

DRAFT STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

for

SAN JUAN CAPISTRANO PASSING SIDING

OCTA Contract No:

Waste Discharge Identification No. (WDID:) _____

Risk Level 1

Project Location:

San Juan Capistrano, CA

Legally Responsible Person [LRP]:

TBD

/ Ph:

Approved Signatory:

Approved Signatory if designated by LRP : TBD

Prepared for:

Orange County Transportation Authority (OCTA)
550 S Main Street
Orange, CA 92668

SWPPP Submitted by:

Contractor Name

Address

City, State Zip

Contact Info

Draft SWPPP Developed by:

HNTB Corporation

401 B Street, Suite 510, San Diego, CA 92101

(619) 684-6586

Christopher Hahn, PE, QSD 20759

HNTB Job No: 60964-DS

SWPPP Preparation Date

90% Draft Submittal October 18, 2016

Estimated Project Dates:

Construction Start: July 1, 2017 Construction Completion: December 30 2018

Table of Contents

Table of Contents	i
Qualified SWPPP Developer (QSD) Certification	2
Section 1 SWPPP Requirements.....	1
1.1 Introduction.....	1
1.2 Permit Registration Documents	2
1.3 SWPPP Availability and Implementation.....	2
1.4 LEGALLY RESPONSIBLE PERSON	3
1.5 SWPPP Amendments.....	3
1.6 Retention of Records.....	4
1.7 Required Non-Compliance Reporting	4
1.8 Annual Report.....	5
1.9 Changes to Permit Coverage.....	6
1.10 Notice of Termination.....	6
Section 2 Project Information.....	7
2.1 Project and Site Description.....	7
2.1.1 Existing Conditions.....	7
2.1.2 Existing Drainage.....	7
2.1.3 Geology and Groundwater	8
2.1.4 Developed Condition	8
2.2 Permits and Governing Documents	9
2.3 Stormwater Run-On from Offsite Area -flow runoff conditions.....	9
2.4 Findings of the Construction Site Sediment and Receiving Water Risk Determination 10	
2.5 Construction Schedule	11
2.6 Potential Construction Activity and Pollutant Sources.....	11
2.7 Identification of Non-Stormwater Discharges	12
2.8 Required Site Map Information	13
Section 3 Best Management Practices	15
3.1 Schedule for BMP Implementation	15
3.2 Erosion and Sediment Control	16
3.2.1 Erosion Control.....	16
3.2.2 Sediment Controls.....	20

3.3	Non-Stormwater Controls and Waste and Materials Management	24
3.3.1	Non-Stormwater Controls	24
3.3.2	Materials Management and Waste Management	27
3.4	Post construction Stormwater Management Measures	32
Section 4	BMP Inspection, and Maintenance	34
4.1	BMP Inspection and Maintenance	34
4.2	Rain Event Action Plans	34
Section 5	Training	35
Section 6	Responsible Parties and Operators	36
6.1	Responsible Parties	36
6.2	Contractor List	37
Section 7	Construction Site Monitoring Program	38
7.1	Purpose	38
7.2	Applicability of Permit Requirements	38
7.3	Weather and Rain Event Tracking	40
7.3.1	Weather Tracking	40
7.3.2	Rain Gauges	40
7.4	Monitoring Locations	40
7.5	Safety and Monitoring Exemptions	41
7.6	Visual Monitoring	41
7.6.1	Routine Observations and Inspections	42
7.6.1.1	Routine BMP Inspections	42
7.6.1.2	Non-Stormwater Discharge Observations	42
7.6.2	Rain-Event Triggered Observations and Inspections	42
7.6.2.1	Visual Observations Prior to a Forecasted Qualifying Rain Event	42
7.6.2.2	BMP Inspections During an Extended Storm Event	43
7.6.2.3	Visual Observations Following a Qualifying Rain Event	43
7.6.3	Visual Monitoring Procedures	43
7.6.4	Visual Monitoring Follow-Up and Reporting	45
7.6.5	Visual Monitoring Locations	45
7.7	Water Quality Sampling and Analysis	48
7.7.1	Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges	48

7.7.1.1	Sampling Schedule.....	48
7.7.1.2	Sampling Locations	49
7.7.1.3	Monitoring Preparation	52
7.7.1.4	Analytical Constituents	53
7.7.1.5	Sample Collection.....	53
7.7.1.6	Sample Analysis.....	54
7.7.1.7	Data Evaluation and Reporting	55
7.7.2	Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges	55
7.7.6	Training of Sampling Personnel	55
7.7.7	Sample Collection and Handling	55
7.7.7.1	Sample Collection.....	55
7.7.7.2	Sample Handling.....	56
7.7.7.3	Sample Documentation Procedures	57
7.8	Active Treatment System Monitoring	58
7.9	Bioassessment Monitoring.....	58
7.10	Watershed Monitoring Option	58
7.11	Quality Assurance and Quality Control	58
7.11.1	Field Logs	59
7.11.2	Clean Sampling Techniques	59
7.11.3	Chain of Custody	59
7.11.4	QA/QC Samples.....	59
7.11.4.1	Field Duplicates.....	60
7.11.4.2	Equipment Blanks	60
7.11.4.3	Field Blanks.....	60
7.11.4.4	Travel Blanks	60
7.11.5	Data Verification.....	60
7.12	Records Retention	61
CSMP Attachment 1: Weather Reports		
CSMP Attachment 2: Monitoring Records		
CSMP Attachment 3: Example Forms		
CSMP Attachment 4: Field Meter Instructions		
CSMP Attachment 5: Supplemental Information		

Section 8 References

Appendix A: Calculations

Appendix B: Site Maps

Appendix C: Permit Registration Documents (PRDs)

Appendix D: SWPPP Amendment Certifications

Appendix E: Submitted Changes to PRDs

Appendix F: Construction Schedule

Appendix G: Construction Activities, Materials Used, and Associated Pollutants

Appendix H: CASQA Stormwater BMP Handbook: Construction Fact Sheets

Appendix I: BMP Inspection Form

Appendix J: Project Specific Rain Event Action Plan Template

Appendix K: Training Reporting Form

Appendix L: LRP Certification & Responsible Parties

Appendix M: Contractors and Subcontractors

Appendix N: Construction General Permit

DRAFT

DRAFT

Qualified SWPPP Developer (QSD) Certification

This SWPPP has been prepared for Orange County Transportation Authority (OCTA) by the following Qualified SWPPP Developer (QSD) as required by the General Permit (Section VII.B):

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: SJC PASSING SIDING PROJECT

Project Number/ID: XXXXXX-XXX

"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 and Order 2012-0006-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

DRAFT

QSD Signature

Date

Christopher E. Hahn, RCE 58971

20759

QSD Name

QSD Certificate Number

Project Manager, HNTB Corporation

cehahn@hntb.com

Title and Affiliation

Telephone Number

cehahn@hntb.com

Email

DRAFT

Section 1 SWPPP Requirements

1.1 INTRODUCTION

The San Juan Capistrano Passing Siding (SJC PS) project is located in southern Orange County mostly in the City of San Juan Capistrano west of the Camino Capistrano Interstate-5. The track is located within Metrolink right-of-way which is part of the Los Angeles to San Diego (LOSSAN) rail corridor. The Project spans approximately 3 miles proceeding south from Paseo de Colinas/73 Tollroad overpass, and west of Camino Capistrano. The Project consists of the construction of a passing track between MP 193.7 and MP 195.7, a pocket track south of Rancho Capistrano, reconstruction of the Camino Capistrano/ Rancho Capistrano grade crossing / street intersection and other appurtenances including culvert extensions and storm drain laterals in support of the project. The project 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 in 2010 and 2012 (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, 2012).

In accordance with the General Permit, Section XIV, the major objectives the SWPPP is designed to address are the following:

"The discharger shall ensure that the SWPPPs for all traditional project sites are developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

- 1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled*
- 2. Where not otherwise required to be under a Regional Water Quality Control Board (RWQCB) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated*
- 3. 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*
- 4. Calculations and design details as well as BMP controls are complete and correct*
- 5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed."*

The following are additional SWPPP objectives:

- Identify post-construction BMPs, which are those measures to be installed during construction that are intended to reduce or eliminate pollutants after construction is completed (post-construction BMPs are required for all sites by Section XIII.B). Note that post-construction BMPs should be developed early in the project planning/design process and reports or drawings related to permanent BMP design should be referenced as needed.
- Identify and provide methods to implement BMP inspection, visual monitoring, Rain Event Action Plan (REAP) (if applicable) and Construction Site
- Monitoring Program (CSMP) requirements to comply with the General Permit.

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

1.2 PERMIT REGISTRATION DOCUMENTS

Required Permit Registration Documents (PRDs) shall be submitted electronically 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

Site Maps 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.

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 LEGALLY RESPONSIBLE PERSON

Refer Appendix L for the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP certification and responsible parties.

1.5 SWPPP AMENDMENTS

The General Permit requires that SWPPP be amended or revised by a QSD (Section XIV.A) and that the SWPPP include a listing of the date of initial preparation and the date of each amendment. Amendments must be signed by a QSD (Section VII.B.6). Amendments shall be directly attached to the SWPPP and certification kept in Appendix D Amendment Log.

The SWPPP should be revised if/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).
- Deployed BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges.

Additionally, the SWPPP shall be amended when:

- There is a significant change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- When there is a significant change in the project duration that changes the project's risk level; or
- When deemed necessary by the Resident Engineer or QSD. Minor changes can be field determined by the QSP as identified by the QSD listed in Table 1.1. All other changes shall be made by the QSD as formal amendments to the SWPPP.

The following items shall be included in the Amendment Log:

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

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

Candidate changes for field location or determination by QSP ⁽¹⁾	Check changes that can be field located or field determined by QSP
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>	

1.6 RETENTION OF RECORDS

The General Permit (Sections I.J.69 and IV.G) requires that all discharges maintain a paper or electronic copy of all required records for three (3) years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed. The discharger shall furnish the RWQCB, SWRCB, or US Environmental Protection Agency (EPA), within a reasonable time, any requested information to determine compliance with this General Permit. RWQCB's may require records to be retained for longer periods.

1.7 REQUIRED NON-COMPLIANCE REPORTING

The General Permit identifies several areas of non-compliance reporting. If a discharge violation occurs the QSP shall immediately notify the Resident Engineer and LRP and the LRP shall file a violation report electronically to the Regional Water Board. It is the responsibility of the permittee to properly document reportable discharges or other violations of the General Permit.

Exceedances and violations should be reporting using the SMARTS system and include the following:

- Numeric Action Level (NAL) Exceedance Report upon request of the RWQCB) (Risk Level 2 and 3)
- Self-reporting of any other discharge violations or to comply with RWQCB enforcement actions; and
- Discharges which contain a hazardous substance in excess of reportable quantities established in 40 CFR §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

The following information should be included for each exceedance or violation:

- 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.

1.8 ANNUAL REPORT

By July 15 of each year, the Contractor shall submit the Contractor's Annual Certification of Compliance to the Resident Engineer stating that the project is in compliance with the terms and conditions of the Permits and the SWPPP. The General Permit requires that all permittees prepare, certify, and electronically submit an Annual Report no later than September 1st of each year. Reporting requirements are identified in Section XVI of the General Permit and include (but are not limited to) providing a summary of:

- 1) Sampling and analysis results including laboratory reports, analytical methods and reporting limits and chain of custody forms;
- 2) Corrective actions and compliance activities, including those not implemented;
- 3) Violations of the General Permit;
- 4) Date, time, place, and name(s) of the inspector(s) for all sampling, inspections, and field measurement activities;
- 5) Visual observation and sample collection exception records; and
- 6) Training documentation of all personnel responsible for General Permit compliance activities.

Projects enrolled for more than one continuous three-month period shall prepare and electronically submit an Annual Report no later than September 1 of each year using SMARTS.

1.9 CHANGES TO PERMIT COVERAGE

The General Permit (Section II.C) allows for the reduction or increase of the total acreage covered under the General Permit when any of the following occur:

- 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.

1.10 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. Filing a NOT certifies that all General Permit requirements have been met.

The NOT is submitted when the construction project is complete and within 90 days of meeting all General Permit requirements for termination and final stabilization (Section II.D) including:

- The site will not pose any additional sediment discharge risk than it did prior to construction activity.
- All construction related equipment, materials and any temporary BMPs no longer needed are removed from the site.
- Post-construction stormwater management measures are installed and a long-term maintenance plan that is designed for a minimum of five years has been developed.

The NOT must demonstrate through photos, Revised Universal Soil Loss Equation (RUSLE) results, or results of testing and analysis that the project meets all of the requirements of Section II.D.1 of the General Permit by one of the following methods:

- 70% final cover method (no computational proof required); or
- RUSLE/RUSLE2 method (computational proof required); or
- Custom method (discharger demonstrates that site complies with final stabilization).

The NOT form is provided in Appendix N

Section 2 Project Information

2.1 PROJECT AND SITE DESCRIPTION

This SWPPP has been prepared for San Juan Capistrano Passing Siding (SJC PS) project located in in southern Orange County mostly in the City of San Juan Capistrano west of the Camino Capistrano Interstate-5. The track is located within Metrolink right-of-way which is part of the Los Angeles to San Diego (LOSSAN) rail corridor. The Project spans approximately 3 miles proceeding south from Paseo de Colinas/73 Tollroad overpass, and west of Camino Capistrano. The Project consists of the construction of a passing track between MP 193.7 and MP 195.7, a pocket track south of Rancho Capistrano, reconstruction of the Camino Capistrano/ Rancho Capistrano grade crossing / street intersection and other appurtenances including trackside drainage ditches, signals, culvert extensions and storm drain laterals in support of the project. The project location is shown on the Site Map in Appendix B.

The overall project limits are approximately 23.8 AC. Disturbed area is approximately 11.9 AC which comprises 50 percent of the total project area. The limits of grading are shown on the Grading & Drainage sheets CG-101 to CG-104 of the SJC PS project drawings. Grading will include both cut and fill activities, with the total graded material estimated to be 19,000 cubic yards. Approximately 6,000 cubic yards of earthwork will be exported during grading activities. Temporary use areas are identified for contractor laydown and stockpile use as shown on the BMP drawings. Construction activities will be phased in accordance with the Track Typical Construction Phasing sheets CT-003 thru CT-006. Selected SJC PS project drawings referenced herein are provided in Appendix B.

2.1.1 Existing Conditions

The Project is located within an existing rail corridor consisting of previously disturbed areas. The track typically consists of rail and ties over rock ballast with earthen trackside drainage on both sides. Vegetation is minimal within the rail right-of-way. The soil is predominately sandy loam material with some:

At the north end, the project is surrounded by developed land and Camino Capistrano. South of BR 194.6 RCB culvert and the improved Oso Creek Orange County flood control channel, surrounding lands are mostly agricultural land.

2.1.2 Existing Drainage

The project site is relatively level with a few side slopes along the track alignment. Trackside drainage is conveyed via surface flow, trackside channels and a series of culverts which ultimately discharges to Oso Creek to the west. City storms drains are intercepted and discharge to Oso Creek at several locations as indicated on the plans. Existing site topography, drainage patterns, and stormwater conveyance systems are shown on Grading & Drainage sheets CG-101 to CG-104 of the project drawings.

The watershed the project discharges to includes Oso Creek which is contributory to Trabuco Creek and then San Juan Creek before discharging to the Pacific Ocean in Dana Point. The following water quality impairments are identified on the most recent 303(d)-list (2010) for these waterbodies:

- Pesticides: DDE, Diazinon
- Pathogens: Indicator Bacteria
- Nutrients: Phosphorus, Total Nitrogen as N
- Metals/Metalloids: Selenium
- Toxicity

Sediment was not listed as a receiving water 303(d) impairment which is the primary pollutant of concern during construction.

2.1.3 Geology and Groundwater

Near surface soils are predominately sandy loam material with some fines as identified on the Natural Resources Conservation Services (NRCS) Web Soil Survey website:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/>

Soil types are variable beneath the track generally consist of clayey and silty sand material. Groundwater depth varies beneath the site at approximately 19 to 33 feet below ground surface as discussed further in the project Geotechnical Report prepared by Earth Mechanics, Inc.

2.1.4 Developed Condition

A passing siding track will be constructed adjacent to the existing mainline track within the railway corridor. Proposed drainage patterns are similar to the existing conditions with modifications to address the additional width of the railway section. Existing drainage patterns are maintained to the maximum extent practicable with relocated drainage facilities typically replaced in kind. Several culverts will be extended to accommodate the siding track.

A siding track project generally maintains the existing perviousness of the site with the track roadway consisting of larger ballast over subballast rock. Drainage patterns are generally maintained with runoff conveyed in improved ditches or under drains where insufficient space is available for a ditch. Track related appurtenances including signal houses and other signal equipment will be installed adjacent to the track roadway in support of the project. The Rancho Capistrano private street grade crossing and adjacent Camino Capistrano intersection will be rebuilt to reduce the elevation difference and provide a smoother vertical profile for vehicles. Streetside curb cuts and trackside concrete ditch maintain the existing street drainage patterns.. Culverts will be extended as needed in support of the project. Concrete lined ditches and rip rap energy dissipaters are provided where needed to protect the track roadway and reduce potential scour and sediment transport concerns.

Post construction drainage patterns and conveyance systems are presented on the SJC PS project grading and drainage plan, sheets CG-101 through CG-104 in Appendix B.

Table 2.1 Construction Site Estimates

Construction site area	<u>23.8</u>	acres
Percent impervious before construction	<u>3.8</u>	%
Runoff coefficient before construction	<u>0.30</u>	
Percent impervious after construction	<u>3.9</u>	%
Runoff coefficient after construction	<u>0.30</u>	

2.2 PERMITS AND GOVERNING DOCUMENTS

In addition to the General Permit, the following documents and anticipated permits have been taken into account while preparing this SWPPP: (List to be updated prior to Bid Ready submittal)

- Contract Documents
- Clean Water Act Section 401 Water Quality Certifications Regional Water Board requirements (No. XXX-XXX)
- Army Corps of Engineers 404 Permit (XXX-201X-XXXXX-XXX)
- CA Department of Fish and Game 1602 Streambed Alteration Notification

2.3 STORMWATER RUN-ON FROM OFFSITE AREA

Existing drainage patterns are generally from east to west toward Oso Creek with the rail corridor intercepting surface and several offsite culverts which then route under the track before discharging toward Oso Creek. Common drainage swales along the easterly rail right-of-way accept runoff from both rail and the Camino Capistrano roadway. Perimeter BMP shall be installed where grading activities are exposed to potential offsite runoff. New drain inlets are show on the plans to intercept and transfer the runoff. Several offsite culverts discharge onto the rail corridor which are then passed thru culverts under the track as depicted on the plans. The BR 194.6 box culvert accepts approximately 83 acres of contributory area including offsite run-on. Installation of BMPs within the City right-of-way are subject to City requirements and approval.

The General Permit requires that temporary BMPs be implemented to direct offsite run-on away from disturbed areas through the use of runoff controls. This requirement shall be

addressed by scheduling culvert extension work and other grading disturbance work for the non-rainy season and during dry weather, as practicable.

As needed, temporary swale stabilization and/or small diversions shall be implemented to limit the amount of offsite water running onto recently graded areas. Temporary gravel bag check dams shall be constructed within the swales to control the velocity of flow.

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 Risk Level 1.

The Risk Level is based on project duration (est. 18 months), location, proximity to impaired receiving waters and soil conditions. A copy of the Risk Level determination to be submitted on SMARTS with the PRDs is included in Appendix C.

The Risk Level was determined through the use of the Risk Determination Worksheet available on the State Water Resources Control Board website. Within this worksheet, calculators, figures and tables are given to define the parameters for risk determination. The R-factor was determined from Isoerodent Maps and adjusted based on the Erosivity Index (EI value). The Soil Erodibility factor(K-factor) is defined by the soil profiles given in the project's soil report. The percentages of fines and sands are then measured on Erickson triangular nomograph and a K-factor value is calculated. The LS factor that determines the hill slope length and gradient was calculated as a weighted value. Due the linear nature of the project, use of a weighted LS factor was deemed appropriate based on the Caltrans Storm Water Quality Handbook "Project Risk Level Determination Guidance" document dated April 2012. The weighted factors are the percentage of project area with a maximum of 2:1 graded slopes and the remaining area of the site. The sheet flow length and average watershed slope were measured on the LS table and a weighted value was calculated.

