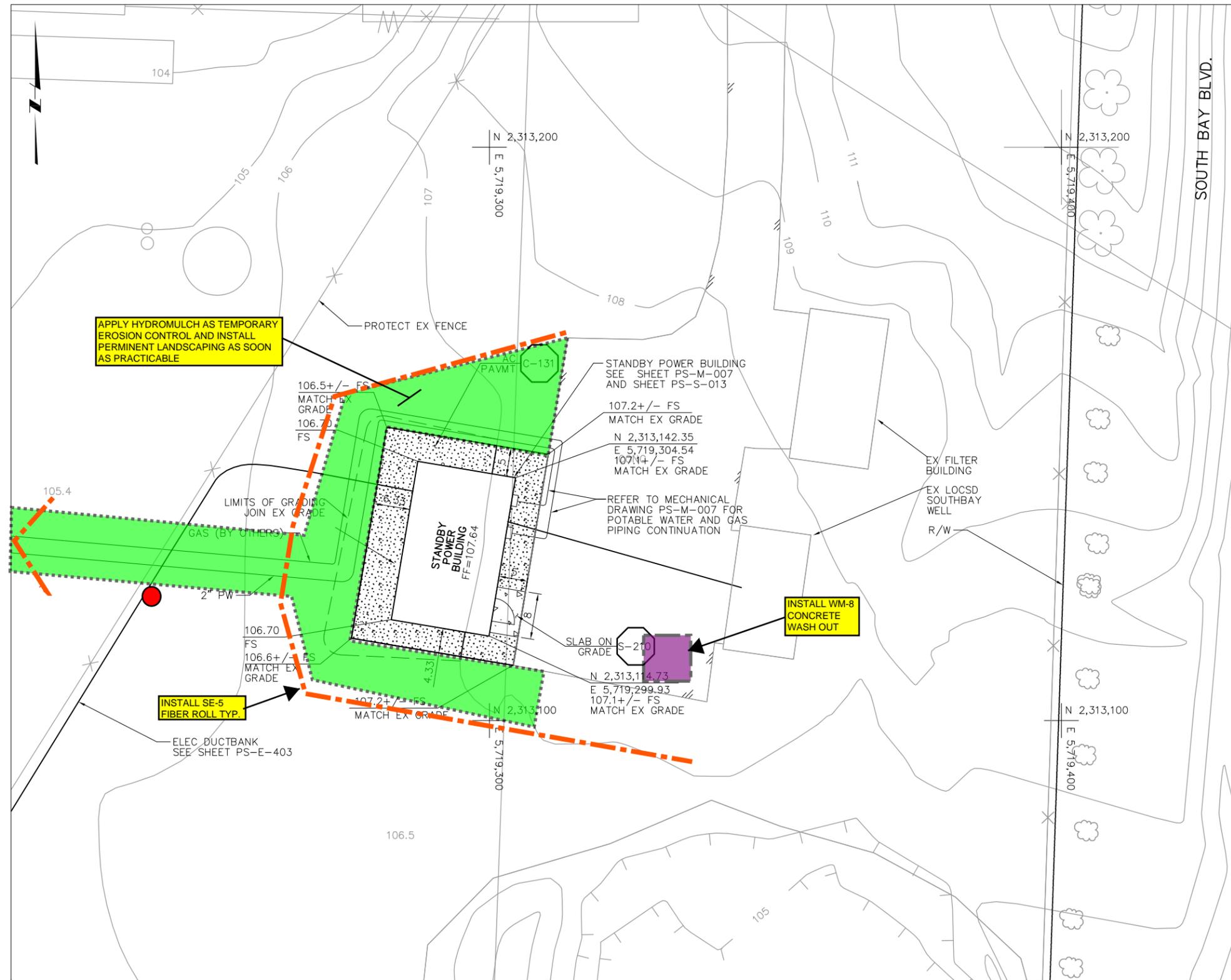
**ground up**  
Design & Construction Management

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**CPESC**  
CERTIFIED PROFESSIONAL  
EROSION AND SEDIMENT CONTROL

PRELIMINARY - NOT FOR CONSTRUCTION

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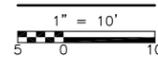
**LEGEND**

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- SE-1 SILT FENCE 
- SE-5 FIBER ROLL 
- SE-6 GRAVEL BAG BARRIERS 
- SE-7 STREET SWEEPING AND VACCUMING 
- EC-3 / 6 HYDRAULIC MULCH, STRAW AND/OR WE-1 WIND EROSION PREVENTION 
- WM-8 CONCRETE WASH OUT 
- SAMPLING POINT 

PRELIMINARY - NOT FOR CONSTRUCTION

MOUNTAIN VIEW STANDBY POWER

**PLAN**



consultant:

**ground UP**  
Design & Construction Management

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LOS OSOS WASTEWATER COLLECTION SYSTEM

**MOUNTAIN VIEW SBP SWPPP**

SWPPP-018

A B C D E F G H I J K L



PRELIMINARY - NOT FOR CONSTRUCTION

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LOS OSOS WASTEWATER COLLECTION SYSTEM

# AREA B KEY MAP

SWPPP-019

consultant:

**ground UP**  
 Design & Construction Management

**Robert W. Carnes**  
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**CERTIFIED PROFESSIONAL**  
 WE EROSION AND SEDIMENT CONTROL  
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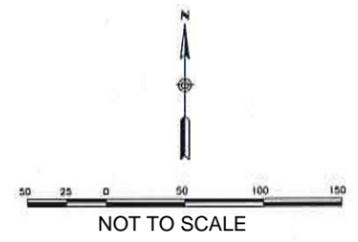
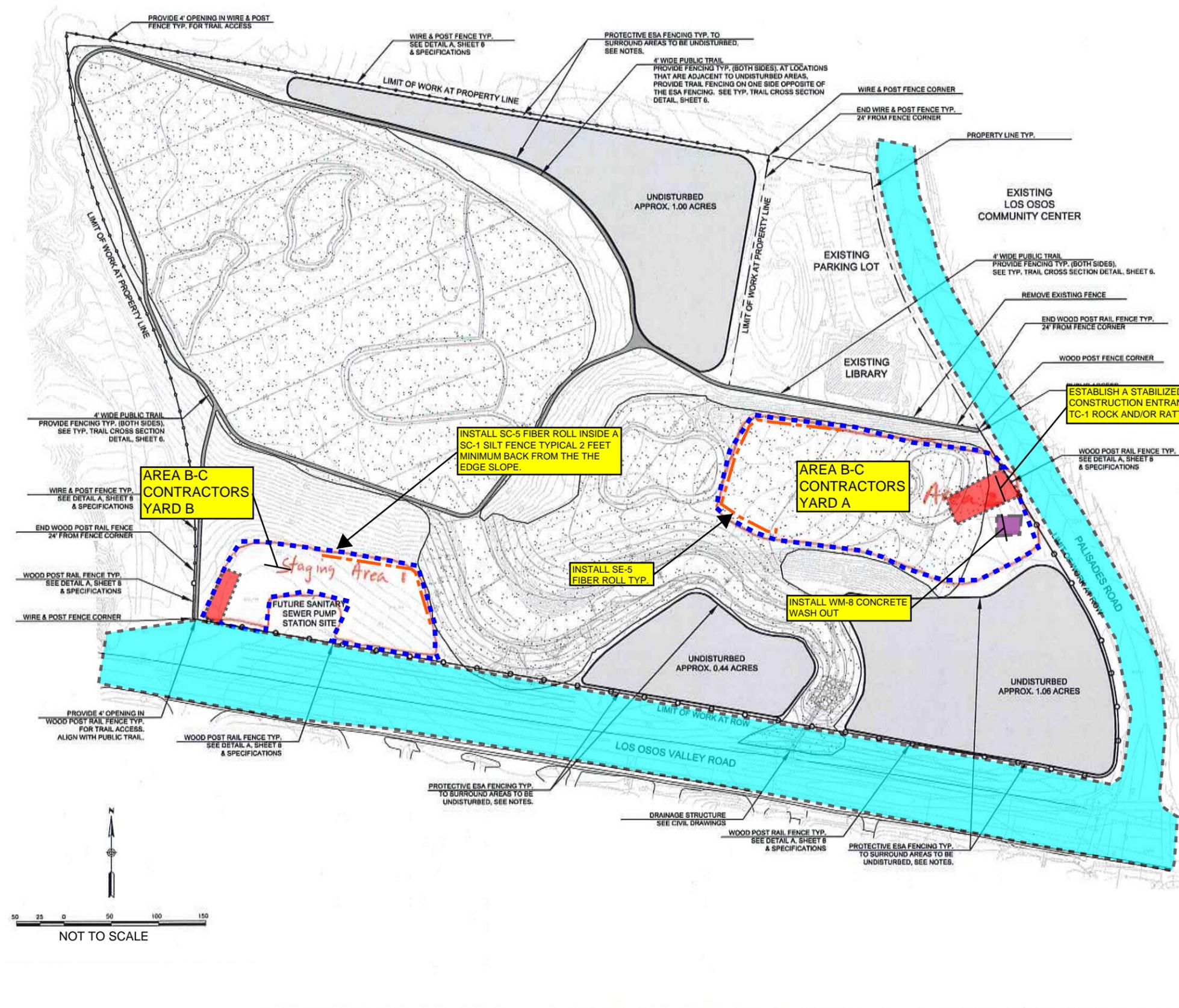
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SE-6 GRAVEL BAG BARRIERS	
SE-7 STREET SWEEPING AND VACCUMING	
WM-8 CONCRETE WASH OUT	
SAMPLING POINT	

SC-5 FIBER ROLL INSIDE A SC-1 SILT FENCE TYPICAL ALONG THE TOE OF SLOPE WITH NO MORE THAN 4 VERTICAL FEET UP STREAM.

DIRECTION OF FLOW

**1. THE CONTRACTOR SHALL PROVIDE A DETAILED STAGING AREA SWPPP PLAN SHOWING THE LOCATION OF THEIR CONSTRUCTION TRAILER, STOCKPILE AREAS, STORAGE AREAS, FUELING ETC, WITH SWPPP MEASURES FOR REVIEW AND APPROVAL BY THE PROJECT QSD AND LRP AND TO AMEND TO THE SWPPP AND THE SMART SYSTEM.**

**2. STAGING AREAS SHOWN ARE APPROXIMATELY 2.0 ACRES COMBINED**



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**SWPPP PLAN NOTES:**

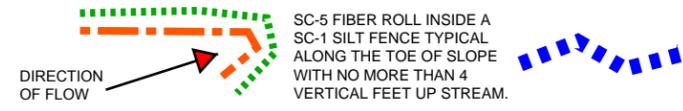
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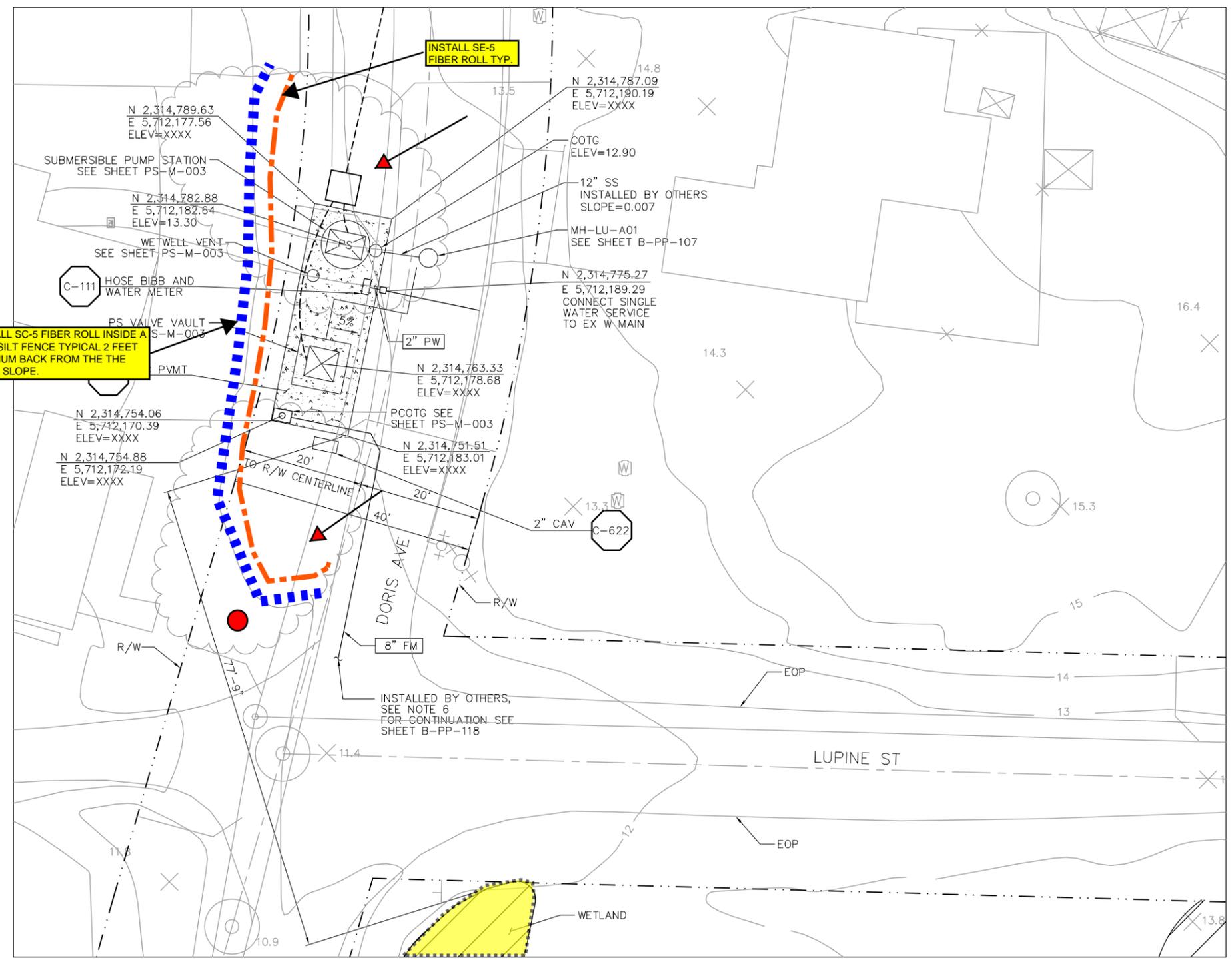
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- SAMPLING POINT 