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

RUSLE Factor	Value	Method for establishing value
R	35	Determined from Isoerodent Map and calculations.
K	0.37	Determined from the NRCS Web Soil Survey (Myford sandy loam is predominant)
LS	0.27	A weighted value determined by measuring slope length and gradient within project site.
Total Predicted Sediment Loss (tons/acre)		3.49
Overall Sediment Risk		<input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Low Sediment Risk < 15 tons/ acre		

Table 2.2 Summary of Sediment Risk

RUSLE Factor	Value	Method for establishing value
Medium Sediment Risk ≥ 15 and < 75 tons/acre		
High Sediment Risk ≥ 75 tons/acre		

Sediment was not listed as a receiving water 303(d) impairment which is the primary pollutant of concern during construction.

Table 2.3 Summary of Receiving Water Risk

Receiving Water Name	303(d) Listed for Sediment Related Pollutant⁽¹⁾	TMDL for Sediment Related Pollutant⁽¹⁾	Beneficial Uses of COLD, SPAWN, and MIGRATORY⁽¹⁾
Oso Creek (L03)/ Trabuco Creek (L02) / Lower San Juan Creek (L01)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Overall Receiving Water Risk			<input checked="" type="checkbox"/> Low <input type="checkbox"/> High
(1) If yes is selected for any option the Receiving Water Risk is High			

Risk Level 1 sites are subject to the narrative effluent limitations specified in the General Permit. 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.

This SWPPP has been prepared to address Risk Level 1 requirements (General Permit Attachment N).

2.5 CONSTRUCTION SCHEDULE

The site sediment risk was determined based on construction estimated to occur over a period of 18 months. 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 (construction schedule to be provided in the final SWPPP prepared by Contractor) can be found in Appendix F.

2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES

Appendix G includes a list of typical construction activities and associated materials that could 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 shall be retained onsite at the construction trailer.

2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES

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:

- Discharges from emergency fire-fighting activities.
- De-chlorinated fire hydrant flushing.
- Water used to control dust or to allow for optimal compaction of grading areas.
- Potable water including uncontaminated and de-chlorinated water line flushing.
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used.
- Uncontaminated air conditioning or compressor condensate.
- Landscape irrigation.

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:

- Construction dewatering
- Concrete curing and finishing
- Construction clean up water
- Concrete washout
- Vehicle and equipment operations, and
- Water from other construction activities.

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. Table 2.5 identifies Map or Sheet Nos. where required elements are illustrated. The QSP shall add any element not currently identified or changed on the provided plans.

Table 2.5 Required Map Information

Included on Map/Plan Sheet No. ⁽¹⁾	Required Element
GN-001	The project's surrounding area (vicinity)
GN-001/-008	Site layout
CU-301 – CU-305	Construction site boundaries
Hydro Map	Drainage areas
CU-301 – CU-305	Discharge locations
CU-301 – CU-305	Sampling locations
CU-301 – CU-305	Areas of soil disturbance (temporary or permanent)
CU-301 – CU-305	Active areas of soil disturbance (cut or fill)
CU-301 – CU-305	Locations of runoff BMPs
CU-301 – CU-305	Locations of erosion control BMPs
CU-301 – CU-305	Locations of sediment control BMPs
N/A	ATS location (if applicable)

Table 2.5 Required Map Information

Included on Map/Plan Sheet No. ⁽¹⁾	Required Element
CU-301 – CU-305	Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
CU-301 – CU-305	Locations of all post construction BMPs
QSP to locate on map	Waste storage areas
QSP to locate on map	Vehicle storage areas
QSP to locate on map	Material storage areas
CG-10X	Entrance and Exits
QSP to locate on map	Fueling Locations

Notes: (1) Indicate maps or drawings that information is included on (e.g., Vicinity Map, Site Map, Drainage Plans, Grading Plans, Progress Maps, etc.)

DRAFT

Section 3 Best Management Practices

3.1 SCHEDULE FOR BMP IMPLEMENTATION

BMPs must be implemented, modified, and maintained to reflect the phase of construction and the weather conditions. 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).

Refer to Appendix F for the BMP implementation schedule.

The SWPPP should be implemented prior to and during construction on a continuous basis, on the following items:

- Prior to construction at a particular site, establish proper construction staging, material storage, and temporary waste storage areas;
- Ensure personnel are familiar with the requirements of the SWPPP;
- Place waste in dumpster or in proper waste contaminant area at the end of each day. Under no circumstances shall construction waste be buried, dumped or discharged at the construction site;
- Inspect and maintain BMPs after installation; and
- After final grading, stabilize the construction site using BMPs

The track phasing plan includes approximately 7 stages of construction in order to accommodate the construction of the siding track while the existing main track remains operational. **The Contractor is responsible to develop a BMP implementation schedule with the QSP based on the overall construction schedule and include a copy of the schedule in Appendix F.**

Table 3.1 BMP Implementation Schedule

	BMP	Implementation	Duration
Erosion Control	EC-1, Scheduling	Prior to Construction	Entirety of Project
	EC-2, Preservation of Existing Vegetation	Start of Construction	Entirety of Project
	EC-4, Hydroseeding	During Construction	Entirety of Project
	EC-9, Earth Dikes/Drainage Swales	During Construction	Entirety of Project
	EC-10, Velocity Dissipation Devices	During Construction	Entirety of Project
Sediment Control	SE-1, Silt Fence	During Construction	Entirety of Project
	SE-4, Check Dam	During Construction	Entirety of Project
	SE-5, Fiber Rolls	During Construction	Entirety of Project
	SE-6, Gravel Bag Berm	During Construction	Entirety of Project
	SE-10, Storm Drain Inlet Protection	During Construction	Entirety of Project
Tracking Control	TC-1, Stabilized Construction Entrance	During Construction	Entirety of Project
	TC-3, Entrance/Outlet Tire Wash	During Construction	Entirety of Project
Wind Erosion	WE-1, Wind Erosion Control	During Construction	Entirety of Project

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.

DRAFT

Table 3.2 Temporary Erosion Control BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement ⁽¹⁾	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling	✓	X		
EC-2	Preservation of Existing Vegetation	✓	X		
EC-3	Hydraulic Mulch	✓ ⁽²⁾	X		Bonded Fiber Matrix
EC-4	Hydroseed	✓ ⁽²⁾	X		
EC-5	Soil Binders	✓ ⁽²⁾		X	EC-4 with EC-3 Bonded Fiber Matrix is sufficient
EC-6	Straw Mulch	✓ ⁽²⁾		X	EC-4 with EC-3 Bonded Fiber Matrix is sufficient
EC-7	Geotextiles and Mats	✓ ⁽²⁾		X	EC-4 with EC-3 Bonded Fiber Matrix is sufficient
EC-8	Wood Mulching	✓ ⁽²⁾		X	EC-4 with EC-3 Bonded Fiber Matrix is sufficient
EC-9	Earth Dike and Drainage Swales	✓ ⁽³⁾	X		
EC-10	Velocity Dissipation Devices		X		
EC-11	Slope Drains			X	Not applicable
EC-12	Stream Bank Stabilization			X	Not applicable
EC-14	Compost Blankets	✓ ⁽²⁾		X	EC-4 with EC-3 Bonded Fiber Matrix is sufficient
EC-15	Soil Preparation-Roughening			X	Not applicable
EC-16	Non-Vegetated Stabilization	✓ ⁽²⁾		X	EC-4 with EC-3 Bonded Fiber Matrix is sufficient
WE-1	Wind Erosion Control	✓	X		
Alternate BMPs Used:					If used, state reason:
⁽¹⁾ Applicability to a specific project shall be determined by the QSD. ⁽²⁾ The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements. ⁽³⁾ 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 and the project specifications takes precedence over guidance in the BMP Fact Sheets.

Pre-Construction BMPs- Stabilize Perimeter

- To prevent transport of sediment into existing storm drain inlets and onto adjacent properties and roadways, before grading or clearing, the site perimeter will be stabilized using controls such as silt fences (SE-1); tracking controls such as stabilized construction entrances (TC-1); storm drain inlets will be protected (SE-10); and sediment traps (if applicable) (SE-3) will be constructed.

Scheduling

- All BMPs shall be in place year-round on an as-needed basis and scheduled to reduce impacts. Construction activities shall be planned and performed to minimize the area and duration of exposure of soil to erosion by wind, rain, runoff and vehicle tracking.
- The area that can be cleared or graded and left exposed at one time will be limited to the amount of acreage that the Contractor can adequately protect prior to a predicted rainstorm. A predicted storm event is defined as a forecasted 50% chance of rain.
- Timing of construction will be considered when scheduling work to minimize soil disturbing activities and major grading operations during the rainy season.
- Grading of the site will be phased to minimize the total area of exposed soil and the duration of exposure.

Preservation of Existing Vegetation

- Existing vegetation or property will be retained (EC-2) in undisturbed areas to the extent possible.

Hydroseed/Bonded Fiber Matrix

- Hydroseed with Bonded Fiber Matrix shall be used on disturbed slope areas as a temporary surface cover until permanent vegetation is established.

Earth Dike and Drainage Swales

- Diversion ditches to prevent run-on from off-site areas will be constructed and maintained.
- Level spreaders, outlets for dikes and flow channels consisting of an excavated depression constructed at zero grade across a slope, will be used to convert concentrated runoff into diffuse flow to be released onto areas stabilized by existing vegetation.

Velocity Dissipation Devices

- Runoff velocities, both on slopes and at discharge points, will be retarded to prevent erosion.
- Rock slope protection (i.e. rip rap) will be placed at pipe inlets/outlets to prevent scour and reduce the velocity and/or energy of storm water flows.

Wind Erosion Control

- Dust control shall be provided to prevent or alleviate dust generated by construction activities. Measures will be taken to control particulate matter air pollution in compliance with Rule 403, Fugitive Dust of the South Coast Air Quality Management District (AQMD) During the dry seasons, construction activities are at their peak, and disturbed and exposed soil areas are increasingly subject to wind erosion, sediment tracking and dust generation by construction equipment.
- Applying water at the site to prevent or alleviate dust nuisance generated by construction activities may be required to control wind erosion or dust. Care will be taken to prevent over-watering, which may result in runoff or erosion. Uncovered exposed soil that is dry and creating dust will be watered on a daily basis. Watering will occur using a hose connected to an identified water source. Covering small stockpiles or areas is an alternative to applying water.

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.

Sufficient quantities of temporary sediment control materials shall be maintained on-site throughout the duration of the project. Allowing for implementation of 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

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.

Table 3.3 Temporary Sediment Control BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement ⁽¹⁾	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence	✓ ⁽²⁾ (3)	X		
SE-2	Sediment Basin			X	Sediment basin is not required for the minimal drainage areas.
SE-3	Sediment Trap			X	Sediment traps are not anticipated necessary for the minimal drainage areas.
SE-4	Check Dams		X		
SE-5	Fiber Rolls	✓ ⁽²⁾ (3)	X		
SE-6	Gravel Bag Berm	✓ ⁽³⁾	X		
SE-7	Street Sweeping	✓	X		
SE-8	Sandbag Barrier			X	SE-6 is sufficient
SE-9	Straw Bale Barrier			X	SE-4 is sufficient
SE-10	Storm Drain Inlet Protection	✓ RL 2&3	X		
SE-11	Active Treatment System (ATS)			X	Not required for Risk Level or anticipated sediment loads.
SE-12	Manufactured Linear Sediment Controls			X	SE-5 & SE-6 meet the minimum requirements
SE-13	Compost Sock and Berm	✓ ⁽³⁾		X	Not required for Risk Level
SE-14	Biofilter Bags	✓ ⁽³⁾		X	Not required for Risk Level
TC-1	Stabilized Construction Entrance and Exit	✓	X		
TC-2	Stabilized Construction Roadway			X	No construction roadway proposed.
TC-3	Entrance Outlet Tire Wash			X	TC-1 & SE-7 is sufficient unless excessive off site tracking is observed
Alternate BMPs Used:					If used, state reason:
⁽¹⁾ Applicability to a specific project shall be determined by the QSD ⁽²⁾ The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements					

Table 3.3 Temporary Sediment Control BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement ⁽¹⁾	BMP used		If not used, state reason
			YES	NO	
⁽³⁾ Risk Level 2 &3 (RL 2&3) shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope					

DRAFT

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

- Temporary silt fences will be constructed and maintained at the toe of exposed and erodible slopes, down slope of exposed soil areas, along the perimeter of the site, or around temporary soil stockpiles to allow sediment to settle from runoff before waterleaves the site.
- Silt fence shall be properly installed and maintained regularly by the Contractor including but not limited to trenching and keying in the bottom of the silt fence fabric, replacing worn fabric, and providing adequate sediment capacity (i.e., clean when sediment reaches 1/3 of the barrier height). Silt fence is not effective in concentrated flow areas.

Check Dams

Check dams will be used in unlined drainage channels to slow runoff velocity and encourage settlement of sediment.

Fiber Rolls

Fiber rolls will be used to reduce flow velocity (as slope interrupters or temporary check dams) and provide some removal of sediment, predominantly along the face or toe of erodible slopes and for perimeter sediment control. Fiber rolls are not appropriate as the only BMP at a site and should be used in conjunction with other erosion and sediment control measures to reduce pollutant discharges and shall be maintained by the Contractor for effective sediment control.

Gravel Bag Berm

- Gravel bag berms will be used to reduce flow velocity (as slope interrupters or temporary check dams) and provide some removal of sediment.
- Gravel bag barriers will be used for perimeter site control or along streams or channels or around stockpiles to intercept sediment laden sheet flow or moderately concentrated flows.

Street Sweeping

All active construction entrance/exits and adjacent roadways shall be inspected on a daily basis for off-site tracking of sediment. Street shall be swept or vacuumed as needed. All sediment deposited on paved roadways will be removed within 24-hours of being identified.

Storm Drain Inlet Protection

- All storm drains in the project area and off-site where inlets can receive flow downstream of sediment tracked from the site will be protected with appropriate storm

drain inlet protection such as filter fabrics, block and gravel filters, gravel and wire mesh filters, or gravel bag barriers.

Stabilized Construction Entrance and Exit

- A stabilized construction entrance will be used to reduce off-site tracking.

Entrance Outlet Tire Wash

- A wheel wash will be used if off site tracking cannot be controlled by a stabilized entrance and sweeping.

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 implementation of the control measures outlined in this section is intended for material and construction management of the site. The non-storm water measures shall be performed in accordance with the CASQA proper BMP installation guide in Appendix G. The effectiveness of these measures will be evaluated through inspections of the site as mandated by the General Construction Permit. Modifications to measures shall be made as needed by the QSP and the plan updated as necessary.

Of significant concern for construction discharges are the pollutants found in materials used in large quantities at construction sites and exposed throughout the rainy season, such as cement, flyash, and other recycled materials or by-products of combustion. The water quality standards that apply to these materials will depend on their composition. Some of the more common storm water pollutants from construction activity are not California Toxic Rule pollutants. Examples of non-visible pollutants include glyphosate (herbicides), diazinon and chlorpyrifos (pesticides), nutrients (fertilizers), and molybdenum (lubricants). The use of diazinon and chlorpyrifos is a common practice among landscaping professionals and may trigger sampling and analysis requirements if these materials come into contact with storm water. High pH values from cement and gypsum, high pH and SSC from wash waters, and chemical/fecal contamination from portable toilets, also are not CTR pollutants. Although some of these constituents do have numeric water quality objectives in individual Basin Plans, many do not and are subject only to narrative water quality standards (i.e. not causing toxicity).

The most effective way to avoid the sampling and analysis requirements, and to ensure permit compliance, is to avoid the exposure of construction materials to precipitation and storm water

runoff. Materials that are not exposed do not have the potential to enter storm water runoff, and therefore, receiving waters sampling is not required. Preventing contact between storm water and construction materials is one of the most important BMPs at any construction site.

Good Housekeeping Practices

Good housekeeping practices shall be implemented to maintain a clean and orderly work site environment. Good housekeeping measures help control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics. This includes keeping an accurate inventory of chemicals or materials on site, sweeping paved areas on a weekly basis or at a minimum during the major hauling periods, removing demolition and construction debris on a regular basis from the construction site, etc. The work area will require tight housekeeping practices on a daily basis.

The Contractor shall conduct a site assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site. Refer to Appendix F for a general list of potential pollutants.

When developing BMPs to address the list of potential pollutants:

- Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
- Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
- Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
- Ensure retention of sampling, visual observation, and inspection records.
- Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
- Maintain a log of Material Safety Data Sheets (MSDS) to be kept onsite.

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 ⁽¹⁾	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices	✓	X		
NS-2	Dewatering Operation		X		As necessary
NS-3	Paving and Grinding Operation		X		
NS-4	Temporary Stream Crossing			X	Construction of culvert BR194.6 RCB culvert is anticipated to occur outside the rainy season.
NS-5	Clear Water Diversion		X		As necessary
NS-6	Illicit Connection/Discharge	✓	X		
NS-7	Potable Water/Irrigation			X	No irrigation on site
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			X	No driven piles.
NS-12	Concrete Curing		X		
NS-13	Concrete Finishing		X		
NS-14	Material and Equipment Use Over Water			X	No open water.
NS-15	Demolition Removal Adjacent to Water			X	No open water.
NS-16	Temporary Batch Plants			X	No batch plants are required for project.
Alternate BMPs Used:			If used, state reason:		

⁽¹⁾ 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 encouraged and monitored throughout the duration of the project. Water sources will be checked regularly for leaks. Water sources are to be stabilized to prevent excess erosion and runoff. All employees are to be notified and reminded of this policy.

Clear Water Diversion

- BR194.6 is located in an intermittent flowing drainage channel. Construction of the concrete box culvert is expected to occur outside the rainy season during dry weather. The Contractor is responsible to provide Clear Water Diversion BMPs as needed depending on the construction schedule and interim site conditions.

Illicit Connection/Discharge

- The Contractor is responsible for timely and accurate reporting of any illegal discharge, whether generated by the Contractor or an outside entity. The WPCM will submit the appropriate information to the Owner. The Owner is to direct and pay the Contractor for any illegal discharge that is not the responsibility of the Contractor.

Vehicle and Equipment Cleaning

- All vehicle, equipment, and machinery washing will be done off-site at commercial wash facilities or at a facility that is properly permitted and discharges wash water to a recycle/reuse system or to the sanitary sewer.

Vehicle and Equipment Fueling

- All vehicle and equipment fueling will be conducted off-site.

Vehicle and Equipment Maintenance

- All vehicle and equipment maintenance will be conducted off-site.

Concrete Curing

- Over-spray of cure will not be allowed. Cure containers are to be secured in primary and secondary containment.

Concrete Finishing

- All water and waste material from high-pressure blasting will be properly contained and disposed of in accordance with waste management requirements and procedures.

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 ⁽¹⁾	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		
WM-07	Contaminated Soil Management		X		As necessary.
WM-08	Concrete Waste Management	✓	X		
WM-09	Sanitary-Septic Waste Management	✓	X		
WM-10	Liquid Waste Management		X		
Alternate BMPs Used:				If used, state reason:	

⁽¹⁾ 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

- Designate areas of the construction site for material delivery and storage. Material storage areas will be placed near construction site entrances, away from drain inlets, culverts and surface water bodies.
- Designated storage areas will be kept clean and well organized.
- Any materials being stored which could release pollutants by wind or runoff transport shall be protected by overhead cover, secondary containment, tarpaulins, or other appropriate method.
- Regular inspections of storage areas will be conducted to monitor inventory and check for leaking containers.
- Any chemicals, drums or bagged materials not stored in a covered location, will be stored on pallets, and when possible in secondary containment.
- Secondary containment will be provided for liquids.
- Secondary containment areas will be covered to prevent accumulation of rainwater.

Material Use

- Materials will be used in accordance with manufacturer directions and in a manner to prevent release of pollutants.
- An accurate, up-to-date inventory of materials delivered and stored on-site will be kept.
- Application of any erodible landscape material will be discontinued two (2) days prior to a forecasted rain event or during periods of precipitation.

Stockpile Management

- Stockpiles will be covered or protected by soil stabilization measures when not in use and at the end of each day throughout the term of the contract (WM-3). Stockpiles shall be protected with temporary perimeter sediment barriers.

Spill Prevention and Control

- If a spill were to occur at the site, it will never be cleaned-up by hosing off the area. Dry material spills will never be hosed down or buried.
- Any fuel products, lubricating fluids, grease or other products and/or waste released from the Contractor's vehicles, equipment, or operations shall be collected and disposed of immediately in accordance with State, Federal and local laws.

- If the spill has occurred during a rain event, the area will be covered as quickly as possible. The spill will be cleaned up as soon as possible after cessation of rain.
- Spill cleanup materials will be stored near potential spill areas (e.g., painting, vehicle maintenance areas).