PRELIMINARY - NOT FOR CONSTRUCTION

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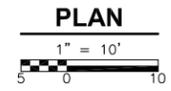
A B C D E F G H I J K L



INSTALL SC-5 FIBER ROLL INSIDE A SC-1 SILT FENCE TYPICAL 2 FEET MINIMUM BACK FROM THE THE EDGE SLOPE.

INSTALL SE-5 FIBER ROLL TYP.

**LUPINE PUMP STATION PLAN**



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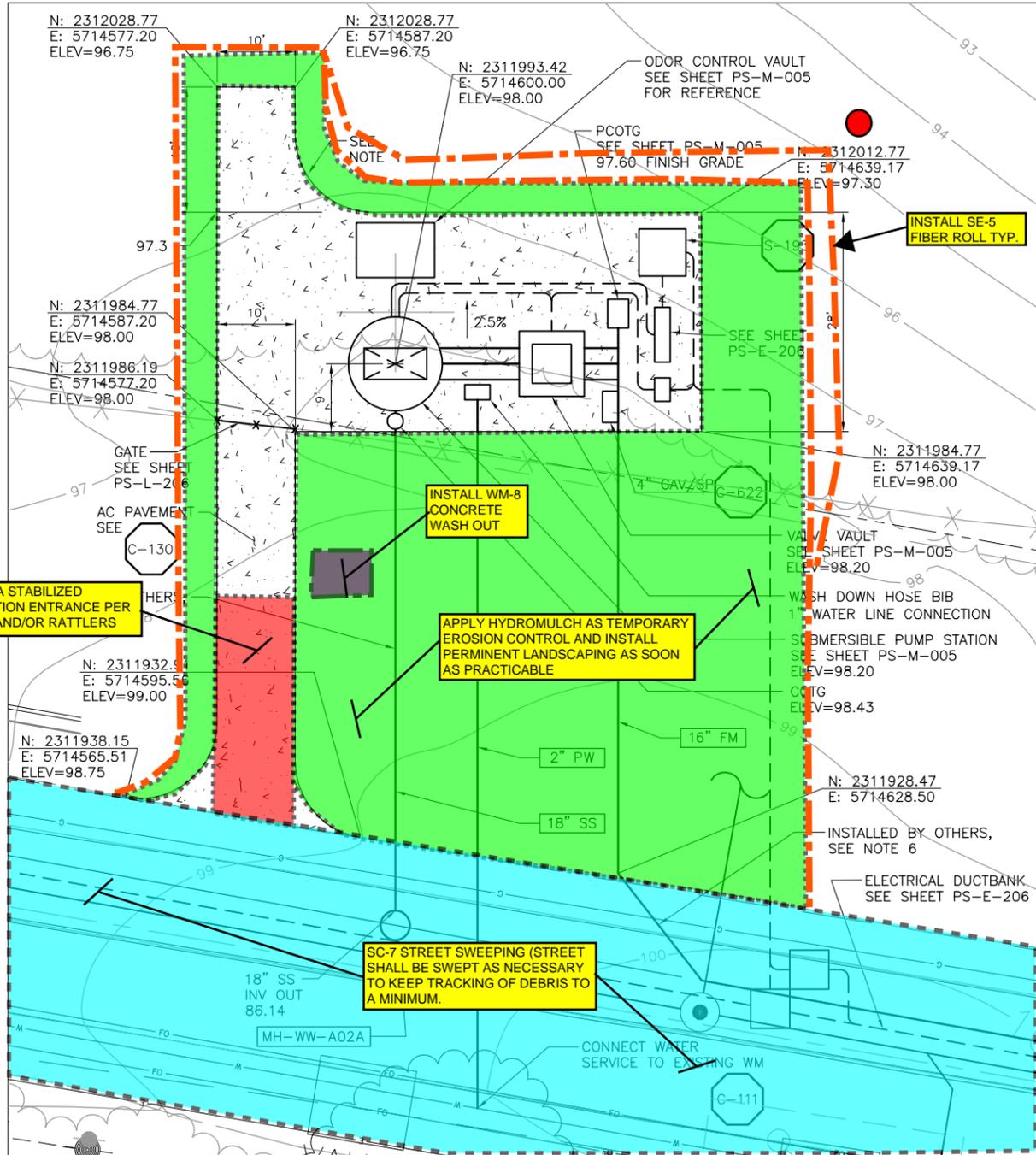
LOS OSOS WASTEWATER COLLECTION SYSTEM