Solid Waste Management

- There will be designated temporary waste storage areas on the site.
- The site will be kept clean of litter and waste.
- Non-hazardous construction wastes (e.g., vegetation, trash, and construction debris) will be collected from throughout the site regularly and deposited at the designated waste storage areas. Additional containers and more frequent pickup will be provided during the demolition phase of construction.
- When practical, non-hazardous site wastes will be stored within covered, water-tight dumpsters and/or containers that prevent exposure to rain and prevent loss of wastes when it is windy.
- All waste materials will be removed from the storage areas by the Contractor or a licensed subcontractor on a weekly basis and disposed or recycled in accordance with all Federal, State, and local regulations.
- Dumpsters will not be hosed out on the construction site. Any required dumpster cleaning will be done off-site by the trash hauling contractor.
- Any solid waste that accumulates at erosion and sediment control devices will be removed immediately.

Hazardous Waste Management

- Hazardous wastes and containers will be placed in a designated hazardous waste storage area that is covered and has an impermeable bottom surface surrounded by secondary containment to minimize the mixing of wastes with storm water and to prevent the direct release of liquid waste to storm water. The temporary storage and removal of hazardous wastes from the site will be in accordance with all applicable state and federal laws.
- Wastes will be segregated and recycled where feasible (e.g., paints, solvents, used oil, batteries, anti-freeze). Wastes will not be mixed since this can cause chemical reactions, will make recycling impossible and complicate disposal.
- Covered waste bins will be designated for the disposal of all empty product (e.g., paints, solvents, glues, petroleum products, concrete, exterior finishes, pesticides, fertilizers, etc.) containers. The original product label will not be removed as it contains important safety and disposal information.
- Toxic wastes and chemicals will not be disposed of in dumpsters designated for construction debris.

- If any asbestos is discovered in the demolished materials, asbestos removal and disposal will be performed by a licensed contractor or licensed subcontractor trained in asbestos removal. All removal and disposal will be done in accordance with state and federal regulations. Any asbestos wastes stored on-site prior to removal will be stored within dumpsters (roll-offs) covered with tarps or other appropriate method to prevent contact with rain and minimize exposure to wind.
- Employees and subcontractors will be trained on proper storage practices.

Concrete Waste Management

- Concrete trucks and transfer chutes will be washed-out on-site utilizing a concrete washout to collect all wash water and concrete waste. The washout area will be located away from storm drains, open ditches or water bodies.
- No concrete washout water or concrete saw cutting wastewater will be discharged off-site.
- Gravel bags will be used to prevent off-site discharge of saw-cut slurry and sediment will be cleaned up when dry.
- On a regular basis during concrete work, solid concrete that has accumulated on-site will be broken up, removed and hauled away. Washing of fresh concrete will be avoided to the extent possible.
- Excess concrete will not be dumped on-site, except in designated areas.
- Sweepings from exposed aggregate concrete will not be washed into the street or storm drain. The sweepings will be collected and returned to the aggregate stockpile or disposed in the trash.
- Employees and subcontractors will be trained in proper concrete waste management.

Sanitary-Septic Waste Management

- Portable sanitary facilities will be transported to and from the site by a licensed contractor, placed in a convenient location and maintained in good working order by a licensed service.
- Untreated wastewater will never be discharged to surface waters or on-site storm drains and will never be buried.

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. ☒ Yes ☐ No

Post construction runoff reduction requirements have been satisfied through the MS4 program, this project is exempt from provision XIII A of the General Permit.

The following source control post construction BMPs to comply with General Permit Section XIII.B and local requirements have been identified for the site:

- Vegetated Slopes
- Concrete lined ditches for scour protection.
- Velocity Dissipaters (e.g. rip rap) at discharge locations.
- Track surfaces stablized with rock ballast and subbase.

The post construction BMPs that are described above shall be funded and maintained by Metrolink.

DRAFT

Section 4 BMP Inspection, and Maintenance

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.

4.2 RAIN EVENT ACTION PLANS

Rain Event Action Plans (REAPs) are not required for Risk Level 1 projects.

DRAFT

Section 5 Training

Appendix L identifies the QSPs for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel shall be included as part of routine project meetings such as daily/weekly 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.

Qualified SWPPP Developer - LRP will ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience:

The designated Qualified SWPPP Developer is (Provided by Contractor):

Name	Phone Number	Qualification(S)

Qualified SWPPP Practitioner - LRP will ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis.

The designated Qualified SWPPP Practitioner is (Provided by Contractor):

Name	Phone Number	Qualification(S)

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

Section 6 Responsible Parties and Operators

6.1 RESPONSIBLE PARTIES

The General Permit requires (Section VII.B.4) that the name of any “Approved Signatory” be listed in the SWPPP. A list of authorized representatives are provided in SWPPP Appendix L along with project site personnel who will be responsible for SWPPP activities, including the QSD and QSP. This list should include the names of the individuals granted authority to sign the permit-related document.

Include copies of the written authorizations for duly authorized representatives in the appendix. The appendix or list should include the name and contact information for the individual, their role on the project, date of training, and date of recorded entry as well as a copy of training certificates or other verification of training.

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 General Permit requires (Section VII.B.5) that the SWPPP include a list of names of all contractors, subcontractors, and individuals who will be directed by the QSP.

Refer to SWPPP Appendix M for the list of contractors for this project. The list is required to include telephone numbers and work addresses and the specific areas of responsibility of each subcontractor and emergency contact numbers.

DRAFT

Section 7 Construction Site Monitoring Program

7.1 PURPOSE

This Construction Site Monitoring Program (CSMP) is a guide for the LRP QSP and/or qualified individual(s) supervised by the QSP for monitoring and sampling procedures and instructions. The QSP is to determine whether BMPs included in the SWPPP are effective and if immediate actions are needed and/or SWPPP revisions are necessary to reduce pollutants in storm water and authorized non-storm water discharges. The QSP is responsible for implementing the requirements of the CSMP from the commencement to the completion of construction activity. Additionally, the QSP must ensure the site is stabilized after all construction activity has been completed.

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

1. To demonstrate that the site is in compliance with the Discharge Prohibitions 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.

Revisions to the CSMP are the responsibility of LRP and will be performed when any of the following occur:

- Site conditions or construction activities change such that a change in monitoring is required to comply with the requirements and intent of the General Permit.
- The RWQCB reviews the CSMP and requires revisions to be made.
- The RWQCB requires additional CSMP requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies.

7.2 APPLICABILITY OF PERMIT REQUIREMENTS

This project has been determined to be a Risk Level 1 project. The General Permit identifies the following types of monitoring as being applicable for a Risk Level 1 project.

- Visual inspections of Best Management Practices (BMPs);
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;

- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- Sampling and analysis of construction site runoff as required by the Regional Water Board when applicable.

The CSMP describes the General Permit monitoring requirements for this project. Requirements vary based on the project risk level. The CSMP shall identify the applicable monitoring requirements; and, inspection, observation, and sample collection frequency based on the project's risk level.

The qualifying storm event for stormwater related observations and sample collection is any event that produces 0.5 inches or more of precipitation with a 48 hour or greater period between rain events. The QSP shall refer to the Rainfall and Inspection Flow Chart in Appendix I for an overall guide for rain-event triggered and other inspections.

DRAFT

7.3 WEATHER AND RAIN EVENT TRACKING

Visual monitoring and inspections 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 forty-eight (48) hours of dry weather will be used to distinguish between separate qualifying storm events.

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 forty-eight (48) hours of dry weather will be used to distinguish between separate qualifying storm events.

For the purposes of assessing exceptions to the Receiving Water Monitoring Triggers the General Permit establishes the compliance storm event at the 5-year, 24-hour event. Based on the Western Regional Climate Center website, the estimated 5-year, 24-hour event for this project location is 3.3 inches.

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.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 a rain gauge 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 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. Since onsite rain gauge readings are not always accurate or consistent, comparison to the nearest appropriate governmental rain gauge is recommended.

7.4 MONITORING LOCATIONS

Monitoring locations are shown on the Site Maps 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 QSP shall identify and revise the sampling locations accordingly. 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

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: Monday through Friday, 7:00 am - 3:00 pm.

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	Weekly ¹
BMP Inspections – Tracking Control	Daily
Non-Stormwater Discharge Observations	Quarterly during daylight hours
<i>Rain Event Triggered Inspections</i>	
Site Inspections Prior to a Qualifying Event	Within 48 hours of a qualifying event ²
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rain event ³
Site Inspections Following a Qualifying Event	Within 48 hours of a qualifying event ²
<i>Sampling and Analysis</i>	
Non-visible pollutants: Spill/BMP failure based on pollutant source assessment	Within first two hours of discharge from site. Collect samples of runoff affected by the spilled or released material(s) and runoff that is unaffected by the spilled or released material(s).

Table 7.1 Summary of Visual Monitoring and Inspections

Type of Inspection	Frequency
Contained rain water	At time of discharge.
Non-stormwater	At locations where discharged off the site.
¹ Most BMPs must be inspected weekly; those identified below must be inspected more frequently. ² Inspections are required during scheduled site operating hours. ³ Inspections are required during scheduled site operating hours regardless of the amount of precipitation on any given day.	

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 twenty-four (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

Within forty-eight (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.

BMP inspections and visual monitoring will be triggered by a NOAA prediction of rain in the project area.

or

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.

7.6.2.3 *Visual Observations Following a Qualifying Rain Event*

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 and their training qualifications shall be maintained in Appendix K.

Assigned Inspector: _____ Contact phone: _____

Alternate Inspector: _____ Contact phone: _____

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 2 days of the inspection submit copies of the completed inspection report to Orange County Transportation Authority or its authorized representative.

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

DRAFT

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 2 days of the inspection submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions to Orange County Transportation Authority or its authorized representative.

Results of visual monitoring shall 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 Site Maps in SWPPP Appendix A.

There are 11 drainage areas on the project site and the contractor’s yard, staging areas, and storage areas. Table 7.2 describes the general drainage area by location. Drainage patterns are shown on the Site Maps in Appendix B..

Table 7.2 Site Drainage Areas

Location No.	Location
1	The drainage area is approximately from the existing mainline to the easterly right-of-way between the MP 193.7 and the MP 194.1 Highway 73 overhead crossing. Drainage is conveyed via a shallow swale to the existing MP 194.2 culvert.
2	The drainage area is approximately from the existing mainline to the westerly right-of-way between the MP 193.7 and the MP 194.1 Highway 73 overhead crossing. Drainage is conveyed via sheet flow toward Oso Creek.
3	The drainage area is approximately from the existing mainline to the westerly right-of-way between the MP 193.7 Highway 73 overhead crossing and MP 194.3 Rancho Capistrano at-grade crossing. Drainage is conveyed via sheet flow toward Oso Creek.

Table 7.2 Site Drainage Areas

Location No.	Location
4	The drainage area is approximately from the existing mainline to the middle of the Camino Capistrano roadway between the MP 194.1 Highway 73 overhead crossing and MP 194.3 Rancho Capistrano at-grade crossing. Drainage is conveyed via curb and gutter to a new catch basin.
5	The drainage area is approximately from the middle of the Camino Capistrano roadway to the easterly City/Caltrans right-of-way between the MP 194.1 Highway 73 overhead crossing and MP 194.3 Rancho Capistrano at-grade crossing. Drainage is conveyed via curb and gutter to an existing catch basin.
6	<p>The drainage area is approximately from the existing mainline to the middle of the Camino Capistrano roadway between the MP 194.3 Rancho Capistrano at-grade crossing and the BR 194.6 culvert. Drainage is conveyed via a shallow swale southerly toward a new MP 194.55 catch basin which connects to the BR 194.6 culvert. The northerly portion of Camino Capistrano near the Rancho Capistrano grade crossing is intercepted by a new catch basin at MP 194.25.</p> <p>The BR 194.6 box culvert accepts approximately 84 acres of contributory area including off-site upstream street, freeway, residential, and unimproved land use areas</p>
7	The drainage area is approximately from the existing mainline to the westerly right-of-way between the MP 194.3 Rancho Capistrano at-grade crossing and MP 195.0. Drainage is conveyed via sheet flow toward Oso Creek.
8	The drainage area is approximately from the middle of the Camino Capistrano roadway to the easterly City/Caltrans right-of-way between the MP 194.3 Rancho Capistrano at-grade crossing and the existing MP 194.5 culvert. Drainage is conveyed via curb and gutter to an existing catch basin.
9	The drainage area is approximately from the existing mainline to the westerly pavement edge / middle of the Camino Capistrano roadway between the BR 194.6 culvert and MP 195.0. Roadway drainage is conveyed via a shallow swale northerly toward a new catch which connects to the BR 194.6 culvert. Drainage within the rail right-of-way is conveyed by trackside underdrains and concrete ditches to the existing MP 194.9/195.0 drop inlets.
10	The drainage area is approximately from the existing mainline to the westerly right-of-way between MP 195.0 and MP 195.7. Drainage is conveyed via sheet flow toward the adjacent private property access road which ultimately drains to Oso Creek.

Table 7.2 Site Drainage Areas

Location No.	Location
11	The drainage area is approximately from the existing mainline to the easterly rail right-of-way adjacent to Camino Capistrano roadway/private property between the BR 195.0 culvert and MP 195.7. Drainage is conveyed via a trackside swale southerly.

There are 10 concentrated discharge locations on the project site. Site stormwater discharge location(s) are shown on the Site Maps in Appendix B and Table 7.3 identifies each stormwater discharge location.

Table 7.3 Site Stormwater Discharge Locations

Location No.	Location
D-1	MP 194.2 culverts accept trackside and run-on drainage from an upstream culvert. The culvert discharge directly to the Oso Creek flood control channel.
D-2	New MP 194.25 westerly curb cut in Camino Capistrano connects to new trackside u-ditch.
D-3	Existing MP 194.25 easterly catch basin in Camino Capistrano connects to an existing 54" storm drain in the City roadway.
D-4	New MP 194.35 westerly curb cut in Camino Capistrano connects to new trackside u-ditch.
D-5	New MP 194.55 westerly catch basin in rail right-of-way connects to the BR 194.6 box culvert.
D-6	BR 194.6 box culvert accepts trackside and run-on drainage from an upstream double box culvert. The box culvert discharges to a separate downstream box culvert located at the westerly right-of-way which connects to the Oso Creek flood control channel.
D-7	MP 194.9 drop inlet connects to a 24" CMP culvert which discharges at the toe of slope near the westerly right-of-way before draining to Oso Creek.
D-8	MP 195.0 drop inlet connects to a 24" CMP culvert which discharges at the toe of slope outside the westerly right-of-way before draining to Oso Creek.
D-9	MP 195.02 culvert accept trackside drainage and discharges at the westerly right-of-way onto the adjacent private property before draining to Oso Creek.
D-10	MP 195.7 shallow swales on both sides of the track maintain the existing southerly drainage pattern within the right-of-way.

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;
- (2) And the leak or spill has not been cleaned up prior to the rain event;
- (3) And there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

Included in Appendix G is the CALTRANS Pollutant Testing Guidance Table which identifies typical construction activities with their associated construction material / wastes and their potential pollutants both visible and non-visible. The QSP shall locate potential sources of non-visible pollutants to storm water discharges on the Site Maps in Appendix B including project storage, use and operational locations. Soil amendments and stabilization products are another potential source on non-visible pollutants to locate as needed.

There are no known existing site features identified as potential sources of non-visible pollutants. The QSP shall locate any existing site features if identified.

The project has received stormwater run-on from several existing culverts discharging into the right-of-way and from the Camino Capistrano roadway as shown on the Site Maps in Appendix B.

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 Site Maps in Appendix B and include the locations identified in Tables 7.5 through 7.9.

Ten (10) suggested sampling location(s) on the project site have been identified as described in Table 7.4. The

QSP shall modify these locations as necessary depending on field conditions. The QSP shall identify sample locations for the collection of samples of runoff from and areas where non-visible pollutant producing construction activities are planned, such as from planned material and waste storage areas within the temporary construction easement / stockpile / staging (e.g. contractor's yard). Print out Table 7.4 and attach additional sheets as necessary.

Table 7.4 Non-Visible Pollutant Sample Locations – Contractors' Yard

Sample Location Number	Sample Location Description	Sample Location Latitude and Longitude (Decimal Degrees)
CY-1	Northern portion of land between Camino Capistrano and project site at MP 195.0.	N 33.5306° W 117.6750°
CY-2	QSP to identify additional as needed	
CY-3	QSP to identify additional as needed	

Three (3) sampling locations have been 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.

If applicable, to be determined.

Table 7.5 Non-Visible Pollutant Sample Locations – Soil Amendment Areas

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
SA-1	Drain inlet at the northern end of RW#1 (MP 194.7) located at back of wall.	N 33.5364°W 117.6756°
SA-2	Drain inlet near the middle of RW#1 (MP 194.8) located at back of wall.	N 33.5347° W 117.6758°
SA-3	Concrete gutter at southern end of RW#1 (MP 194.9) located at back of wall.	N 33.5333° W 117.6756°

No sampling locations have been currently identified for the collection of samples of runoff from drainage areas contaminated by historical usage of the site.

If applicable, none currently identified.

Table 7.6 Non-Visible Pollutant Sample Locations – Areas of Historical Contamination

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

TWO (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 7.7 Non-Visible Pollutant Sample Locations – Background (Unaffected Sample)

Sample Location Number	Sample Location	Sample Location Latitude and Longitude(Decimal Degrees)
US-1	Located in the western flowline of existing Camino Capistrano (MP 194.2), north of street improvements.	N 33.5425° W 117.6747°
US-2	Located in the western flowline of existing Camino Capistrano (MP 194.7), south of street improvements.	N 33.5361° W 117.6756°

Five (5) sampling locations have been identified for the collection of samples of run-on to the project site. 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 7.8 Non-Visible Pollutant Sample Locations – Site Run-On

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
SR-1	Located at the outlet of an existing 30" RCP on the east side of the track alignment near the 73 overpass (MP 194.2)	N 33.5436° W 117.6750°
SR-2	Located in the western flowline of existing Camino Capistrano (MP 194.2), north of street improvements.	N 33.5425° W 117.6747°
SR-3	Located at the outlet of the RCB culvert, along the westerly side of the track alignment at end of wingwall (MP 194.6).	N 33.5375° W 117.6758°
SR-4	Located in the western flowline of existing Camino Capistrano (MP 194.7), south of street improvements.	N 33.5361° W 117.6756°

Table 7.8 Non-Visible Pollutant Sample Locations – Site Run-On

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
SR-5	Located on the westerly trackside ditch just before rock slope protection pad (MP 194.9).	N 33.5311° W 117.6756°
SR-6	Located at the outlet of the proposed 24" CMP culvert extension (MP 195.05)	N 33.5283° W 117.6750°
SR-7	Located along the easterly track alignment flowline, south of the Camino Capistrano split (MP 195.25).	N 33.5283° W 117.6742°

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 Site Maps, 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 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”.

Samples on the project site will be collected by the following [specify laboratory or environmental consultant]:

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 [specify name of laboratory or environmental consultant] 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 7.9 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 7.9 Potential Non-Visible Pollutants and Water Quality Indicator Constituents

Pollutant Source	Pollutant	Water Quality Indicator Constituent

7.7.1.5 Sample Collection

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the Site Maps 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 Appendix G.

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

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 analyte 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 not required for Risk Level 1 projects.

7.7.6 Training of Sampling Personnel

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the State Water Resources Control Board Surface Water Ambient Monitoring program (SWAMP) Quality Assurance Program Plan (QAPrP) (2008) and subsequent updates.

Training records of designated contractor sampling personnel shall be kept in Appendix K. Identify at the minimum the sampler(s) and alternate(s), their training / qualifications and stormwater sampling experience,

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 Site Maps and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the SWAMP Quality Assurance Program Plan (QAPrP) (2008) and subsequent updates.

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.

SSC samples should be taken as a normal grab sample, where the bottle is submerged facing upstream and filled. SSC samples need to be collected in a separate bottle because the analysis requires the entire volume of the bottle. Do not collect in a larger container and partition into the laboratory sample 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:

DRAFT

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 ☒ 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.

This project is Risk Level 3 ☐ Yes ☒ No

This project will disturb more than 30 acres ☐ Yes ☒ No

This project directly discharges runoff to a freshwater wadeable stream (or streams) that is either: ☐ Yes ☒ No

- a) Listed by the State Water Board or EPA as impaired due to sediment or is tributary to any downstream waterbody that is listed for sediment impairments ☐
- or
- b) Has the beneficial uses of SPAWN and COLD and MIGRATORY ☐

This project is not subject to bioassessment monitoring because it does not meet both of the permit specified trigger requirements.