**LUPINE PS SWPPP**

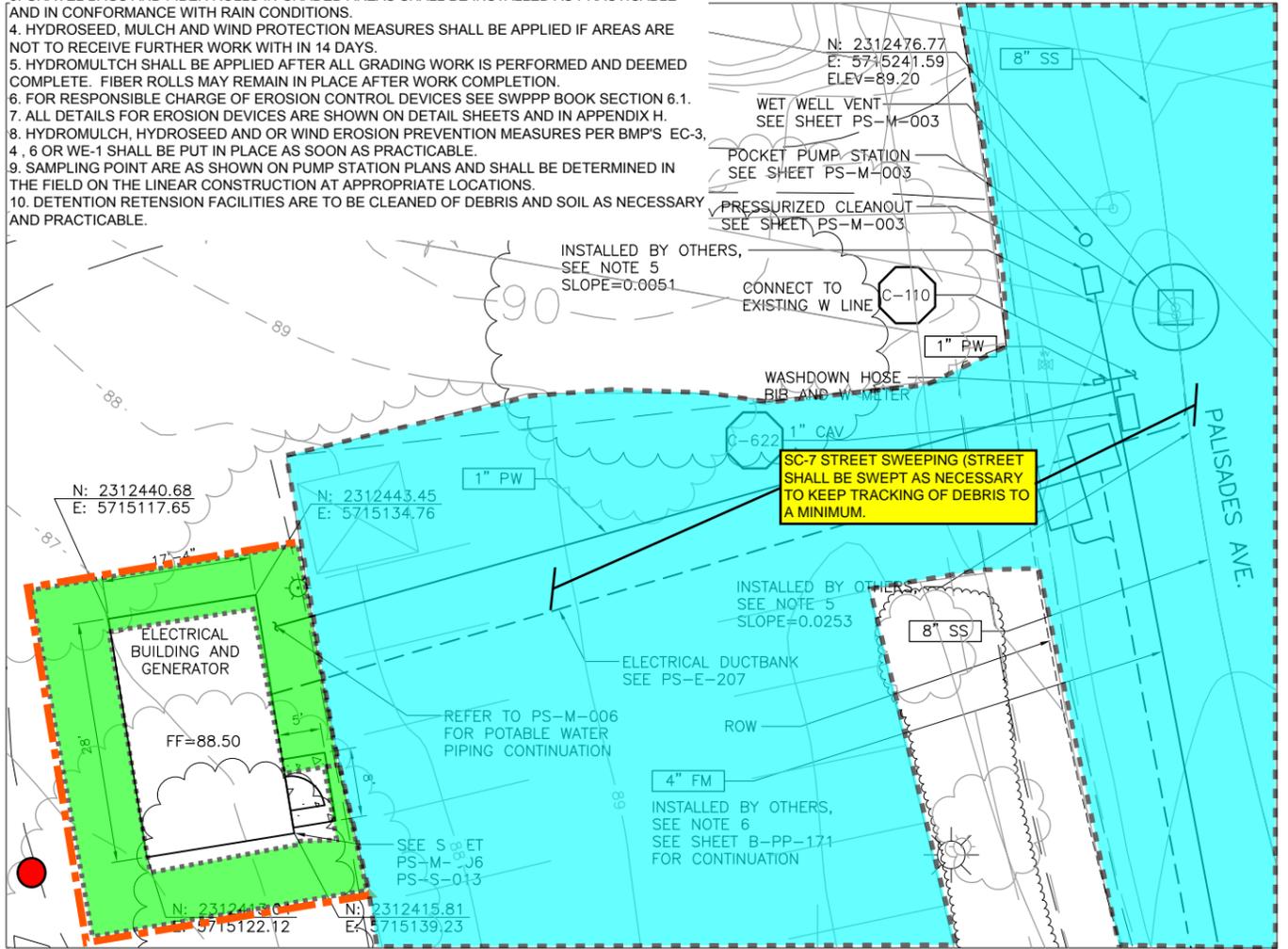
SWPPP-021

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10. DETENTION RETENSION FACILITIES ARE TO BE CLEANED OF DEBRIS AND SOIL AS NECESSARY AND PRACTICABLE.



MID-TOWN PS  
**PLAN**  
1" = 10'  
5 0 10

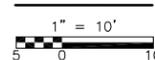


STANDBY POWER & 5A POCKET PUMP STATION PLAN

**LEGEND**

- TC-1 STABILIZED CONSTRUCTION ENTRANCE
- SE-1 SILT FENCE
- SE-5 FIBER ROLL
- SE-6 GRAVEL BAG BARRIERS
- SE-7 STREET SWEEPING AND VACCUING
- EC-3 / 6 HYDRAULIC MULCH, STRAW AND/OR WE-1 WIND EROSION PREVENTION
- WM-8 CONCRETE WASH OUT
- SAMPLING POINT

**PLAN**



PRELIMINARY - NOT FOR CONSTRUCTION

consultant:

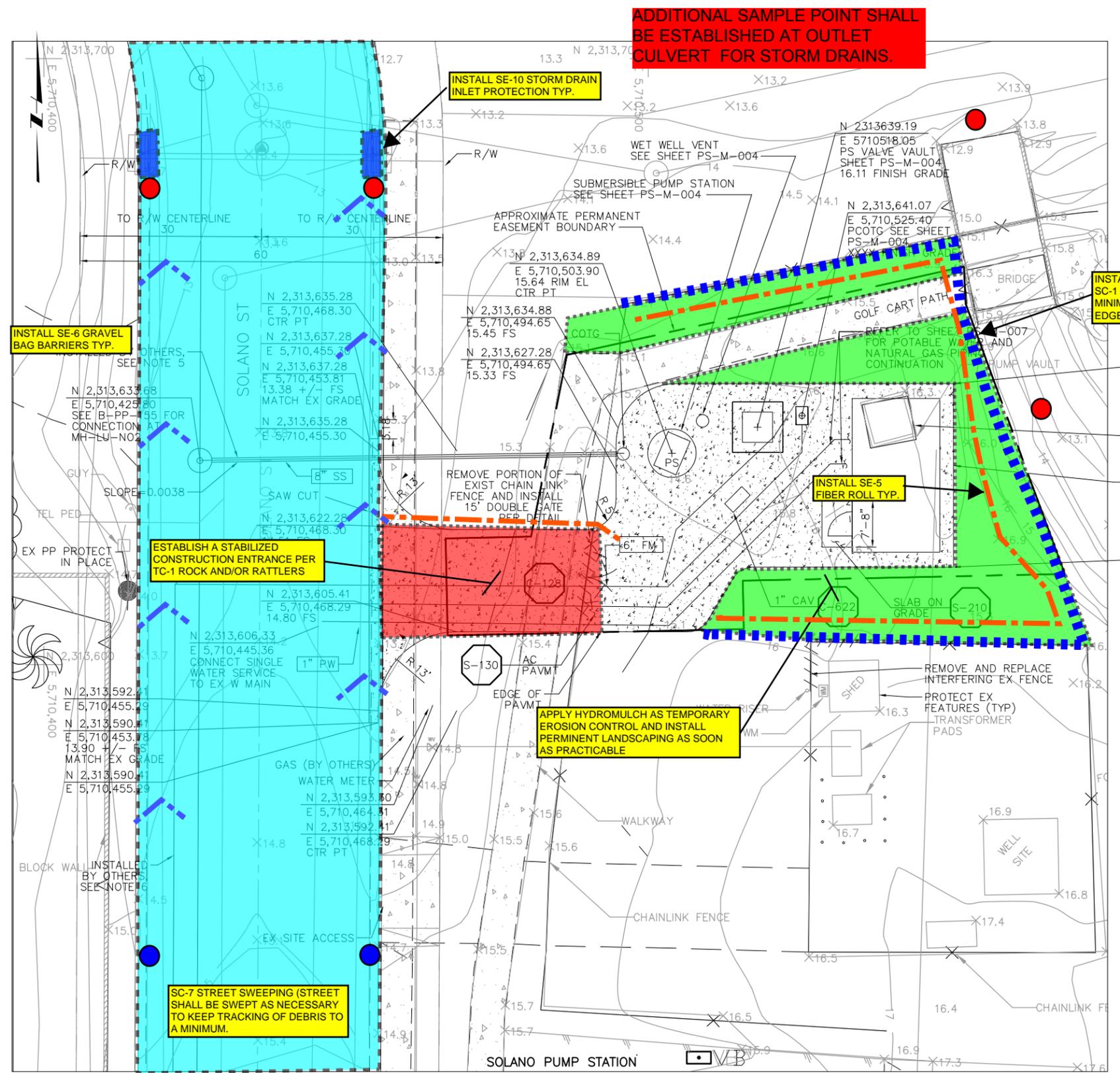
**groundUP**  
Design & Construction Management

Robert W. Carnes  
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C.P.S.C. #5454 030/P #00161  
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LOS OSOS WASTEWATER COLLECTION SYSTEM

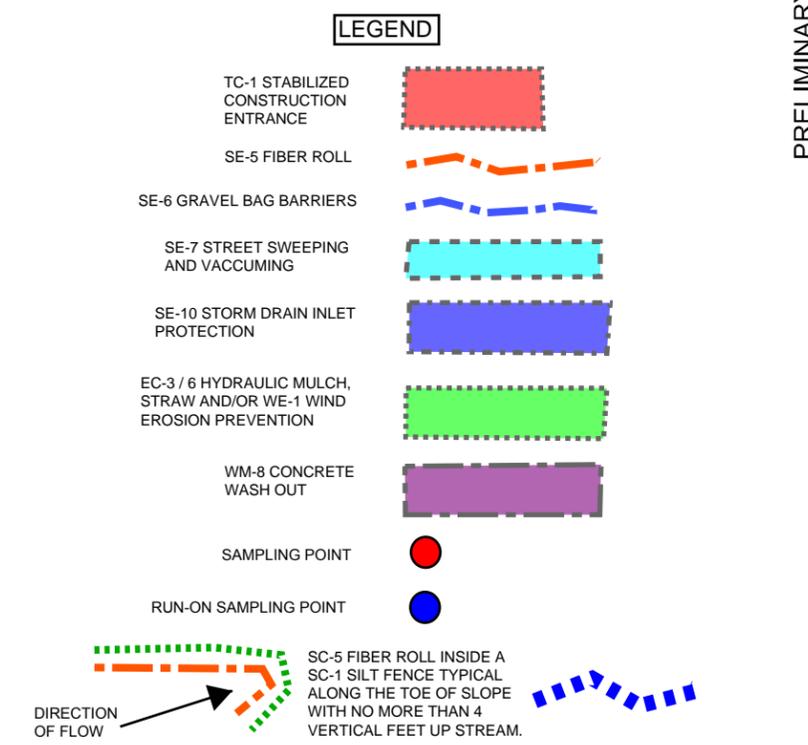
**MID TOWN PS & SBP SWPPP**

SWPPP-022



- SWPPP PLAN NOTES:**
1. ALL EROSION CONTROL NOTES ON SWPPP SHEETS SHALL APPLY TO THIS PLAN.
  2. ALL PERIMETER PROTECTIONS I.E. SILT FENCING AND FIBER ROLLS ARE CONSIDERED PHASE ONE CONTROLS AND SHALL BE INSTALLED PRIOR TO THE BEGINNING OF WORK ON THE SITE AS PRACTICABLE.
  3. GRAVEL BAGS AND FIBER ROLLS IN GRADED AREAS SHALL BE INSTALLED AS PRACTICABLE AND IN CONFORMANCE WITH RAIN CONDITIONS.
  4. HYDROSEED, MULCH AND WIND PROTECTION MEASURES SHALL BE APPLIED IF AREAS ARE NOT TO RECEIVE FURTHER WORK WITH IN 14 DAYS.
  5. HYDROMULCH SHALL BE APPLIED AFTER ALL GRADING WORK IS PERFORMED AND DEEMED COMPLETE. FIBER ROLLS MAY REMAIN IN PLACE AFTER WORK COMPLETION.
  6. FOR RESPONSIBLE CHARGE OF EROSION CONTROL DEVICES SEE SWPPP BOOK SECTION 6.1.
  7. ALL DETAILS FOR EROSION DEVICES ARE SHOWN ON DETAIL SHEETS AND IN APPENDIX H.
  8. HYDROMULCH, HYDROSEED AND OR WIND EROSION PREVENTION MEASURES PER BMP'S EC-3, 4, 6 OR WE-1 SHALL BE PUT IN PLACE AS SOON AS PRACTICABLE.
  9. SAMPLING POINT ARE AS SHOWN ON PUMP STATION PLANS AND SHALL BE DETERMINED IN THE FIELD ON THE LINEAR CONSTRUCTION AT APPROPRIATE LOCATIONS.
  10. DETENTION RETENSION FACILITIES ARE TO BE CLEANED OF DEBRIS AND SOIL AS NECESSARY AND PRACTICABLE.
- SHEET NOTES:**
1. ALL STOCKPILED MATERIAL SHALL BE REMOVED PRIOR TO ANY RAIN EVENTS AT THIS LOCATION.
  2. AN ADAQUATE CONSTRUCTION ACCESS SHALL BE PROVIDED.
  3. CONCRETE WASHOUT SHALL BE PERFORMED AT A REMOTE LOCATION FROM THIS SITE.