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, [and a Receiving Water 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:

- ☐ 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)
- ☐ Equipment Blanks at a frequency of [Insert frequency required by method]
(Only needed if equipment used to collect samples could add the pollutants to sample)
- ☐ Field Blanks at a frequency of [Insert frequency required by method]
(Only required if sampling method calls for field blanks)
- ☐ Travel Blanks at a frequency of [Insert frequency required by method]
(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;

DRAFT

CSMP Attachment 1: Weather Reports

DRAFT

DRAFT

CSMP Attachment 2: Monitoring Records

DRAFT

DRAFT

CSMP Attachment 3: Example Forms

DRAFT

DRAFT

[illegible]

DRAFT

Risk Level 1 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: _____		Estimate storm duration: _____		Estimate time since last storm: _____		Rain gauge reading: _____
(date and time)		(hours)		(days or hours)		(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:	

DRAFT

NAL 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 <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		

NAL Exceedance Evaluation Summary Report		Page ___ of ___
Description of BMPs in Place at Time of Event		
Initial Assessment of Cause		
Corrective Actions Taken (deployed after exceedance)		
Additional Corrective Actions Proposed	<div style="font-size: 100px; opacity: 0.3; transform: rotate(-10deg);">DRAFT</div>	
Report Completed By	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div>(Print Name, Title)</div>	
Signature	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>	

DRAFT

CHAIN-OF-CUSTODY

DATE:

Lab ID:

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

DRAFT

CSMP Attachment 4: Field Meter Instructions

DRAFT

DRAFT

CSMP Attachment 5: Supplemental Information

DRAFT

DRAFT

Section 8 References

Project Plans and Specifications No. [Insert Number] dated [insert date], prepared by [entity preparing plans and specifications]

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.

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.

State Water Resources Control Board (2012). Order 2012-0006-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/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf

California Stormwater Quality Association (CASQA), *Stormwater BMP Handbook: Construction*, latest edition, www.casqa.org

DRAFT

Appendix A: Calculations

DRAFT

DRAFT

Sediment Risk Factor Worksheet		Entry
A) R Factor		
<p>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.</p> <p>http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm</p>		
R Factor Value		35
B) K Factor (weighted average, by area, for all site soils)		
<p>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.</p> <p>Site-specific K factor guidance</p>		
K Factor Value		0.37
C) LS Factor (weighted average, by area, for all slopes)		
<p>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.</p> <p>LS Table</p>		
LS Factor Value		0.27
Watershed Erosion Estimate (=R _x K _x LS) in tons/acre		3.4965
Site Sediment Risk Factor Low Sediment Risk: < 15 tons/acre Medium Sediment Risk: >=15 and <75 tons/acre High Sediment Risk: >= 75 tons/acre		Low

Receiving Water (RW) Risk Factor Worksheet		Entry	Score
A. Watershed Characteristics		yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed waterbody impaired by sediment (For help with impaired waterbodies please visit the link below) or has a USEPA approved TMDL implementation plan for sediment ?: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml OR		no	Low
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan) http://www.waterboards.ca.gov/waterboards_map.shtml			
Region 1 Basin Plan Region 2 Basin Plan Region 3 Basin Plan Region 4 Basin Plan Region 5 Basin Plan Region 6 Basin Plan Region 7 Basin Plan Region 8 Basin Plan Region 9 Basin Plan			

DRAFT

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**

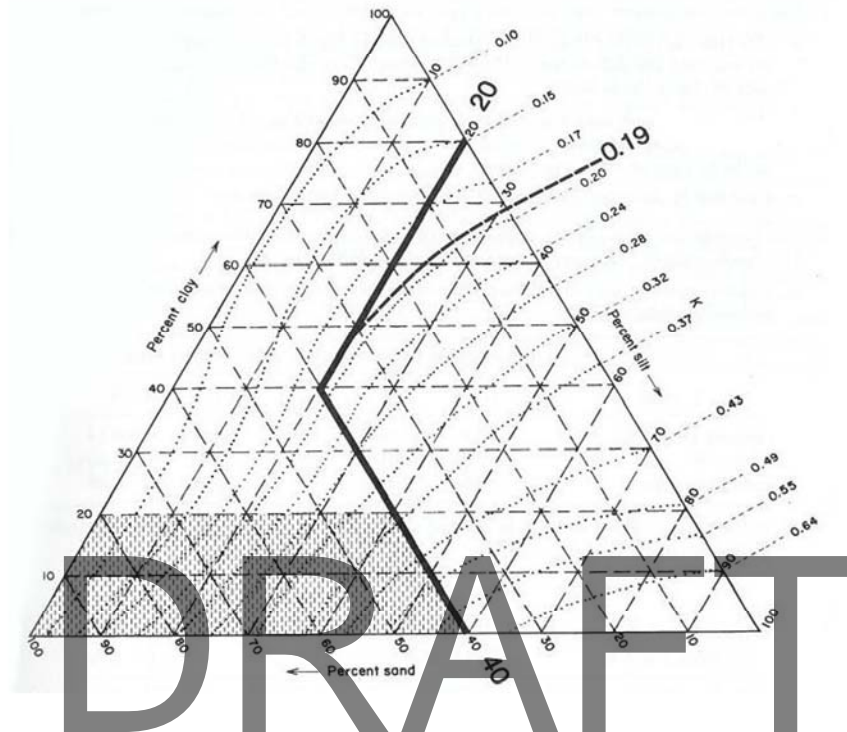
Project RW Risk: **Low**

Project Combined Risk: **Level 1**

DRAFT

Soil Erodibility Factor (K)

The K factor can be determined by using the nomograph method, which requires that a particle size analysis (ASTM D-422) be done to determine the percentages of sand, very fine sand, silt and clay. Use the figure below to determine appropriate K value.



Erickson triangular nomograph used to estimate soil erodibility (K) factor.

The figure above is the USDA nomograph used to determine the K factor for a soil, based on its texture (% silt plus very fine sand, % sand, % organic matter, soil structure, and permeability). *Nomograph from Erickson 1977 as referenced in Goldman et. al., 1986.*

Sheet Flow Length (ft)	Average Watershed Slope (%)																		
	0.2	0.5	1.0	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0	30.0	40.0	50.0	60.0
<3	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.35	0.36	0.38	0.39	0.41	0.45	0.48	0.53	0.58	0.63
6	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.37	0.41	0.45	0.49	0.56	0.64	0.72	0.85	0.97	1.07
9	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.38	0.45	0.51	0.56	0.67	0.80	0.91	1.13	1.31	1.47
12	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.39	0.47	0.55	0.62	0.76	0.93	1.08	1.37	1.62	1.84
15	0.05	0.07	0.09	0.13	0.17	0.20	0.23	0.26	0.32	0.40	0.49	0.58	0.67	0.84	1.04	1.24	1.59	1.91	2.19
25	0.05	0.07	0.10	0.16	0.21	0.26	0.31	0.36	0.45	0.57	0.71	0.85	0.98	1.24	1.56	1.86	2.41	2.91	3.36
50	0.05	0.08	0.13	0.21	0.30	0.38	0.46	0.54	0.70	0.91	1.15	1.40	1.64	2.10	2.67	3.22	4.24	5.16	5.97
75	0.05	0.08	0.14	0.25	0.36	0.47	0.58	0.69	0.91	1.20	1.54	1.87	2.21	2.86	3.67	4.44	5.89	7.20	8.37
100	0.05	0.09	0.15	0.28	0.41	0.55	0.68	0.82	1.10	1.46	1.88	2.31	2.73	3.57	4.59	5.58	7.44	9.13	10.63
150	0.05	0.09	0.17	0.33	0.50	0.68	0.86	1.05	1.43	1.92	2.51	3.09	3.68	4.85	6.30	7.70	10.35	12.75	14.89
200	0.06	0.10	0.18	0.37	0.57	0.79	1.02	1.25	1.72	2.34	3.07	3.81	4.56	6.04	7.88	9.67	13.07	16.16	18.92
250	0.06	0.10	0.19	0.40	0.64	0.89	1.16	1.43	1.99	2.72	3.60	4.48	5.37	7.16	9.38	11.55	15.67	19.42	22.78
300	0.06	0.10	0.20	0.43	0.69	0.98	1.28	1.60	2.24	3.09	4.09	5.11	6.15	8.23	10.81	13.35	18.17	22.57	26.51
400	0.06	0.11	0.22	0.48	0.80	1.14	1.51	1.90	2.70	3.75	5.01	6.30	7.60	10.24	13.53	16.77	22.95	28.60	33.67
600	0.06	0.12	0.24	0.56	0.96	1.42	1.91	2.43	3.52	4.95	6.67	8.45	10.26	13.94	18.57	23.14	31.89	39.95	47.18
800	0.06	0.12	0.26	0.63	1.10	1.65	2.25	2.89	4.24	6.03	8.17	10.40	12.69	17.35	23.24	29.07	40.29	50.63	59.93
1000	0.06	0.13	0.27	0.69	1.23	1.86	2.55	3.30	4.91	7.02	9.57	12.23	14.96	20.57	27.66	34.71	48.29	60.84	72.15

LS Factors for Construction Sites. *Table from Renard et. al., 1997.*

DRAFT

RISK FACTOR SUPPORTING CALCULATIONS

RUSLE Rule

$$A=(R)(K)(LS)(C)(P)$$

Where:

R=Project Erosivity Factor

K= Soil Erodibility Factor

LS= Project LS Factor

C = 1.0

P= 1.0

R-Factor Calcs

Isoerodent R Value

From Isoerodent Map for San Juan Capistrano

IsoR =35

Erosivity Index

Estimated construction duration is 18 months.

EI Value = 1.0 (100%) if project is more than one year.

Project R Factor

R Factor= $35 * 1.0 = \underline{35}$

Soil Erodibility Factor (K)

From the NRCS Web Soil Survey, the predominant near surface soil type is a sandy loam with some fines and beneath the track the soil type is variable generally consisting of a clayey and silty sand material with a corresponding K factor of typically 0.24 to 0.37.

Assume the highest the K = 0.37

LS Factor Calcs

Project Background

Total Project Limits: 21.5 AC

Areas of 2:1 Slope:

4980 to 4994 : 0.4 AC

4996 to 5019: 1.25 AC

5038 to 5046: 0.2 AC

Sub Total: 1.85 AC

Longest Runoff Length

2:1 Sheet Flow => 25 LF @ 30% slope

From LS Factor for Construction Sites table => LS= 1.86

Trackside drainage

Trackside ditches follow track profile which varies from 0.1% to 0.8%. Assume 0.8 % worst case.

100 LF @ 0.8% => LS= 0.12

Calculate Weighted LS Value

$$LS = 1.86 * 1.85 / 21.5 + 0.12 * 19.65 / 21.5 = \underline{0.27}$$

Watershed Characteristics

Oso Creek and the downstream receiving waters are not 303(d) listed as impaired for sediment. The project does not discharge to a waterbody with beneficial use of SPAWN & COLD & MIGRATORY.

Rainfall Erosivity Wavier:

The new General Construction Permit 2009-0009 includes the option allowing small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R-value) for their site's given location and time frame compute to less than or equal to 5.

This example is for Region 7 Colorado River Basin Region.

Erosivity Index Zone Map for Region 7 is **26** (Figure 2)
Isoerodent Map of California Region 7 is **10** (Figure 1)

Date Period		EI (Table 1)
Jan	1-15	0.0
Jan	16-29	2.0
Feb	1-15	5.4
Feb	16-29	9.8
Mar	1-15	15.6
Mar	16-31	21.5
Apr	1-15	24.7
Apr	16-30	26.6
May	1-15	27.4
May	16-31	28.0
Jun	1-15	28.7
Jun	16-30	29.8
Jul	1-15	32.5
Jul	16-31	36.6
Aug	1-15	44.9
Aug	16-31	55.4
Sept	1-15	65.7
Sept	16-31	72.6
Oct	1-15	77.8
Oct	16-31	84.4
Nov	1-15	89.5
Nov	16-31	93.9
Dec	1-15	96.5
Dec	16-31	98.4

	EI	
Start Date	1-Jan	0.0
End Date	1-Dec	96.5
Difference		96.5

For EIZ = **26** (See page 4)
For IM = **10** (See page 3)

R-Value Calculation = Difference in Percent x IM
R-Value = **9.65**

DRAFT

FOR CONSTRUCTION PROJECTS LESS THAN ONE YEAR
ZONE 26

END DATES FOR CONSTRUCTION ZONE 26

START DATES FOR CONSTRUCTIONS FOR ZONE 26

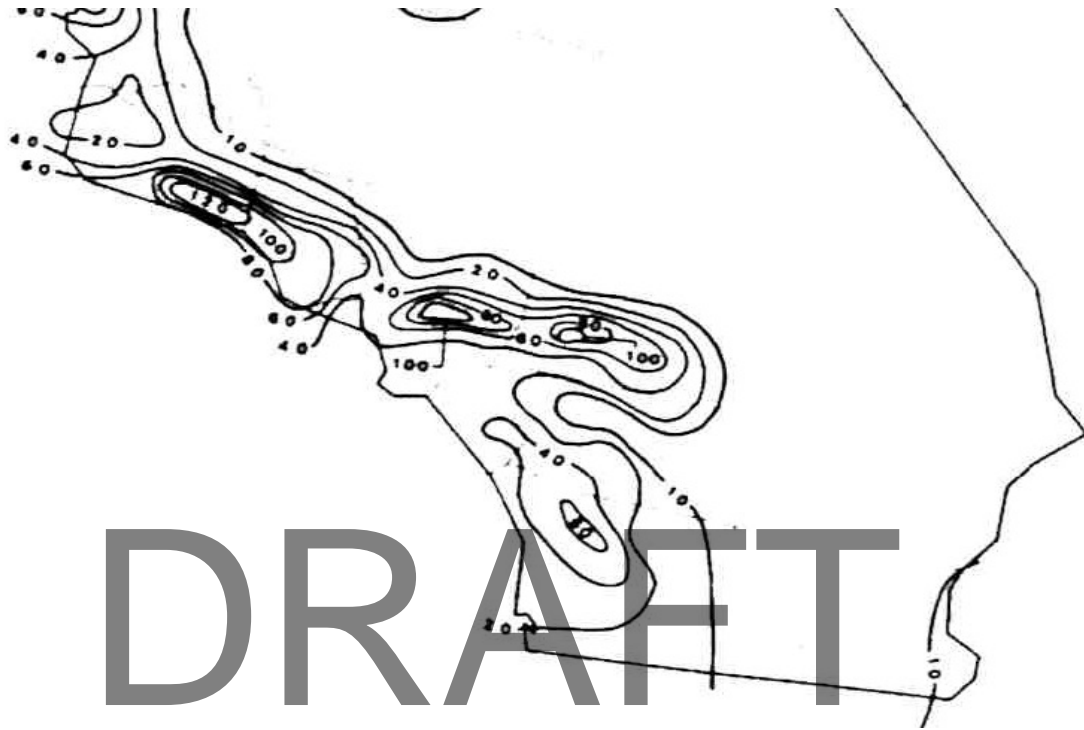
	Jan 1-15	Jan 16-29	Feb 1-15	Feb16-29	Mar 1-15	Mar 16-31	Apr 1-15	Apr 16-30	May 1-15	May 16-31	Jun 1-15	Jun 16-30	Jul 1-15	Jul 16-31	Aug 1-15	Aug 16-31	Sept 1-15	Sept 16-31	Oct 1-15	Oct 16-31	Nov 1-15	Nov 16-31	Dec 1-15	Dec 16-31	Periods
Jan 1-15	9.84	0.2	0.54	0.98	1.56	2.15	2.47	2.66	2.74	2.8	2.87	2.98	3.25	3.66	4.49	5.54	6.57	7.26	7.78	8.44	8.95	9.39	9.65	9.84	14
Jan 16-29	9.64	9.84	0.34	0.78	1.36	1.95	2.27	2.46	2.54	2.6	2.67	2.78	3.05	3.46	4.29	5.34	6.37	7.06	7.58	8.24	8.75	9.19	9.45	9.64	13
Feb 1-15	9.3	9.5	9.84	0.44	1.02	1.61	1.93	2.12	2.2	2.26	2.33	2.44	2.71	3.12	3.95	5	6.03	6.72	7.24	7.9	8.41	8.85	9.11	9.3	13
Feb16-29	8.86	9.06	9.4	9.84	0.58	1.17	1.49	1.68	1.76	1.82	1.89	2	2.27	2.68	3.51	4.56	5.59	6.28	6.8	7.46	7.97	8.41	8.67	8.86	12
Mar 1-15	8.28	8.48	8.82	9.26	9.84	0.59	0.91	1.1	1.18	1.24	1.31	1.42	1.69	2.1	2.93	3.98	5.01	5.7	6.22	6.88	7.39	7.83	8.09	8.28	11
Mar 16-31	7.69	7.89	8.23	8.67	9.25	9.84	0.32	0.51	0.59	0.65	0.72	0.83	1.1	1.51	2.34	3.39	4.42	5.11	5.63	6.29	6.8	7.24	7.5	7.69	11
Apr 1-15	7.37	7.57	7.91	8.35	8.93	9.52	9.84	0.19	0.27	0.33	0.4	0.51	0.78	1.19	2.02	3.07	4.1	4.79	5.31	5.97	6.48	6.92	7.18	7.37	11
Apr 16-30	7.18	7.38	7.72	8.16	8.74	9.33	9.65	9.84	0.08	0.14	0.21	0.32	0.59	1	1.83	2.88	3.91	4.6	5.12	5.78	6.29	6.73	6.99	7.18	10
May 1-15	7.1	7.3	7.64	8.08	8.66	9.25	9.57	9.76	9.84	0.06	0.13	0.24	0.51	0.92	1.75	2.8	3.83	4.52	5.04	5.7	6.21	6.65	6.91	7.1	9
May 16-31	7.04	7.24	7.58	8.02	8.6	9.19	9.51	9.7	9.78	9.84	0.07	0.18	0.45	0.86	1.69	2.74	3.77	4.46	4.98	5.64	6.15	6.59	6.85	7.04	9
Jun 1-15	6.97	7.17	7.51	7.95	8.53	9.12	9.44	9.63	9.71	9.77	9.84	0.11	0.38	0.79	1.62	2.67	3.7	4.39	4.91	5.57	6.08	6.52	6.78	6.97	8
Jun 16-30	6.86	7.06	7.4	7.84	8.42	9.01	9.33	9.52	9.6	9.66	9.73	9.84	0.27	0.68	1.51	2.56	3.59	4.28	4.8	5.46	5.97	6.41	6.67	6.86	7
Jul 1-15	6.59	6.79	7.13	7.57	8.15	8.74	9.06	9.25	9.33	9.39	9.46	9.57	9.84	0.41	1.24	2.29	3.32	4.01	4.53	5.19	5.7	6.14	6.4	6.59	6
Jul 16-31	6.18	6.38	6.72	7.16	7.74	8.33	8.65	8.84	8.92	8.98	9.05	9.16	9.43	9.84	0.83	1.88	2.91	3.6	4.12	4.78	5.29	5.73	5.99	6.18	6
Aug 1-15	5.35	5.55	5.89	6.33	6.91	7.5	7.82	8.01	8.09	8.15	8.22	8.33	8.6	9.01	9.84	1.05	2.08	2.77	3.29	3.95	4.46	4.9	5.16	5.35	7
Aug 16-31	4.3	4.5	4.84	5.28	5.86	6.45	6.77	6.96	7.04	7.1	7.17	7.28	7.55	7.96	8.79	9.84	1.03	1.72	2.24	2.9	3.41	3.85	4.11	4.3	11
Sept 1-15	3.27	3.47	3.81	4.25	4.83	5.42	5.74	5.93	6.01	6.07	6.14	6.25	6.52	6.93	7.76	8.81	9.84	0.69	1.21	1.87	2.38	2.82	3.08	3.27	12
Sept 16-31	2.58	2.78	3.12	3.56	4.14	4.73	5.05	5.24	5.32	5.38	5.45	5.56	5.83	6.24	7.07	8.12	9.15	9.84	0.52	1.18	1.69	2.13	2.39	2.58	12
Oct 1-15	2.06	2.26	2.6	3.04	3.62	4.21	4.53	4.72	4.8	4.86	4.93	5.04	5.31	5.72	6.55	7.6	8.63	9.32	9.84	0.66	1.17	1.61	1.87	2.06	16
Oct 16-31	1.4	1.6	1.94	2.38	2.96	3.55	3.87	4.06	4.14	4.2	4.27	4.38	4.65	5.06	5.89	6.94	7.97	8.66	9.18	9.84	0.51	0.95	1.21	1.4	17
Nov 1-15	0.89	1.09	1.43	1.87	2.45	3.04	3.36	3.55	3.63	3.69	3.76	3.87	4.14	4.55	5.38	6.43	7.46	8.15	8.67	9.33	9.84	0.44	0.7	0.89	17
Nov 16-31	0.45	0.65	0.99	1.43	2.01	2.6	2.92	3.11	3.19	3.25	3.32	3.43	3.7	4.11	4.94	5.99	7.02	7.71	8.23	8.89	9.4	9.84	0.26	0.45	17
Dec 1-15	0.19	0.39	0.73	1.17	1.75	2.34	2.66	2.85	2.93	2.99	3.06	3.17	3.44	3.85	4.68	5.73	6.76	7.45	7.97	8.63	9.14	9.58	9.84	0.19	16
Dec 16-31	0	0.2	0.54	0.98	1.56	2.15	2.47	2.66	2.74	2.8	2.87	2.98	3.25	3.66	4.49	5.54	6.57	7.26	7.78	8.44	8.95	9.39	9.65	9.84	15