- LEGEND**
- TC-1 STABILIZED CONSTRUCTION ENTRANCE
  - SE-5 FIBER ROLL
  - SE-6 GRAVEL BAG BARRIERS
  - SE-7 STREET SWEEPING AND VACCUMING
  - SE-10 STORM DRAIN INLET PROTECTION
  - EC-3 / 6 HYDRAULIC MULCH, STRAW AND/OR WE-1 WIND EROSION PREVENTION
  - WM-8 CONCRETE WASH OUT
  - SAMPLING POINT
  - RUN-ON SAMPLING POINT
  - SC-5 FIBER ROLL INSIDE A SC-1 SILT FENCE TYPICAL ALONG THE TOE OF SLOPE WITH NO MORE THAN 4 VERTICAL FEET UP STREAM.



**PLAN**  
1" = 10'  
5 0 10

LOS OSOS WASTEWATER COLLECTION SYSTEM

**SOLANO PS SWPPP**

SWPPP-023

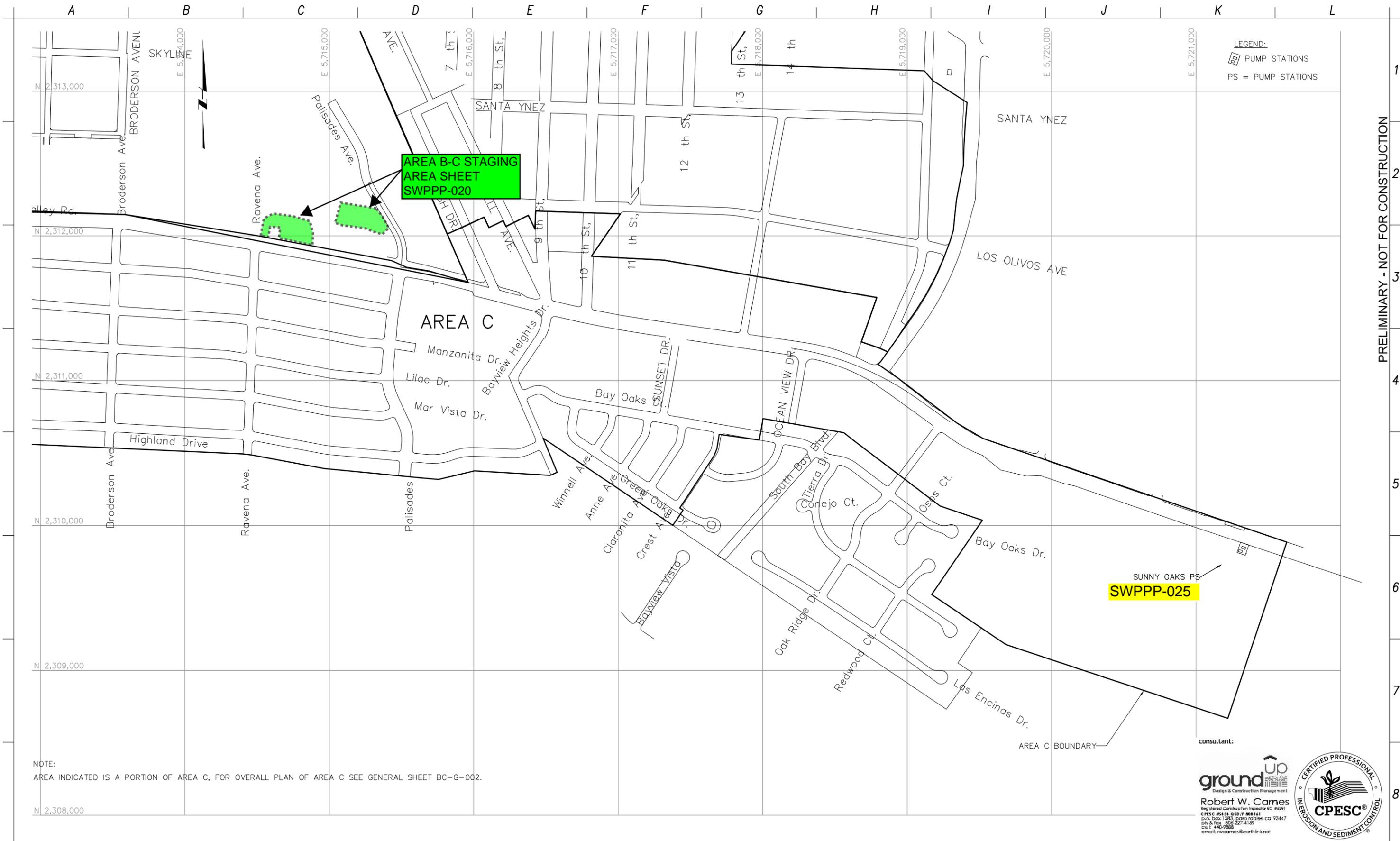
consultant:

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**CPESC**  
CERTIFIED PROFESSIONAL  
EROSION AND SEDIMENT CONTROL

PRELIMINARY - NOT FOR CONSTRUCTION



PRELIMINARY - NOT FOR CONSTRUCTION

NOTE:  
 AREA INDICATED IS A PORTION OF AREA C, FOR OVERALL PLAN OF AREA C SEE GENERAL SHEET BC-G-002.

consultant:



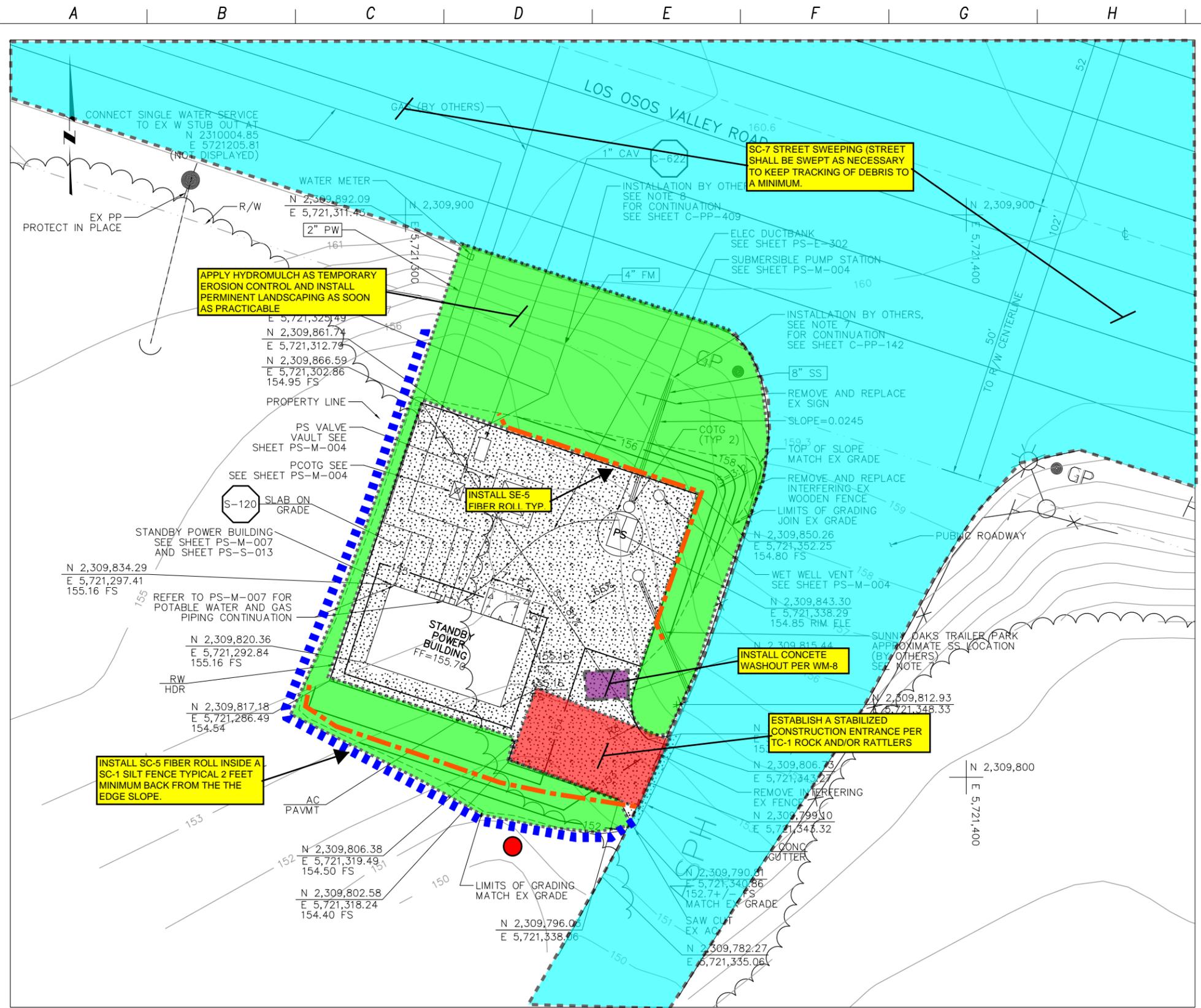
**Robert W. Carnes**  
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 email: rwcarnes@earthlink.net



LOS OSOS WASTEWATER COLLECTION SYSTEM

# AREA C KEY MAP

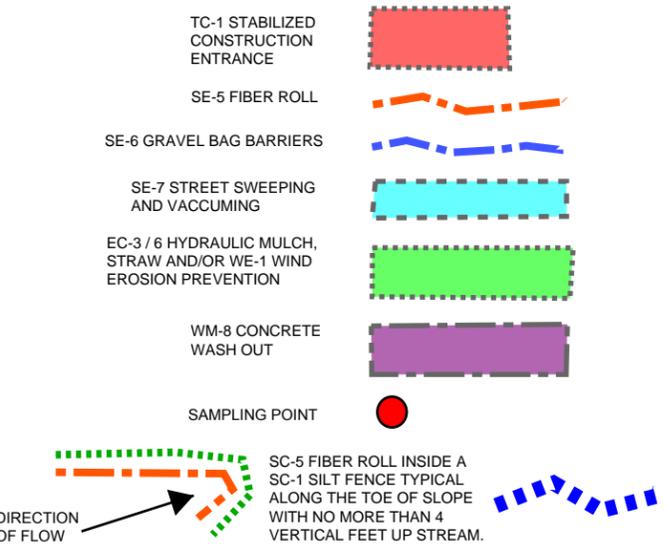
SWPPP-024



**SWPPP PLAN NOTES:**

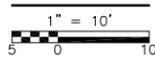
1. ALL EROSION CONTROL NOTES ON SWPPP SHEETS SHALL APPLY TO THIS PLAN.
2. ALL PERIMETER PROTECTIONS I.E. SILT FENCING AND FIBER ROLLS ARE CONSIDERED PHASE ONE CONTROLS AND SHALL BE INSTALLED PRIOR TO THE BEGINNING OF WORK ON THE SITE AS PRACTICABLE.
3. GRAVEL BAGS AND FIBER ROLLS IN GRADED AREAS SHALL BE INSTALLED AS PRACTICABLE AND IN CONFORMANCE WITH RAIN CONDITIONS.
4. HYDROSEED, MULCH AND WIND PROTECTION MEASURES SHALL BE APPLIED IF AREAS ARE NOT TO RECEIVE FURTHER WORK WITH IN 14 DAYS.
5. HYDROMULCH SHALL BE APPLIED AFTER ALL GRADING WORK IS PERFORMED AND DEEMED COMPLETE. FIBER ROLLS MAY REMAIN IN PLACE AFTER WORK COMPLETION.
6. FOR RESPONSIBLE CHARGE OF EROSION CONTROL DEVICES SEE SWPPP BOOK SECTION 6.1.
7. ALL DETAILS FOR EROSION DEVICES ARE SHOWN ON DETAIL SHEETS AND IN APPENDIX H.
8. HYDROMULCH, HYDROSEED AND OR WIND EROSION PREVENTION MEASURES PER BMP'S EC-3, 4, 6 OR WE-1 SHALL BE PUT IN PLACE AS SOON AS PRACTICABLE.
9. SAMPLING POINT ARE AS SHOWN ON PUMP STATION PLANS AND SHALL BE DETERMINED IN THE FIELD ON THE LINEAR CONSTRUCTION AT APPROPRIATE LOCATIONS.
10. DETENTION RETENSION FACILITIES ARE TO BE CLEANED OF DEBRIS AND SOIL AS NECESSARY AND PRACTICABLE.