Enter Isoindent = 10

Periods beginning and ending in yellow indicate rainfall erosivity value (R-value) less than or equal to 5

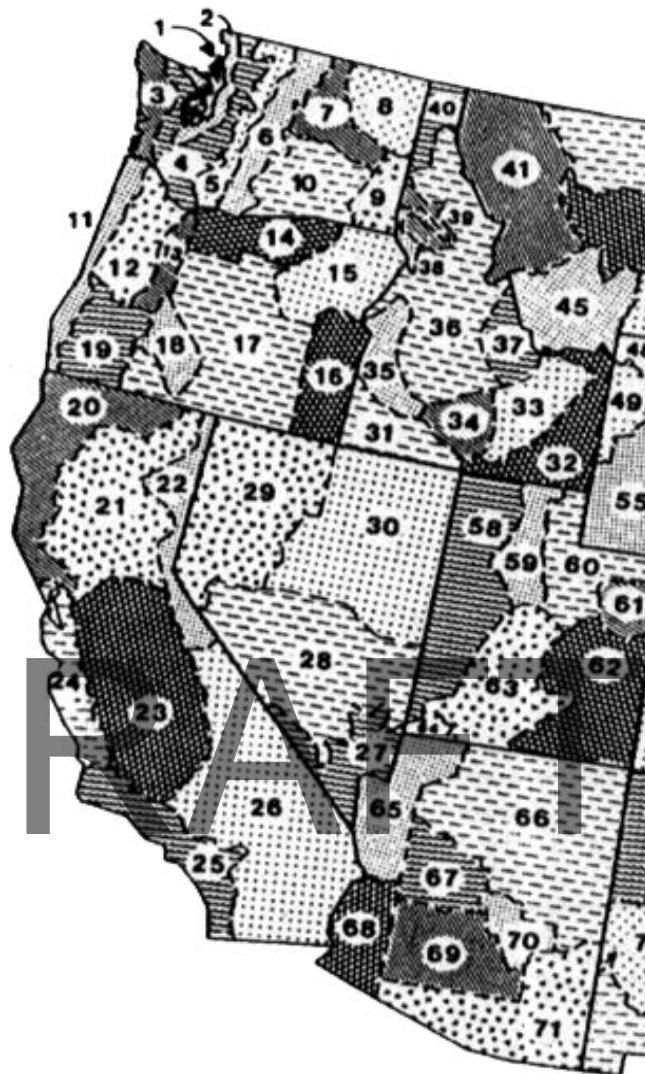
Isoerodent Map of Southern California
R - Values

Figure 1



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

Erosivity Index Zone Map
Figure 2



EPA Link pg 4 of 13 - http://h2o.enr.state.nc.us/su/PDF_Files/EPA_Factsheets/fact3_1.pdf

2010 California 303(d) List of Water Quality Limited Segments*

Water quality limited segments requiring a TMDL (5A), being addressed by TMDL (5B), and/or being addressed by an action other than TMDL (5C)

REGION NAME	WATER BODY NAME	WBID	WATER BODY TYPE	POLLUTANT	POLLUTANT CATEGORY	FINAL LISTING DECISION
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Diazinon	Pesticides	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Diazinon	Pesticides	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Diazinon	Pesticides	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Diazinon	Pesticides	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Diazinon	Pesticides	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Phosphorus	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Phosphorus	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Phosphorus	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Total Nitrogen as N	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Total Nitrogen as N	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Total Nitrogen as N	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Total Nitrogen as N	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Arroyo Trabuco Creek	CAR9012000020011025103603	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Oso Creek (lower)	CAR9012000020010831154628	River & Stream	Selenium	Metals/Metalloids	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Oso Creek (lower)	CAR9012000020010831154628	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	Oso Creek (lower)	CAR9012000020010831154628	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	DDE (Dichlorodiphenyldichloroethylene)	Pesticides	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Indicator Bacteria	Pathogens	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Indicator Bacteria	Pathogens	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Phosphorus	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Phosphorus	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Phosphorus	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Selenium	Metals/Metalloids	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Selenium	Metals/Metalloids	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Selenium	Metals/Metalloids	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Total Nitrogen as N	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Total Nitrogen as N	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Total Nitrogen as N	Nutrients	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek	CAR9012000020011025103828	River & Stream	Toxicity	Toxicity	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek (mouth)	CAE9012000019990208150457	Estuary	Indicator Bacteria	Pathogens	List on 303(d) list (f)
Regional Board 9 - San Diego Region	San Juan Creek (mouth)	CAE9012000019990208150457	Estuary	Indicator Bacteria	Pathogens	List on 303(d) list (f)

2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report) — Statewide

2010 Integrated Report

Map

303(d) List

Admin. Record

Data Download

Past Reports

Contact Us

2010 INTEGRATED REPORT — 303(D) LISTED WATERS FOR SEDIMENT

Zoom to county:

All

Zoom to Regional Board:

San Diego (9)

☒ Show county

☒ Show Regional Board

Map Help

Zoom to water body: (Filter: All)

Filter list by:

Reset list



☐ Show all assessed waters
☒ Show only impaired ("303(d)-listed") waters

Show water bodies by pollutant:

Pollutant category:

Sediment

Sediment

Pollutant:

All

All

Reset filters

This [Webinar](#) walks the user through the Integrated Report and its geospatial information system (GIS) map.

- Geographical Information Systems (GIS) Files
Update 12/23/11: The information presented on this map reflects the final USEPA-approved 2010 303(d) list. If you have any questions regarding the Integrated Report data and information, please email [Lisa Holmes](#) or call 916-341-5557. For any GIS-related questions, please email [Stephanie Bucknam](#) or call 916-558-1708.

IMPERVIOUS AREA SWPPP CALCS

TOTAL AREA OF PROJECT

23.8 AC

REMOVE & REPLACE AC PAVEMENT ON CAMINO CAPISTRANO AND AT-GRADE CROSSING

0.9 AC

AC PAVED PARKING AT RCB CULVERT

0.02 AC

PERCENT IMPERVIOUS BEFORE CONSTRUCTION

0.9 AC / 23.8 AC = **3.8%**

PERCENT IMPERVIOUS AFTER CONSTRUCTION

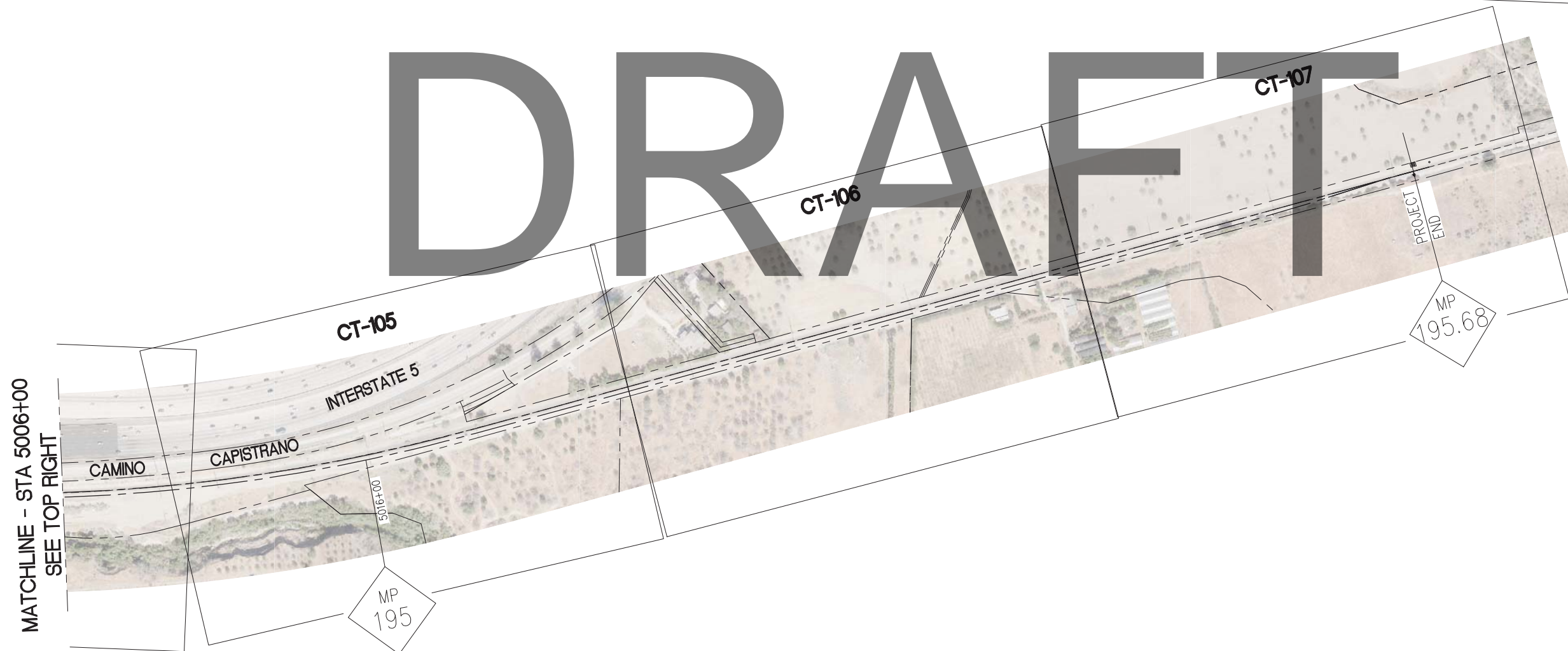
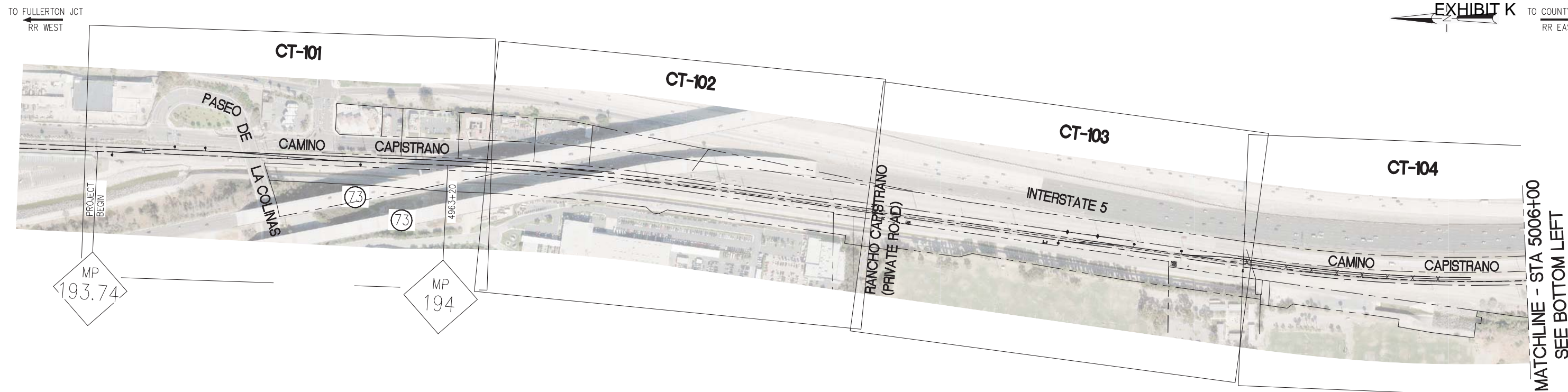
(0.9 AC + 0.02 AC) / 23.8 AC = **3.9%**

DRAFT

Appendix B: Site Maps

DRAFT

DRAFT



PROJECT NUMBER	COST ELEMENT	LINE ITEM	CONTRACT DESIGNATOR	PHYSICAL ENTITY	WORK ELEMENT
----------------	--------------	-----------	---------------------	-----------------	--------------

REV.	DATE	DESCRIPTION	SUB	APP.

INFORMATION CONFIDENTIAL

All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.

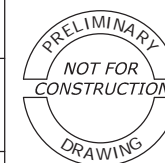
DESIGNED BY	C. COFFMAN
DRAWN BY	B. TIMBERS
CHECKED BY	C. HAHN
APPROVED BY	G. CHRISTIE
DATE	10/18/16



Orange County Transportation Authority



200 Sandpointe Avenue
Suite 200
Santa Ana, CA 92707



METROLINK COMMUTER RAIL SYSTEM

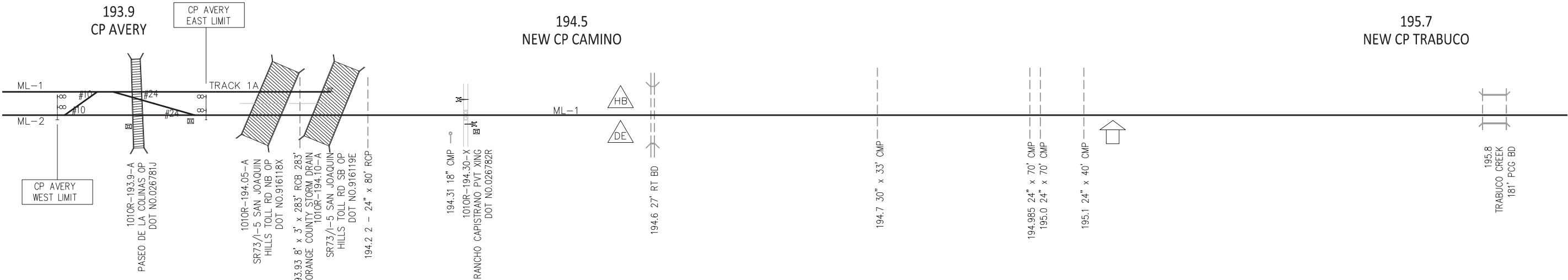
KEY MAP

CONTRACT NO.	
DRAWING NO.	
OCTA -GI-008	
REVISION	SHEET NO.
0	8 /87
SCALE	
AS SHOWN	

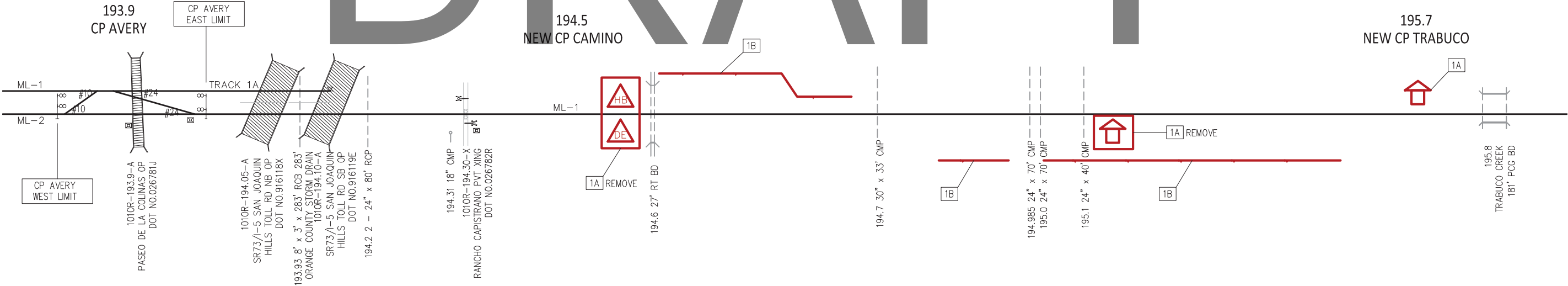
90% DESIGN



PHASE 0 (EXISTING)



PHASE 1



LEGEND

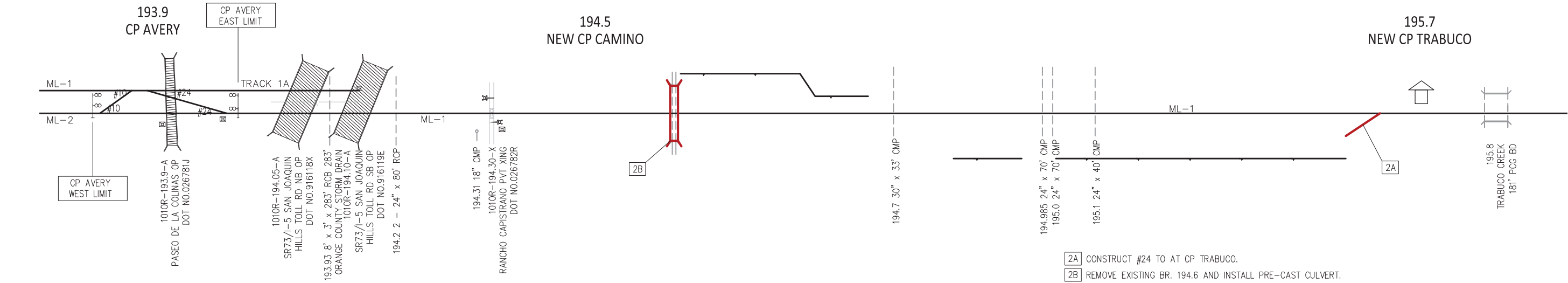
- EXISTING TRACK
- NEW TRACK
- SHIFTED TRACK

- 1A INSTALL CP TRABUCO HOUSE, REMOVE OSO REMOTE HOUSE, RELOCATE HB AND DE DETECTORS TO MP 196.1 (BY SCRRRA SIGNAL CONTRACTOR).
- 1B INSTALL RETAINING WALLS AND EMBANKMENT.

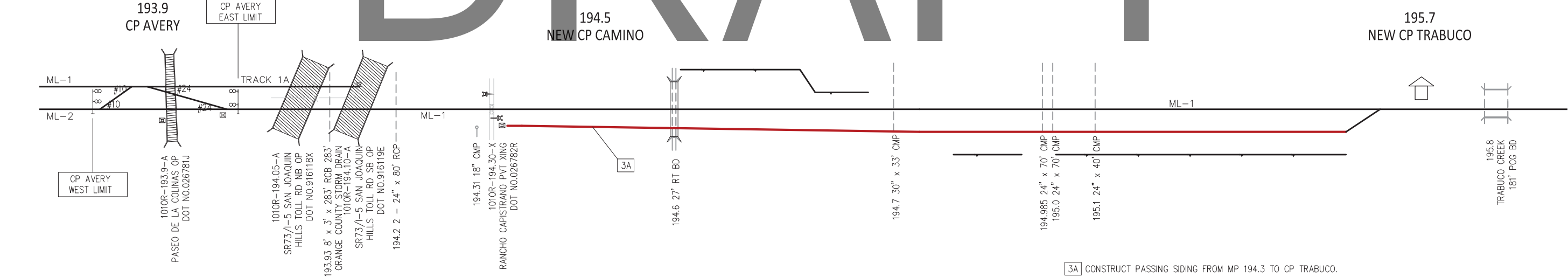
PROJECT NUMBER	COST ELEMENT	LINE ITEM	CONTRACT DESIGNATOR	PHYSICAL ENTITY	WORK ELEMENT	REV.	DATE	DESCRIPTION	SUB.	APP.	INFORMATION CONFIDENTIAL: All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.	DESIGNED BY C. COFFMAN	 Orange County Transportation Authority	 200 Sandpointe Avenue Suite 200 Santa Ana, CA 92707	SUBMITTED: _____ TASK MANAGER	APPROVED: _____ PROJECT MANAGER - COMPANY	 PRELIMINARY NOT FOR CONSTRUCTION DRAWING	METROLINK COMMUTER RAIL SYSTEM LN - SJC PASSING SIDING CONSTRUCTION PHASING - SHEET 1 OF 4	CONTRACT NO. DRAWING NO. OCTA -CT-003
												CHECKED BY C. HAHN							REVISION 0
												DATE 10/18/16					SCALE AS SHOWN		

90% DESIGN

PHASE 2



PHASE 3



LEGEND		
	EXISTING TRACK	
	NEW TRACK	
	SHIFTED TRACK	

WORK ELEMENT	PHYSICAL ENTITY	CONTRACT DESIGNATOR	<div>LEGEND</div> <div><div>—————</div>EXISTING TRACK</div> <div><div>—————</div>NEW TRACK</div> <div><div>-----</div>SHIFTED TRACK</div>										133.9 ORCA	PA	9	RAN	3A CONSTRUCT PASSING SIDING FROM MP 194.3 TO CP TRABUCO.										90% DESIGN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
LINE ITEM						INFORMATION CONFIDENTIAL: All plans, drawings, specifications, and or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.					DESIGNED BY C. COFFMAN	<div><div><div></div></div><div>OCTA Orange County Transportation Authority</div></div> <div><div><div>HNTB</div><div>200 Sandpointe Avenue Suite 200 Santa Ana, CA 92707</div></div></div>					<div><div>PRELIMINARY</div><div>NOT FOR CONSTRUCTION</div><div>DRAWING</div></div>					METROLINK COMMUTER RAIL SYSTEM LN - SJC PASSING SIDING CONSTRUCTION PHASING - SHEET 2 OF 4										CONTRACT NO.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					DRAWING NO. OCTA -CT-004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
COST ELEMENT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</

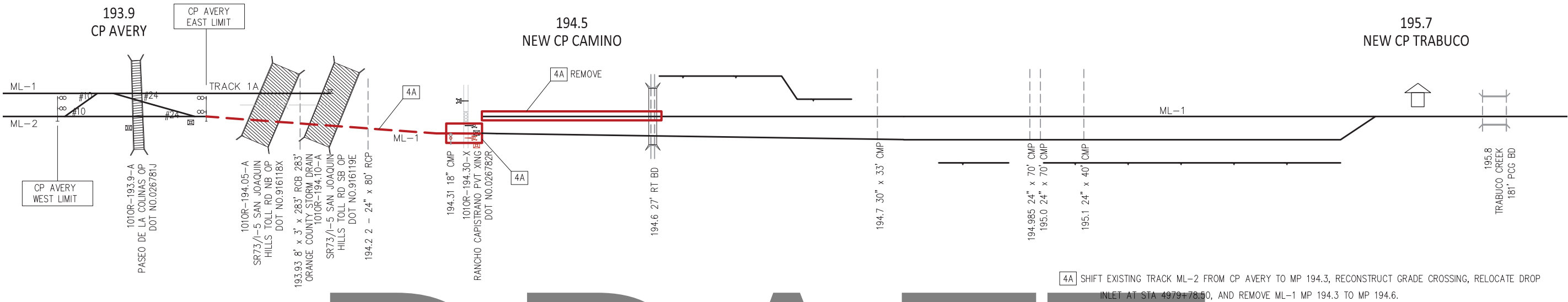
90% DESIGN

MILEPOST

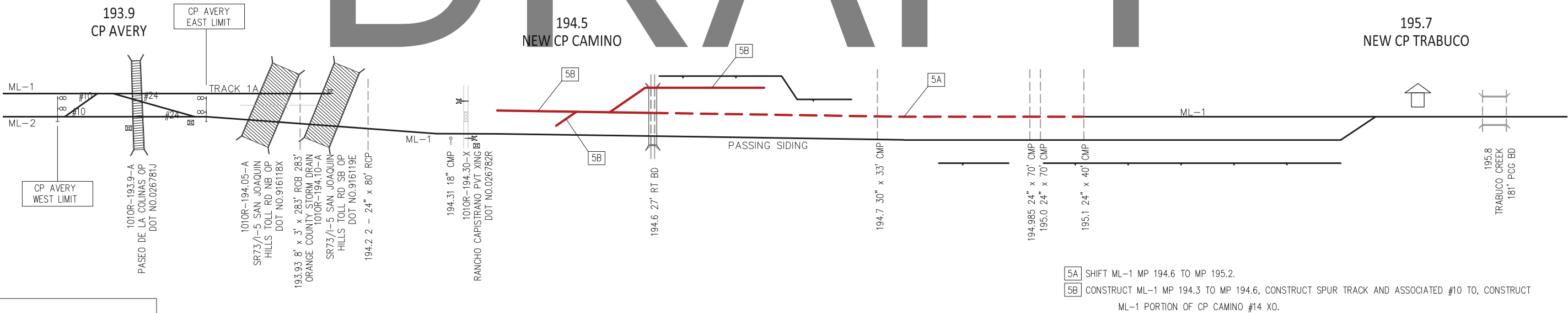
194

195

PHASE 4



PHASE 5



LEGEND

- EXISTING TRACK
- NEW TRACK
- SHIFTED TRACK

PROJECT NUMBER	LINE ITEM	CONTRACT DESIGNATOR	PHYSICAL ENTITY	WORK ELEMENT
REV.	DATE	DESCRIPTION		
SUB.	APP.			

INFORMATION CONFIDENTIAL:
All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.

DESIGNED BY	C. COFFMAN
DRAWN BY	B. TIMBERS
CHECKED BY	C. HAHN
APPROVED BY	Q. CHRISTIE
DATE	10/18/16



Orange County Transportation Authority



200 Sandpointe Avenue
Suite 200
Santa Ana, CA 92707

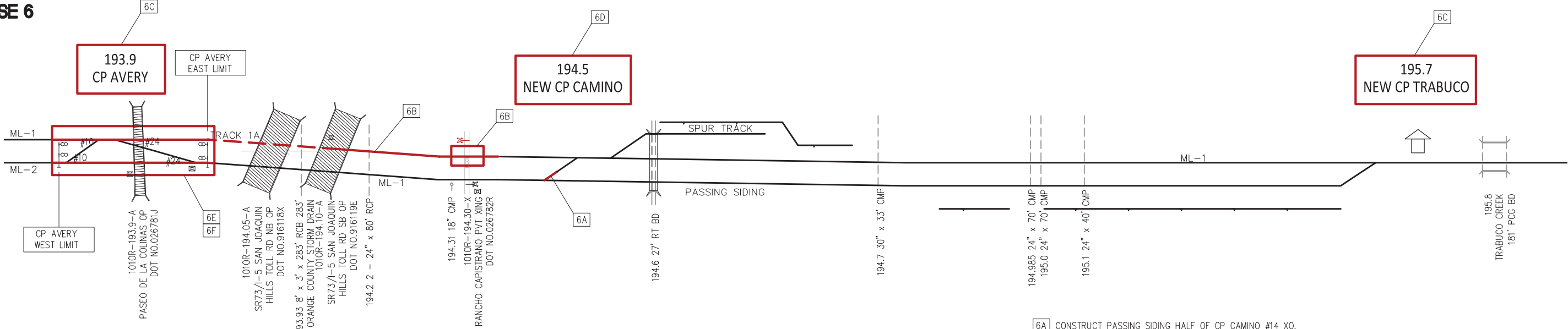


METROLINK COMMUTER RAIL SYSTEM
LN - SJC PASSING SIDING
CONSTRUCTION PHASING - SHEET 3 OF 4

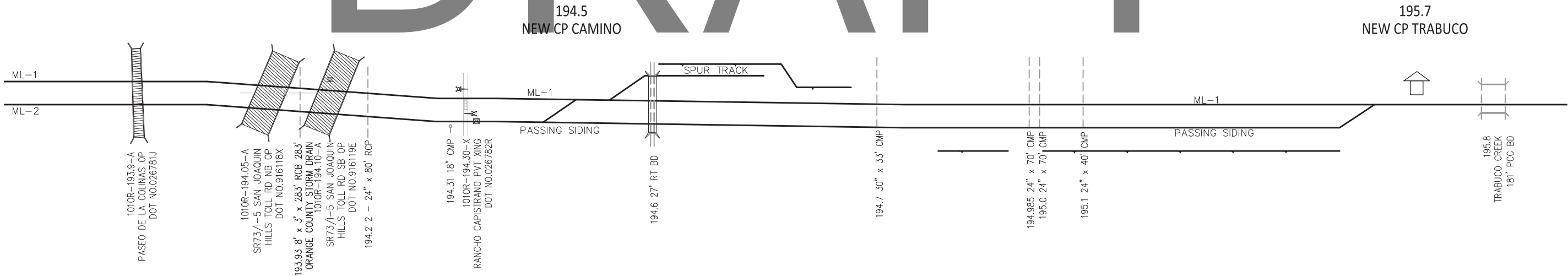
CONTRACT NO.	
DRAWING NO.	
OCTA -CT-005	
REVISION	SHEET NO.
0	15 /90
SCALE	
AS SHOWN	

90% DESIGN

PHASE 6



PHASE 7



DRAFT

- LEGEND
- EXISTING TRACK
 - NEW TRACK
 - SHIFTED TRACK

WORK ELEMENT	PHYSICAL ENTITY	CONTRACT DESIGNATOR	<div>LEGEND</div> <div><div>—————</div>EXISTING TRACK</div> <div><div>—————</div>NEW TRACK</div> <div><div>-----</div>SHIFTED TRACK</div>										193.93 ORAN	RAN																	
LINE ITEM						INFORMATION CONFIDENTIAL: All plans, drawings, specifications, and or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.					DESIGNED BY C. COFFMAN	<div><div><div><div></div><div>OCTA</div><div>Orange County Transportation Authority</div></div><div><div><div>HNTB</div><div>200 Sandpointe Avenue Suite 200 Santa Ana, CA 92707</div></div></div></div></div>					<div><div>PRELIMINARY</div><div>NOT FOR CONSTRUCTION</div><div>DRAWING</div></div>					<div>METROLINK COMMUTER RAIL SYSTEM</div> <div>LN - SJC PASSING SIDING</div> <div>CONSTRUCTION PHASING - SHEET 4 OF 4</div>					CONTRACT NO.				
COST ELEMENT																													DRAWING NO. OCTA -CT-006		
PROJECT NUMBER	REV.	DATE	DESCRIPTION					SUB.	APP.	DATE 10/18/16	SUBMITTED: _____ TASK MANAGER					APPROVED: _____ PROJECT MANAGER - COMPANY					REVISION 0					SHEET NO. 16 /90					
																SCALE AS SHOWN															

90% DESIGN

90% DESIGN

GENERAL NOTES

1.

THESE PLANS AND THE ASSOCIATED DRAFT WPCP AND DRAFT SWPPP ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL STORMWATER PERMITTING AND COMPLY WITH THE ASSOCIATED STORMWATER PROTECTION REQUIREMENTS. CONTRACTOR SHALL PREPARE FINAL WPCD AND FINAL SWPPP DOCUMENTS, UPDATE THE SWPPP PLANS, AND SUBMIT THEM TO OCTA FOR INITIAL APPROVAL. UPON OCTA APPROVAL OF THE DOCUMENTS, THE CONTRACTOR SHALL GAIN SDRWCB APPROVAL AND OBTAIN ASSOCIATED STORMWATER PERMITS. NO SOIL DISTURBANCE MAY COMMENCE UNTIL CONTRACTOR HAS OBTAINED APPROVAL OF ALL STORMWATER PERMITTING.
2.

CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND REMOVAL, INSPECTIONS AND MAINTENANCE OF EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP).
3.

ALL BMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLAN SHOWN OR AS DIRECTED BY A QUALIFIED SWPPP PRACTITIONER (QSP). DEVIATION FROM THIS PLAN SHALL BE NOTED AND RECORDED IN WEEKLY INSPECTION REPORTS WITHIN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
4.

THE SWPPP AND ALL MAINTENANCE AND INPECTION REPORTS SHALL BE SIGNED BY A QUALIFIED INSPECTOR ASSIGNED BY THE CONTRACTOR. THE SWPPP PACKAGE AND THE REPORTS SHALL BE AVAILABLE TO REGIONAL WATER QUALITY CONTROL BOARD (RWQCB), AND OCTA REPRESENTATIVES AT ALL TIMES DURING CONSTRUCTION.
5.

THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY, PRIVATE PROPERTY, OR ENVIRONMENTALLY SENSITIVE AREAS.

STABILIZATION PRACTICES INTERIM STABILIZATION

1.

THE CONTRACTOR SHALL USE WATERING EQUIPMENT AGGRESSIVELY AND CONTINUOUSLY FOR DUST POLLUTION ABATEMENT. THIS OPERATION SHALL BE GIVEN PRIORITY OVER ANY OTHER OPERATION WHERE EQUIPMENT MIGHT BE NEEDED.
2.

IF THE CONTRACTOR CANNOT CONTROL DUST BECAUSE OF HIGH WINDS, WORK MUST CEASE UNTIL DUST CONTROL IS IMPLEMENTED.

MAINTENANCE AND INSPECTION PROCEDURES

1.

THE CONTRACTOR SHALL MAINTAIN A "STORM WATER POLLUTION PREVENTION PLAN (SWPPP)" INSPECTION AND MAINTENANCE REPORT ON THE JOB SITE AT ALL TIMES DURING THE CONSTRUCTION. EACH INSPECTION OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DOCUMENTED. COPIES OF THE COMPLETED FORMS SHALL BE SUBMITTED TO THE OCTA WITHIN 48 HOURS AFTER EACH INSPECTION.
2.

THE CONTRACTOR SHALL REPAIR ANY EROSION AND SEDIMENT CONTROL MEASURES AS SOON AS POSSIBLE FOLLOWING THE INSPECTION DURING WHICH DAMAGE IS NOTED OR FOLLOWING NOTIFICATION BY THE PROJECT MANAGER, OR OCTA, THAT REPAIRS ARE REQUIRED.

3.

REPAIRS SHALL BE INITIATED WITHIN TWENTY FOUR (24) HOURS OF DAMAGE OCCURRING TO THE EROSION CONTROL MEASURES THAT COULD RESULT IN A DISCHARGE OF SEDIMENTS INTO A LIVE STREAM, WATER IMPOUNDMENT, OR OTHER NEARBY BODIES OF WATER.
4.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED BY CLEANING OR REPLACING AS NEEDED, AS DIRECTED BY THE QSP OR OCTA, SO AS TO BE FULLY EFFECTIVE UNTIL PERMANENT EROSION CONTROL MEASURES ARE IN PLACE AND OPERATIONAL.
5.

REPAIRS AND/OR MAINTENANCE SHALL BE DULY NOTED IN THE SWPPP INSPECTION AND MAINTENANCE REPORT.

BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES

- A.

ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SWALES, AREA DRAINS, OR NATURAL DRAINAGE COURSES.
- B.

STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FORM THE SITE BY THE FORCES OF WIND OR WATER.
- C.

EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO DRAIN AND CONTAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- D.

TRASH AND CONSTRUCTION RELATED DEBRIS MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND. A LOCKED 3 CUBIC YARD DUMPSTER SHALL BE MAINTAINED ON SITE AT ALL TIMES.
- E.

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR, AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. THE CONTRACTOR SHALL SUPPLY A WATER TRUCK TO WASH WHEELS IF NECESSARY.
- F.

ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION SHALL BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
- G.

ALL STABILIZATION PRACTICES REQUIRED TO PREVENT DISCHARGE OF SEDIMENT FROM THE SITE SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING ACTIVITIES.
- H.

CONTRACTOR SHALL PROVIDE ADDITIONAL BMPS FOR THE BOX CULVERT CONSTRUCTION IF CONSTRUCTION OCCURS DURING RAINY SEASON AS NEEDED.

LEGEND

NON-STORMWATER MANAGEMENT	
PERMANENT PROJECT FOOTPRINT	
TEMPORARY PROJECT FOOTPRINT	
NS-3: PAVING AND GRINDING OPERATIONS	

SEDIMENT CONTROL	
SE-1: SILT FENCE (CALTRANS STD PLAN T60 TYPE 1)	
SE-4: CHECK DAMS	
SE-5: FIBER ROLLS (CALTRANS STD PLAN T56 TYPE 2)	
SE-10: STORM DRAIN INLET PROTECTION	

SOIL STABILIZATION	
SS-2: PRESERVATION OF EXISTING VEGETATION	
EC-4: COASTAL SAGE SCRUB HYDROSEED WITH BONDED FIBER MATRIX	

TRACKING CONTROL	
TC-1: STABILIZED CONSTRUCTION ENTRANCE/EXIT	

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL	
WM-3: STOCKPILE MANAGEMENT	
WM-8: CONCRETE WASTE MANAGEMENT	

REFER TO CALTRANS 2010 STANDARD PLANS FOR TEMPORARY WATER POLLUTION CONTROL DETAILS

PROJECT NUMBER	COST ELEMENT	LINE ITEM	CONTRACT DESIGNATOR	PHYSICAL ENTITY	WORK ELEMENT				INFORMATION CONFIDENTIAL: All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.		DESIGNED BY O. SALGADO	Orange County Transportation Authority		200 Sandpointe Avenue Suite 200 Santa Ana, CA 92707			METROLINK COMMUTER RAIL SYSTEM LN - SJC PASSING SIDING SWPPP SAMPLING AND ANALYSIS PLAN		CONTRACT NO.	
						DRAWING NO. OCTA -CU-301														
						REVISION 0		SHEET NO. 64 /90												
						SCALE AS SHOWN														
						REV.	DATE	DESCRIPTION	SUB.	APP.	DATE 10/18/16	SUBMITTED: _____ TASK MANAGER	APPROVED: _____ PROJECT MANAGER - COMPANY							

90% DESIGN



90% DESIGN

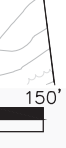
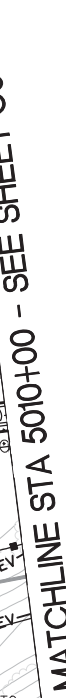
INFORMATION CONFIDENTIAL:
All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.

**HNTB**

SUBMITTED: _____ TASK MANAGER

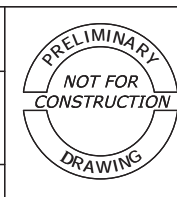
A circular stamp with the text "PRELIMINARY" at the top, "NOT FOR CONSTRUCTION" in the center, and "DRAWING" at the bottom.

CONTRACT NO.	
DRAWING NO.	
OCTA -CU-302	
REVISION	SHEET NO.
0	65 /87
SCALE	
AS SHOWN	

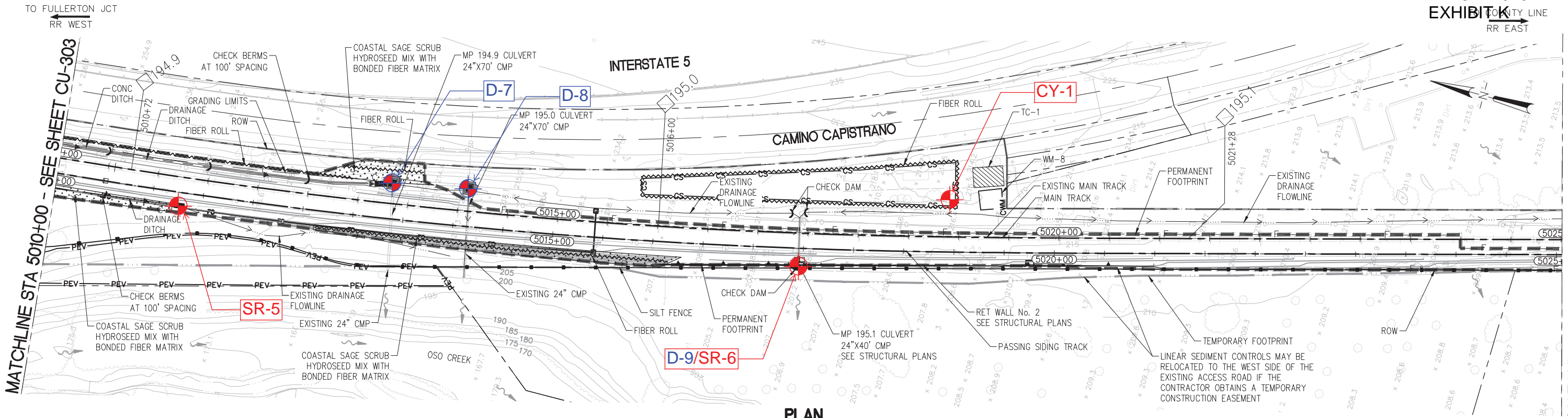


INFORMATION CONFIDENTIAL:
All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.

 Orange County Transportation Authority	
	200 Sandpointe Avenue Suite 200 Santa Ana, CA 92707
SUBMITTED: _____ TASK MANAGER	APPROVED: _____ PROJECT MANAGER - COMPANY



CONTRACT NO.	
DRAWING NO.	
OCTA -CU-303	
REVISION	SHEET NO.
0	66 /87
SCALE	
AS SHOWN	



PROJECT NUMBER	LINE ITEM	CONTRACT DESIGNATOR	PHYSICAL ENTITY	WORK ELEMENT
REV.	DATE	DESCRIPTION		
SUB.	APP.			

INFORMATION CONFIDENTIAL:
All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.