**LEGEND**



SUNNY OAKS PUMP STATION

**PLAN**



LOS OSOS WASTEWATER COLLECTION SYSTEM

**SUNNY SIDE PS SWPPP**

SWPPP-025

consultant:

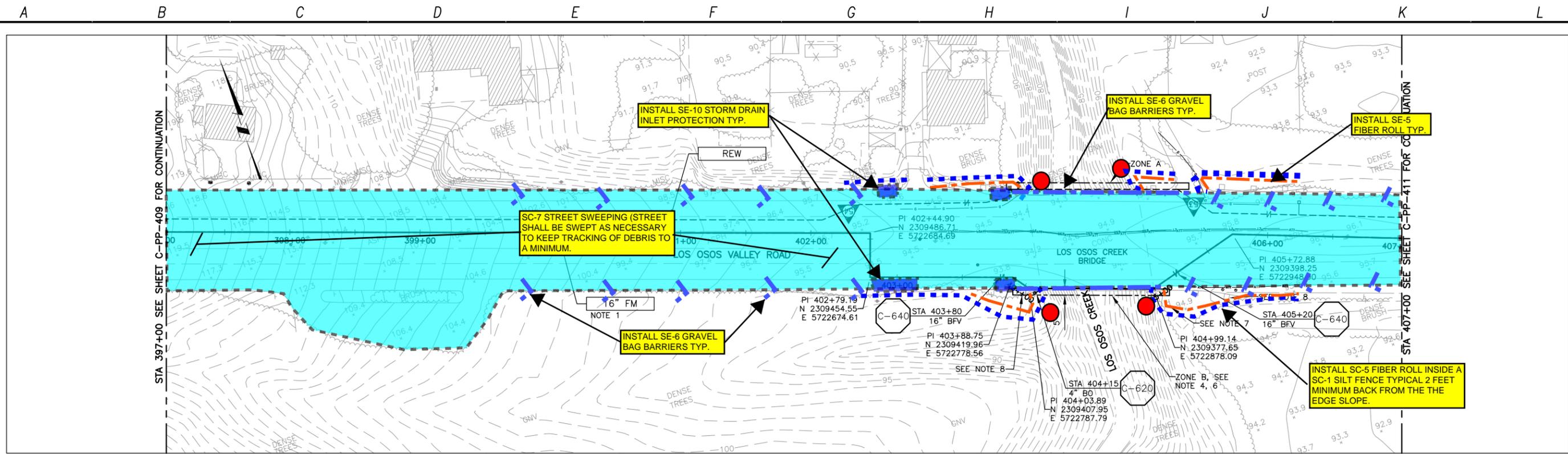
**groundUP**  
Design & Construction Management

**Robert W. Carnes**  
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PRELIMINARY - NOT FOR CONSTRUCTION

L:\Los Osos-42502\8120\01-Sheets\02civil\ C-PP-410\_01/17/12\_18:02\_ditchis\_XFEES\_X-FEAT-TOPO-(NEW\_ADD\_ON)\_N-FEAT-INDX\_X-FEAT-TOPO-(NEW\_ADD\_ON)\_N-FEAT-ALIGNMENT\_N-FM-PROFILE\_N-FEAT-CNBL\_N-UTIL-SS\_x-uti-oi\_N-TOP-AREA\_A\_x-feat-row-D\_x-feat-odr-D\_C-UTIL-SEWR-CNPL\_CA-BUC\_x-feat-topo-supp\_x-feat-watr\_AEA-C-MIDTOWN-PS\_loc.mxd



PLAN ON LOS OSOS VALLEY ROAD

**LEGEND**

- SE-5 FIBER ROLL
  - SE-6 GRAVEL BAG BARRIERS
  - SE-7 STREET SWEEPING AND VACCUMING
  - SE-10 STORM DRAIN INLET PROTECTION
  - EC-3 / 6 HYDRAULIC MULCH, STRAW AND/OR WE-1 WIND EROSION PREVENTION
  - SAMPLING POINT
  - SC-5 FIBER ROLL INSIDE A SC-1 SILT FENCE TYPICAL ALONG THE TOE OF SLOPE WITH NO MORE THAN 4 VERTICAL FEET UP STREAM.
- DIRECTION OF FLOW

**SWPPP PLAN NOTES:**

1. ALL EROSION CONTROL NOTES ON SWPPP SHEETS SHALL APPLY TO THIS PLAN.
2. ALL PERIMETER PROTECTIONS I.E. SILT FENCING AND FIBER ROLLS ARE CONSIDERED PHASE ONE CONTROLS AND SHALL BE INSTALLED PRIOR TO THE BEGINNING OF WORK ON THE SITE AS PRACTICABLE.
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10. DETENTION RETENTION FACILITIES ARE TO BE CLEANED OF DEBRIS AND SOIL AS NECESSARY AND PRACTICABLE.

**SHEET NOTES:**

1. ALL APPLICABLE REQUIREMENTS PER THE CONSTRUCTION TRAIN DRAWING SHEET SWPPP-008 SHALL APPLY TO CONSTRUCTION IN THIS AREA.
2. ALL REQUIREMENTS OF STATE AND FEDERAL PERMITS REQUIRED FOR THE WORK SHALL BE STRICTLY ADHERED TOO.
3. NO CONCRETE WASHOUT FACILITY WILL BE ALLOWED WITHIN 100 FEET OF THE CROSSING. CONCRETE WASHOUT SHALL BE IN STRICT CONFORMANCE WITH WM-8.
4. ALL PERIMETER EROSION CONTROL DEVICES WILL BE INSTALLED PRIOR TO CONSTRUCTION COMMENCEMENT AND BE INSPECTED BY THE PROJECT QSD.

consultant:

**ground**  
Design & Construction Management

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**CPESC**  
CERTIFIED PROFESSIONAL  
INTERIOR AND SEDIMENT CONTROL

REV. NO.	DATE	DRWN	CHKD	REMARKS

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN ADJUST SCALE ACCORDINGLY

**DIGALERT**

DIAL TOLL FREE  
1-800-642-2444  
AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

LOS OSOS WASTEWATER COLLECTION SYSTEM

**LOVR BRIDGE**

**CROSSING SWPPP**

SWPPP-026