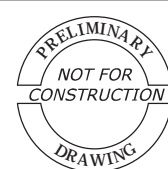
DESIGNED BY
O. SALGADO
DRAWN BY
B. TRAN
CHECKED BY
C. HAHN
APPROVED BY
Q. CHRISTIE
DATE
10/18/16



HNTB
200 Sandpointe Avenue
Suite 200
Santa Ana, CA 92707

SUBMITTED: TASK MANAGER

APPROVED: PROJECT MANAGER - COMPANY



METROLINK COMMUTER RAIL SYSTEM
LN - SJC PASSING SIDING
SWPPP SAMPLING AND ANALYSIS
PLAN

CONTRACT NO.
DRAWING NO.
OCTA -CU-304
REVISION
0
SHEET NO.
67 / 87
SCALE
AS SHOWN

0' 25' 50' 100' 150'
H: SCALE: IN FEET

90% DESIGN



INFORMATION CONFIDENTIAL:
All plans, drawings, specifications, and/or information furnished herewith shall remain the property of the Orange County Transportation Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Orange County Transportation Authority.

 Orange County Transportation Authority	
HNTB 200 Sandpointe Avenue Suite 200 Santa Ana, CA 92707	
SUBMITTED: _____ TASK MANAGER	APPROVED: _____ PROJECT MANAGER - COMPANY



CONTRACT NO.	
DRAWING NO.	
OCTA -CU-305	
REVISION	SHEET NO.
0	68 /87
SCALE	
AS SHOWN	

DRAFT

Appendix C: Permit Registration Documents (PRDs)

DRAFT

DRAFT

Permit Registration Documents included in this Appendix

Y/N	Permit Registration Document
	Notice of Intent
Y	Risk Assessment
	Certification
N/A	Post Construction Water Balance
	Copy of Annual Fee Receipt
N/A	ATS Design Documents
Y	Site Map, see Appendix B
Y	Legally Responsible Person Certification

DRAFT

DRAFT

Appendix D: SWPPP Amendment Certifications

DRAFT

DRAFT

Amendment Log

Project Name: SJC PASSING SIDING

WDID: _____

Instructions to QSP: The General Permit requires that SWPPP be amended or revised by a QSD. If site conditions or compliance issues onsite are significant enough to require a formal SWPPP amendment, the LRP and QSD must be notified. COIs should also be recorded here as SWPPP amendments. For each amendment, an amendment certificate should be prepared. A blank copy of an amendment certification is provided on the following page.

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

SWPPP Amendment No.

Project Name: SJC PASSING SIDING

Project Number: _____

**Qualified SWPPP Developer's Certification of the
Stormwater Pollution Prevention Plan Amendment**

"This Stormwater Pollution Prevention Plan and attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Order No. 2009-009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

QSD's Signature

Date

QSD Name

QSD Certificate Number

Title and Affiliation

Telephone

Address

Email

Appendix E: Submitted Changes to PRDs

DRAFT

DRAFT

Log of Updated PRDs

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, with revisions and amendments recorded in Appendix C. Updated PRDs submitted electronically via SMARTS can be found in this Appendix.

This appendix includes all of the following updated PRDs (check all that apply):

- ☐ Revised Notice of Intent (NOI);
- ☐ Revised Site Map;
- ☐ Revised Risk Assessment;
- ☐ New landowner's information (name, address, phone number, email address); and
- ☐ New signed certification statement.

Legally Responsible Person

Signature of [Authorized Representative of] Legally
Responsible Person or Approved Signatory

Date

Name of [Authorized Representative of] Legally
Responsible Person or Approved Signatory

Telephone Number

DRAFT

Appendix F: Construction Schedule

DRAFT

DRAFT

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes															
								November 2017							June 2018							
								August 11		November 21		March 1		June 11		September 21						
								5/28	7/16	9/3	10/22	12/10	1/28	3/18	5/6	6/24	8/12	9/30	11/18			
1		Notice To Proceed	0 days	Mon 7/3/17	Mon 7/3/17																	
2		Mobilization	22 days	Mon 7/3/17	Tue 8/1/17	1																
3		Material Procurement	201 days	Mon 10/2/17	Tue 7/10/18																	
4		Special Trackwork	201 days	Mon 10/2/17	Tue 7/10/18																	
5		Order turnouts and crossover	0 days	Mon 10/2/17	Mon 10/2/17	2FS+44 days																
6		Develop Shop Drawings and submit	44 days	Tue 10/3/17	Fri 12/1/17	5																
7		Shop Drawing Approval Process	44 days	Mon 12/4/17	Thu 2/1/18	6																
8		Manufacture special trackwork	100 days	Fri 2/2/18	Thu 6/21/18	7																
9		Delivery & Unloading	10 days	Fri 6/22/18	Thu 7/5/18	8																
10		Material Approval (by Metrolink)	3 days	Fri 7/6/18	Tue 7/10/18	9																
11		Signal Material	201 days	Mon 10/2/17	Tue 7/10/18																	
12		Order signal material	0 days	Mon 10/2/17	Mon 10/2/17	2FS+44 days																
13		Develop Shop Drawings and submit	44 days	Tue 10/3/17	Fri 12/1/17	12																
14		Shop Drawing Approval Process	44 days	Mon 12/4/17	Thu 2/1/18	13																
15		Manufacture signal material	100 days	Fri 2/2/18	Thu 6/21/18	14																
16		Delivery & Unloading	10 days	Fri 6/22/18	Thu 7/5/18	15																
17		Material Approval (by Metrolink)	3 days	Fri 7/6/18	Tue 7/10/18	16																
18		CP Avery	17 days	Wed 7/25/18	Thu 8/16/18																	
19		CP Avery Trackwork	17 days	Wed 7/25/18	Thu 8/16/18																	
20		Remove crossover and install ML track elements	1 day	Wed 7/25/18	Wed 7/25/18	159	Phase 7															
21		Remove crossover and install ML track elements	1 day	Thu 8/16/18	Thu 8/16/18	20FS+15 days	Phase 7															
22		South of CP Avery to Rancho Capistrano	294 days	Wed 8/2/17	Mon 9/17/18																	
23		Clearing and Grubbing	10 days	Wed 8/2/17	Tue 8/15/17	2																
24		Extend culvert (4973+00)	33 days	Wed 8/16/17	Fri 9/29/17	23	Phase 1B															
25		Remove Rip Rap (4971+50 to crossing)	15 days	Wed 8/16/17	Tue 9/5/17	23	Phase 1B															
26		Construct subgrade and place sub-ballast	33 days	Mon 10/2/17	Wed 11/15/17	25,24	Phase 3															
27		Trackwork	90 days	Tue 5/15/18	Mon 9/17/18																	
28		Shift Mainline: 4960+00 to 4980+00	1 day	Tue 5/15/18	Tue 5/15/18	26,72	Phase 4															
29		Construct new track (new Mainline): 4958+30 to 4980+00	15 days	Tue 8/28/18	Mon 9/17/18	62																
30		Camino Capistrano street improvements	260 days	Mon 9/18/17	Fri 9/14/18																	
31		Develop Traffic Control Permit	22 days	Mon 9/18/17	Tue 10/17/17	2FS+33 days																
32		Submit Traffic Control Permit	0 days	Tue 10/17/17	Tue 10/17/17	31																
33		City Approval of Traffic Control Permit	0 days	Thu 11/16/17	Thu 11/16/17	32FS+22 days																
34		Construct North Side (Traffic on S. side)	19 days	Fri 11/17/17	Wed 12/13/17																	
35		Set Changeable Message Signs	1 day	Fri 11/17/17	Fri 11/17/17	33																
36		Place temporary traffic delineators or k-rail	1 day	Mon 11/20/17	Mon 11/20/17	35																
37		Demo asphalt	3 days	Tue 11/21/17	Thu 11/23/17	36																
38		Fill	3 days	Fri 11/24/17	Tue 11/28/17	37																
39		Construct Curb and Gutter - East side	5 days	Wed 11/29/17	Tue 12/5/17	38																
40		Fine grade	1 day	Wed 12/6/17	Wed 12/6/17	39																
41		Adjust utilities	4 days	Thu 12/7/17	Tue 12/12/17	40																
42		Base Pave (northbound lanes)	1 day	Wed 12/13/17	Wed 12/13/17	41																
43		Shift Traffic, remove temporary barriers, temp AC, signage, install crossing panels	1 day	Fri 8/3/18	Fri 8/3/18	42,166SS	Phase 4															
44		Construct South Side (Traffic on N. side)	30 days	Mon 8/6/18	Fri 9/14/18																	
45		Demo asphalt	3 days	Mon 8/6/18	Wed 8/8/18	43																
46		Fill	3 days	Thu 8/9/18	Mon 8/13/18	45																
47		Construct Curb and Gutter - West side	5 days	Tue 8/14/18	Mon 8/20/18	46																
48		Fine grade	1 day	Tue 8/21/18	Tue 8/21/18	47																
49		Adjust utilities	4 days	Wed 8/22/18	Mon 8/27/18	48																

Project: Laguna Niguel to San Juan
Date: Fri 9/30/16

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Deadline

Progress

Page 1

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes
50		Base Pave (southbound lanes)	1 day	Tue 8/28/18	Tue 8/28/18	49	
51		Pave intersection	1 day	Wed 8/29/18	Wed 8/29/18	50	
52		Install AC cap	1 day	Thu 9/13/18	Thu 9/13/18	51FS+10 days	
53		Signing and Striping	1 day	Fri 9/14/18	Fri 9/14/18	52	
54		Rancho Capistrano Grade Crossing	269 days	Wed 8/16/17	Mon 8/27/18		
55		Install Pull Boxes and conduit	10 days	Wed 8/16/17	Tue 8/29/17	23	
56		Install signal foundations	4 days	Wed 8/30/17	Mon 9/4/17	55	
57		Set new instrument house	0 days	Tue 7/10/18	Tue 7/10/18	17	
58		Set new gate (Passing Siding)	1 day	Wed 7/11/18	Wed 7/11/18	57,72	Phase 4
59		Remove existing Mainline track and crossing panels	2 days	Wed 7/11/18	Thu 7/12/18	58SS	Phase 4
60		Install grade crossing panels (Passing Siding)	1 day	Wed 7/11/18	Wed 7/11/18	57,72	Phase 4
61		Set new gate (new Mainline)	1 day	Mon 8/27/18	Mon 8/27/18	75	Phase 6A
62		Install grade crossing panels (new Mainline)	1 day	Mon 8/27/18	Mon 8/27/18	61SS	Phase 6A
63		South of Rancho Capistrano to end of shift	298 days	Wed 8/2/17	Fri 9/21/18		
64		Clearing and Grubbing	5 days	Wed 8/9/17	Tue 8/15/17	115	
65		Extend culvert	22 days	Mon 10/2/17	Tue 10/31/17	24,64	Phase 1B
66		Remove Rip Rap (crossing to 4994+50)	22 days	Wed 9/6/17	Thu 10/5/17	64,25	
67		Construct subgrade and place sub-ballast (Passing Siding)	44 days	Wed 11/1/17	Mon 1/1/18	65,66	Phase 3
68		Construct subgrade and place sub-ballast (Mainline)	22 days	Thu 6/28/18	Fri 7/27/18	107,67	
69		Trackwork: Mainline and Passing Siding	114 days	Tue 4/17/18	Fri 9/21/18		
70		Construct new track (Passing Siding): crossing to 4989+50	2 days	Wed 7/11/18	Thu 7/12/18	58SS	Phase 4
71		Construct new track (Passing Siding): 4989+50 to 4995+00	5 days	Tue 5/15/18	Mon 5/21/18	72	Phase 3
72		Construct new track (Passing Siding): 4995+00 to 5024+00	20 days	Tue 4/17/18	Mon 5/14/18	67,112	Phase 3
73		Construct Pocket Track	10 days	Mon 9/10/18	Fri 9/21/18	81	Phase 5
74		Shift Mainline: 4993+50 to 5024+00	15 days	Mon 7/30/18	Fri 8/17/18	59,68	Phase 5
75		Construct new track (new Mainline): crossing to 4988+50	5 days	Mon 8/20/18	Fri 8/24/18	74,68	Phase 5
76		CP Camino Trackwork	21 days	Mon 8/20/18	Mon 9/17/18		
77		Construct half of XO (in place)	10 days	Mon 8/20/18	Fri 8/31/18	10,74	Phase 5
78		Construct 1/2 XO (on the side of ML) and track between XO and TO	10 days	Mon 9/3/18	Fri 9/14/18	77	Phase 5
79		Install half of XO	1 day	Mon 9/17/18	Mon 9/17/18	78	Phase 6A
80		Construct pocket track turnout	10 days	Mon 8/27/18	Fri 9/7/18	10,75	Phase 5
81		Install pocket track turnout	0 days	Fri 9/7/18	Fri 9/7/18	80	Phase 5
82		Bridge 194.6	248 days	Wed 8/16/17	Fri 7/27/18		
83		Install diversion	10 days	Wed 8/16/17	Tue 8/29/17	64	
84		Channel demo	5 days	Wed 8/30/17	Tue 9/5/17	83	
85		Prep subgrade	10 days	Wed 9/6/17	Tue 9/19/17	84	
86		Precast culvert	98 days	Tue 10/3/17	Thu 2/15/18		
87		Shop Drawing Approval Process	44 days	Tue 10/3/17	Fri 12/1/17	2FS+44 days	
88		Manufacture culvert	44 days	Mon 12/4/17	Thu 2/1/18	87	
89		Delivery & Unloading	10 days	Fri 2/2/18	Thu 2/15/18	88	
90		Install pre-cast box culvert	1 day	Fri 2/16/18	Fri 2/16/18	89	
91		Remove Bridge	1 day	Wed 7/25/18	Wed 7/25/18	90,128	Phase 2
92		LCC fill/embankment	2 days	Thu 7/26/18	Fri 7/27/18	91	
93		Retaining Walls	236 days	Wed 8/2/17	Wed 6/27/18		
94		Retaining Wall 1	174 days	Wed 8/2/17	Mon 4/2/18		
95		Submittals/Shop Drawings	44 days	Wed 8/2/17	Mon 10/2/17	2	

Project: Laguna Niguel to San Juan
Date: Fri 9/30/16

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Deadline

Progress

Page 2

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes	J. J.													
								August 11				November 21		March 1		June 11		September 21			
								5/28	7/16	9/3	10/22	12/10	1/28	3/18	5/6	6/24	8/12	9/30	11/18		
96		Procure and Deliver Piles	22 days	Tue 10/3/17	Wed 11/1/17	95															
97		Install CIDH Piles	50 days	Thu 11/2/17	Wed 1/10/18	96															
98		Procure and deliver panels	44 days	Tue 10/3/17	Fri 12/1/17	95															
99		Place panels	22 days	Thu 12/21/17	Fri 1/19/18	98,97FS-15 days															
100		Backfill	22 days	Mon 1/22/18	Tue 2/20/18	99															
101		Slope Paving	22 days	Wed 2/21/18	Thu 3/22/18	100															
102		Install cable railing	7 days	Fri 3/23/18	Mon 4/2/18	101															
103		Retaining Wall 1B	236 days	Wed 8/2/17	Wed 6/27/18																
104		Submittals/Shop Drawings	44 days	Wed 8/2/17	Mon 10/2/17	2															
105		Prepare subgrade	22 days	Tue 4/17/18	Wed 5/16/18	64,104,112															
106		Place wall	12 days	Thu 5/17/18	Fri 6/1/18	105															
107		Backfill	24 days	Fri 5/25/18	Wed 6/27/18	106FS-6 days															
108		Retaining Wall 2	188 days	Wed 8/2/17	Fri 4/20/18																
109		Submittals/Shop Drawings	44 days	Wed 8/2/17	Mon 10/2/17	2															
110		Prepare subgrade	22 days	Fri 2/9/18	Mon 3/12/18	64,109,123															
111		Place wall	10 days	Tue 3/13/18	Mon 3/26/18	110															
112		Backfill	20 days	Tue 3/20/18	Mon 4/16/18	111FS-5 days															
113		Install cable railing	4 days	Tue 4/17/18	Fri 4/20/18	112															
114		End of shift to Trabuco	255 days	Wed 8/2/17	Tue 7/24/18																
115		Clearing and Grubbing	5 days	Wed 8/2/17	Tue 8/8/17	2															
116		Extend culvert (5017+50)	33 days	Wed 8/9/17	Fri 9/22/17	115															
117		Construct Track Subgrade and place sub-ballast	66 days	Fri 2/9/18	Fri 5/11/18	115,123	Phase 3														
118		Retaining Wall 3	143 days	Wed 8/2/17	Fri 2/16/18																
119		Submittals/Shop Drawings	44 days	Wed 8/2/17	Mon 10/2/17	2															
120		Procure and deliver precast units	44 days	Tue 10/3/17	Fri 12/1/17	119,115															
121		Prepare wall subgrade	44 days	Mon 9/25/17	Thu 11/23/17	64,116															
122		Place wall units	44 days	Fri 11/24/17	Wed 1/24/18	121															
123		Backfill	33 days	Tue 12/26/17	Thu 2/8/18	122FS-22 days															
124		Install cable railing	6 days	Fri 2/9/18	Fri 2/16/18	123															
125		Trackwork	52 days	Mon 5/14/18	Tue 7/24/18																
126		Construct new track (Passing Siding): 5024+00 to 5047+00	15 days	Mon 5/14/18	Fri 6/1/18	117	Phase 3														
127		CP Trabuco Turnout	10 days	Wed 7/11/18	Tue 7/24/18																
128		Construct turnout (on the side of ML)	10 days	Wed 7/11/18	Tue 7/24/18	10															
129		Install Turnout	0 days	Tue 7/24/18	Tue 7/24/18	128,123	Phase 2														
130		Signals and Communications	272 days	Wed 8/9/17	Thu 8/23/18																
131		CP Camino	247 days	Wed 8/16/17	Thu 7/26/18																
132		Install Pull Boxes and conduit	15 days	Wed 8/16/17	Tue 9/5/17	64															
133		Install signal foundations	15 days	Wed 9/6/17	Tue 9/26/17	132															
134		Install signals (structure and heads)	5 days	Wed 7/11/18	Tue 7/17/18	133,135SS															
135		Install instrument enclosure	5 days	Wed 7/11/18	Tue 7/17/18	17															
136		Terminate and test equipment	5 days	Wed 7/18/18	Tue 7/24/18	135															
137		Create new subdiv file and update	10 days	Fri 6/29/18	Thu 7/12/18	139FF-10 days															
138		Modify Dispatch System (OC Sub desk)	5 days	Fri 7/6/18	Thu 7/12/18	139FF-10 days															
139		Signal cutover (CP Camino)	2 days	Wed 7/25/18	Thu 7/26/18	136	Phase 6C														
140		Install new program for CP Crown	1 day	Wed 7/25/18	Wed 7/25/18	139SS															
141		CP Camino in-service	0 days	Thu 7/26/18	Thu 7/26/18	139															
142		CP Trabuco	262 days	Wed 8/9/17	Thu 8/9/18																
143		Install Pull Boxes and conduit	15 days	Wed 8/9/17	Tue 8/29/17	115															
144		Install signal foundations	15 days	Wed 8/30/17	Tue 9/19/17	143															
145		Install signals (structure and heads)	5 days	Wed 7/11/18	Tue 7/17/18	144,146SS															
146		Set instrument enclosure	5 days	Wed 7/11/18	Tue 7/17/18	17															

Project: Laguna Niguel to San Juan
Date: Fri 9/30/16

Task

Split

Milestone

.....

◆

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Milestone

◆

◆

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Deadline

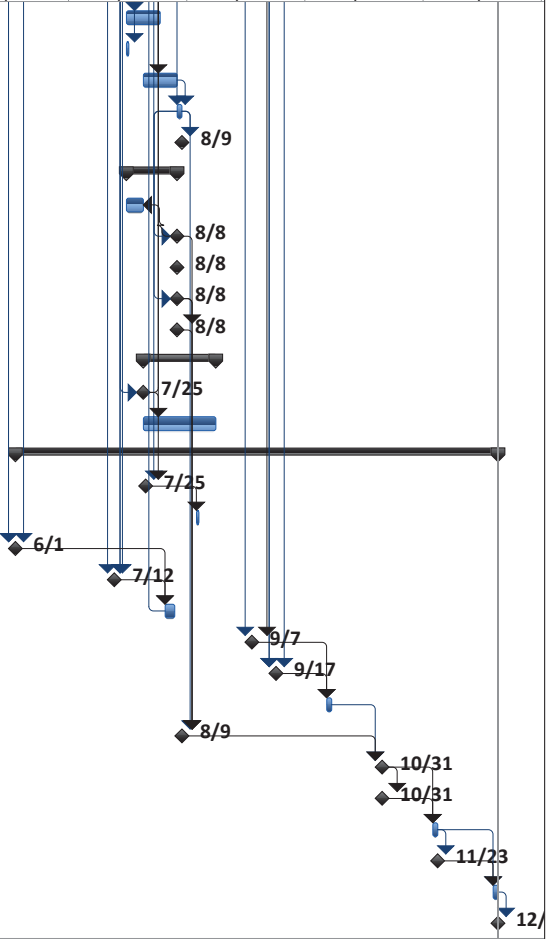
Progress

⌵

↓

Page 3

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes	November 2017						June 2018						J			
								August 11			November 21			March 1			June 11				September 21		
								5/28	7/16	9/3	10/22	12/10	1/28	3/18	5/6	6/24	8/12	9/30	11/18				
147		Remove DAX house	10 days	Wed 7/18/18	Tue 7/31/18	146																	
148		Terminate and test equipment	1 day	Wed 7/18/18	Wed 7/18/18	146																	
149		Create new subdiv file and update	10 days	Wed 7/25/18	Tue 8/7/18	114																	
150		Signal cutover (CP Trabuco)	2 days	Wed 8/8/18	Thu 8/9/18	149,144	Phase 6B																
151		CP Trabuco in-service	0 days	Thu 8/9/18	Thu 8/9/18	150																	
152		CP Capistrano	15 days	Wed 7/18/18	Wed 8/8/18																		
153		Install signals	5 days	Wed 7/18/18	Wed 7/25/18	154SF-10 days																	
154		Signal cutover (CP Capistrano)	0 days	Wed 8/8/18	Wed 8/8/18	150SS	Phase 6B																
155		CP Oso Removal	0 days	Wed 8/8/18	Wed 8/8/18																		
156		Reconfigure grade crossings	0 days	Wed 8/8/18	Wed 8/8/18	150SS	Phase 6B																
157		Remove CP Oso	0 days	Wed 8/8/18	Wed 8/8/18	156	Phase 6B																
158		CP Avery Removal	22 days	Wed 7/25/18	Thu 8/23/18																		
159		Remove CP Avery from service	0 days	Wed 7/25/18	Wed 7/25/18	139SS	Phase 6C																
160		Remove CP Avery signal facilities	22 days	Wed 7/25/18	Thu 8/23/18	159	Phase 7																
161		Phases	142 days	Fri 6/1/18	Tue 12/18/18																		
162		Phase 2 predecessors complete	0 days	Wed 7/25/18	Wed 7/25/18	129,91																	
163		Phase 2 Window	1 day	Thu 8/16/18	Thu 8/16/18	162FS+15 days																	
164		Phase 3 predecessors complete	0 days	Fri 6/1/18	Fri 6/1/18	26,72,126																	
165		Phase 4 predecessors complete	0 days	Thu 7/12/18	Thu 7/12/18	28,58,60,59																	
166		Phase 4 Window	2 days	Fri 8/3/18	Mon 8/6/18	165FS+15 days,164FS+15 day																	
167		Phase 5 complete	0 days	Fri 9/7/18	Fri 9/7/18	75,81																	
168		Phase 6A predecessors complete	0 days	Mon 9/17/18	Mon 9/17/18	61,62,79																	
169		Phase 6A Window	2 days	Tue 10/9/18	Wed 10/10/18	168FS+15 days,167FS+15 day																	
170		Phase 6B predecessors complete	0 days	Thu 8/9/18	Thu 8/9/18	150,154,156,157																	
171		Start Phase 6B Window	0 days	Wed 10/31/18	Wed 10/31/18	170FS+15 days,169FS+15 day																	
172		Phase 6C predecessors complete	0 days	Wed 10/31/18	Wed 10/31/18	171																	
173		Phase 6C Window	2 days	Thu 11/22/18	Fri 11/23/18	172FS+15 days,171FS+15 day																	
174		Phase 7 predecessors complete	0 days	Fri 11/23/18	Fri 11/23/18	173																	
175		Phase 7 Window	2 days	Mon 12/17/18	Tue 12/18/18	174FS+15 days,173FS+15 day																	
176		Construction Complete	0 days	Tue 12/18/18	Tue 12/18/18	175																	



Appendix G: Construction Activities, Materials Used, and Associated Pollutants

Documents Included:

Table G.1 POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Pollutant Guidance Testing Table

DRAFT

Table G.1 General Construction Activities and Associated Pollutants

QSP to supplement as needed.

Phase	Activity	Associated Materials or Pollutants	Pollutant Category ⁽¹⁾
Grading and Land Development	Earthwork	Turbidity	Sediment
	Contaminated Soils	Aerially Deposited Lead / Petroleum	
	Soil Stabilization / Dust Control	Polymer / Copolymer / Salts	Synthetic Organics,
	Treated Wood Products	CCA / ACA / ACZA / Copper Naphthenate / Creosote Ties	Metals
	Vehicle	Vehicle Fluids / Batteries / Fuel / Oil / Lubricants	Oil and Grease
	Cement & Masonry	Alkalinity / pH	
Streets and Utilities Phase	Asphalt Paving	Petroleum	Oil and Grease
	Painting/Sealants/Solvents	VOC / SVOC / COD	
	Saw-cutting	pH/Alkalinity	
	Line Flushing Products	Chlorinated Water	
Vertical Construction Phase	Cement & Masonry	Alkalinity / pH	
	Painting/Sealants/Solvents	VOC / SVOC / COD	Oil and Grease
	Treated Wood Products	CCA / ACA / ACZA / Copper Naphthenate	Metals
	Adhesives	Phenols / SVOC / COD	Gross Pollutants/ Oil and Grease
	Cleaning/Solvents	Acids/Bleach/Detergent/TSP/Solvents	Gross Pollutants / Nutrients/ Oil and Grease
Landscaping and Site Stabilization Phase	Amendments	Aluminum Sulfate / Sulfur / Lime Gypsum / Lignin Sulfonate	Gross Pollutants /Metals
	Fertilizers	Fertilizers	Nutrients
	Topsoil / Sand / Gravel	Turbidity	Sediment
	Pesticides/Herbicides	Pesticides/Herbicides	Pesticides
	Soil Stabilization (e.g. w/ Hydraulic Mulching)	Polymer / Copolymer	Synthetic Organics

⁽¹⁾ Categories per CASQA BMP Handbook (i.e., Sediment, Nutrients, Bacteria and Viruses, Oil and Grease, Metals, Synthetic Organics, Pesticides, Gross Pollutants, and Vector Production)

Table G.1 POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES

General Work Activity/ Products With Potential Stormwater Pollutants	Specific Work Activity/Products With Potential Stormwater Pollutants	Pollutant Categories
Adhesives	Adhesives, glues, resins, epoxy synthetics, PVC cement Caulks, sealers, putty, sealing agents and Coal tars (naphtha, pitch)	Oil and Grease, Synthetic Organics ¹
Asphalt paving/curbs	Hot and cold mix asphalt	Oil and Grease
Cleaners	Polishes (metal, ceramic, tile) Etching agents, acids Cleaners, ammonia, lye, caustic sodas, bleaching agents and chromate salts	Metals, Synthetic Organics
Concrete / Masonry	Cement and brick dust Concrete curing compounds Glazing compounds Surfaces cleaners Saw cut slurries	Metals, Synthetic Organics
Earthwork	Turbidity	Sediment
Framing/Carpentry	Sawdust, particle board dust, and treated woods Saw cut slurries	Metals, Synthetic Organics
Earthwork	Turbidity / Contaminated Soils (e.g., ADL / Petroleum)	Sediment / Metals / Oil and Grease
Liquid waste	Wash waters	Metals, Synthetic Organics
Painting	Paint thinners, acetone, methyl ethyl ketone, stripper paints, lacquers, varnish, enamels, turpentine, gum spirit, solvents, dyes, stripping pigments and sanding	Metals, Synthetic Organics
Revegeation	Vegetation control (pesticides/herbicides) Amendments / Fertilizers / Soil Stabilization (e.g.Binder applied w/ Hydraulic Mulching)	Nutrients, Metals, Synthetic Organics
Fencing/Railing	Galvanized metal	Metals
Removal of existing structures	Demolition of asphalt, concrete, masonry, timber ties, metal structures.	Metals, Oil and Grease, Synthetic Organics
Sanitary waste	Portable toilets Disturbance of existing sewer lines.	Nutrients
Soil preparation/amendments	Use of soil additives/amendments	Nutrients
Soil Stabilization / Dust Control	Polymer / Copolymer	Synthetic Organics
Solid waste	Litter, trash and debris Vegetation	Gross Pollutants
Treated Wood Products	CCA / ACA / ACZA / Copper Naphthenate / Creosote	Metals

Table G.1 POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES

[illegible]

***Appendix H: CASQA Stormwater BMP Handbook: Construction
Fact Sheets***

DRAFT

DRAFT

CASQA BMP RESOURCE HANDBOOK LOG-IN

The Storm Water Best Management Practices Handbook: Construction is prepared by the California Stormwater Quality Association (CASQA) and is available via the portal from the website (www.casqa.org) by paid subscription only. The current Handbook is dated January 2015.

<https://www.casqa.org/resources/bmp-handbooks>

A COPY OF THE BMP FACTS SHEETS TO BE INCLUDED FOR THE 100% SUBMITTAL

DRAFT

DRAFT

Appendix I: BMP Inspection Form

DRAFT

DRAFT

BMP INSPECTION REPORT

Date and Time of Inspection:		Date Report Written:		
Inspection Type: (Circle one)	Weekly <i>Complete Parts I, II, III and VII</i>	Pre-Storm <i>Complete Parts I, II, III, IV and VII</i>	During Rain Event <i>Complete Parts I, II, III, V, and VII</i>	Post-Storm <i>Complete Parts I, II, III, VI and VII</i>
Part I. General Information				
Site Information				
Construction Site Name: SJC PASSING SIDING				
Construction stage and completed activities:			Approximate area of site that is exposed:	
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:	
Weather				
Estimate storm beginning: (date and time)		Estimate storm duration: (hours)		
Estimate time since last storm: (days or hours)		Rain gauge reading and location: (in)		
Is a "Qualifying Event" predicted or did one occur (i.e., 0.5" rain with 48-hrs or greater between events)? (Y/N) If yes, summarize forecast:				
Exemption Documentation (explanation required if inspection could not be conducted). Visual inspections are not required outside of business hours or during dangerous weather conditions such as flooding or electrical storms.				
Inspector Information				
Inspector Name:			Inspector Title:	
Signature:			Date:	
Part II. BMP Observations. Describe deficiencies in Part III.				

Minimum BMPs for Risk Level _____ Sites	Failures or other short comings (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping for Construction Materials			
Inventory of products (excluding materials designed to be outdoors)			
Stockpiled construction materials not actively in use are covered and bermed			
All chemicals are stored in watertight containers with appropriate secondary containment, or in a completely enclosed storage shed			
Construction materials are minimally exposed to precipitation			
BMPs preventing the off-site tracking of materials are implemented and properly effective			
Good Housekeeping for Waste Management			
Wash/rinse water and materials are prevented from being disposed into the storm drain system			
Portable toilets are contained to prevent discharges of waste			
Sanitation facilities are clean and with no apparent for leaks and spills			
Equipment is in place to cover waste disposal containers at the end of business day and during rain events			
Discharges from waste disposal containers are prevented from discharging to the storm drain system / receiving water			
Stockpiled waste material is securely protected from wind and rain if not actively in use			
Procedures are in place for addressing hazardous and non-hazardous spills			
Appropriate spill response personnel are assigned and trained			
Equipment and materials for cleanup of spills is available onsite			
Washout areas (e.g., concrete) are contained appropriately to prevent discharge or infiltration into the underlying soil			
Good Housekeeping for Vehicle Storage and Maintenance			
Measures are in place to prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters			
All equipment or vehicles are fueled, maintained, and stored in a designated area with appropriate BMPs			
Vehicle and equipment leaks are cleaned immediately and disposed of properly			

Part II. BMP Observations Continued. Describe deficiencies in Part III.			
Minimum BMPs for Risk Level _____ Sites	Adequately designed,	Action Required (yes/no)	Action Implemented (Date)

	implemented and effective (yes, no, N/A)		
Good Housekeeping for Landscape Materials			
Stockpiled landscape materials such as mulches and topsoil are contained and covered when not actively in use			
Erodible landscape material has not been applied 2 days before a forecasted rain event or during an event			
Erodible landscape materials are applied at quantities and rates in accordance with manufacturer recommendations			
Bagged erodible landscape materials are stored on pallets and covered			
Good Housekeeping for Air Deposition of Site Materials			
Good housekeeping measures are implemented onsite to control the air deposition of site materials and from site operations			
Non-Stormwater Management			
Non-Stormwater discharges are properly controlled			
Vehicles are washed in a manner to prevent non-stormwater discharges to surface waters or drainage systems			
Streets are cleaned in a manner to prevent unauthorized non-stormwater discharges to surface waters or drainage systems.			
Erosion Controls			
Wind erosion controls are effectively implemented			
Effective soil cover is provided for disturbed areas inactive (i.e., not scheduled to be disturbed for 14 days) as well as finished slopes, open space, utility backfill, and completed lots			
The use of plastic materials is limited in cases when a more sustainable, environmentally friendly alternative exists.			
Sediment Controls			
Perimeter controls are established and effective at controlling erosion and sediment discharges from the site			
Entrances and exits are stabilized to control erosion and sediment discharges from the site			
Sediment basins are properly maintained			
Linear sediment control along toe of slope, face of slope and at grade breaks			
Limit construction activity to and from site to entrances and exits that employ effective controls to prevent offsite tracking			
Ensure all storm, drain inlets and perimeter controls, runoff control BMPs and pollutants controls at entrances and exits are maintained and protected from activities that reduce their effectiveness			
Inspect all immediate access roads (Daily inspection for Risk Level 2 & 3 Only)			
Run-On and Run-Off Controls			

Run-on to the site is effectively managed and directed away from all disturbed areas.			
Other			
Are the project SWPPP and BMP plan up to date, available on-site and being properly implemented?			

Part III. Descriptions of BMP Deficiencies		
Deficiency	Repairs Implemented: Note - Repairs must begin within 72 hours of identification and, complete repairs as soon as possible.	
	Start Date	Action
1.		
2.		
3.		
4.		

Part IV. Additional Pre-Storm Observations. Note the presence or absence of floating and suspended materials, sheen, discoloration, turbidity, odors, and source(s) of pollutants(s).	
	Yes, No, N/A
Do stormwater storage and containment areas have adequate freeboard? If no, complete Part III.	
Are drainage areas free of spills, leaks, or uncontrolled pollutant sources? If no, complete Part VII and describe below.	
Notes:	
Are stormwater storage and containment areas free of leaks? If no, complete Parts III and/or VII and describe below.	
Notes:	

Part V. Additional During Storm Observations. If BMPs cannot be inspected during inclement weather, list the results of visual inspections at all relevant outfalls, discharge points, and downstream locations. Note odors or visible sheen on the surface of discharges. Complete Part VII (Corrective Actions) as needed.

Outfall, Discharge Point, or Other Downstream Location

Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description

DRAFT

Part VI. Additional Post-Storm Observations. Visually observe (inspect) stormwater discharges at all discharge locations within two business days (48 hours) after each qualifying rain event, and observe (inspect) the discharge of stored or contained stormwater that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Complete Part VII (Corrective Actions) as needed.

Discharge Location, Storage or Containment Area	Visual Observation

Part VII. Additional Corrective Actions Required. Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Note if SWPPP change is required.

Required Actions	Implementation Date

***Appendix J: Project Specific Rain Event Action Plan
Template***

(Reserved for Risk Levels 2 or 3, Not Used)

DRAFT

Rain Event Action Plan (REAP)

Project: SJC PASSING SIDING

Date of REAP:

WDID Number:

Date Rain Predicted to Occur:

**Predicted % chance of
rain:**

DRAFT

Predicted Rain Event Triggered Actions

Below is a list of suggested actions and items to review for this project. Each active Trade should check all material storage areas, stockpiles, waste management areas, vehicle and equipment storage and maintenance, areas of active soil disturbance, and areas of active work to ensure the proper implementation of BMPs. Project-wide BMPs should be checked and cross-referenced to the BMP progress map.

Trade or Activity	Suggested action(s) to perform / item(s) to review prior to rain event
<input type="checkbox"/> Information & Scheduling	<input type="checkbox"/> Inform trade supervisors of predicted rain <input type="checkbox"/> Check scheduled activities and reschedule as needed <input type="checkbox"/> Alert erosion/sediment control provider <input type="checkbox"/> Alert sample collection contractor (if applicable) <input type="checkbox"/> Schedule staff for extended rain inspections <input type="checkbox"/> Check Erosion and Sediment Control (ESC) material stock <input type="checkbox"/> Review BMP progress map <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Material storage areas	<input type="checkbox"/> Material under cover or in sheds (ex: treated woods and metals) <input type="checkbox"/> Perimeter control around stockpiles <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Waste management areas	<input type="checkbox"/> Dumpsters closed <input type="checkbox"/> Drain holes plugged <input type="checkbox"/> Recycling bins covered <input type="checkbox"/> Sanitary stations bermed and protected from tipping <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Trade operations	<input type="checkbox"/> Exterior operations shut down for event (e.g., no concrete pours or paving) <input type="checkbox"/> Soil treatments (e.g., fertilizer) ceased within 24 hours of event <input type="checkbox"/> Materials and equipment (e.g., tools) properly stored and covered <input type="checkbox"/> Waste and debris disposed in covered dumpsters or removed from site <input type="checkbox"/> Trenches and excavations protected <input type="checkbox"/> Perimeter controls around disturbed areas <input type="checkbox"/> Fueling and repair areas covered and bermed <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Site ESC BMPs	<input type="checkbox"/> Adequate capacity in sediment basins and traps <input type="checkbox"/> Site perimeter controls in place <input type="checkbox"/> Catch basin and drop inlet protection in place and cleaned <input type="checkbox"/> Temporary erosion controls deployed <input type="checkbox"/> Temporary perimeter controls deployed around disturbed areas and stockpiles <input type="checkbox"/> Roads swept; site ingress and egress points stabilized <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Concrete rinse out area	<input type="checkbox"/> Adequate capacity for rain <input type="checkbox"/> Wash-out bins covered <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Spill and drips	<input type="checkbox"/> All incident spills and drips, including paint, stucco, fuel, and oil cleaned <input type="checkbox"/> Drip pans emptied <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____

Continued on next page.

<input type="checkbox"/> Other / Discussion / Diagrams	<input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
--	--

DRAFT

Attach a printout of the weather forecast from the NOAA website to the REAP.

I certify under penalty of law that this Rain Event Action Plan (REAP) will be performed in accordance with the General Permit by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, 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.

Qualified SWPPP Practitioner (Use ink please)

Date:

Appendix K: Training Reporting Form

DRAFT

DRAFT

Trained Contractor Personnel Log

Stormwater Management Training Log and Documentation

Project Name: SJC PASSING SIDING

WDID #: _____

Stormwater Management Topic: (check as appropriate)

- | | |
|--|---|
| <input type="checkbox"/> Erosion Control | <input type="checkbox"/> Sediment Control |
| <input type="checkbox"/> Wind Erosion Control | <input type="checkbox"/> Tracking Control |
| <input type="checkbox"/> Non-Stormwater Management | <input type="checkbox"/> Waste Management and Materials Pollution Control |
| <input type="checkbox"/> Stormwater Sampling | |

Specific Training Objective: _____

Location: _____

Date: _____

Instructor: _____

Telephone: _____

Course Length (hours): _____

Attendee Roster (Attach additional forms if necessary)

Name	Company	Phone

As needed, add proof of external training (e.g., course completion certificates, credentials for QSP, QSD).

DRAFT

Appendix L: LRP Certification & Responsible Parties

DRAFT

DRAFT

Legally Responsible Person (LRP) Certification

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name:

SJC Passing Siding

WDID:

"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."

Legally Responsible Person

Signature of [Authorized Representative of]
Legally Responsible Person or Approved
Signatory

Date

Name of [Authorized Representative of] Legally
Responsible Person or Approved Signatory

Telephone Number

DRAFT

OPTIONAL

Authorization of Approved Signatories

Project Name: SJC PASSING SIDING

WDID #: _____

Name of Personnel	Project Role	Company	Signature	Date

DRAFT

LRP's Signature

Date

LRP Name and Title

Telephone Number

Identification of QSP

Project Name: SJC PASSING SIDING

WDID #: _____

The following are QSPs associated with this project

Name of Personnel ⁽¹⁾	Company	Date

(1) If additional QSPs are required on the job site add additional lines and include information here

DRAFT

Authorization of Data Submitters

Project Name: SJC PASSING SIDING

WDID #: _____

Name of Personnel	Project Role	Company	Signature	Date

Approved Signatory's Signature Date

DRAFT

Approved Signatory
Name and Title

Telephone Number

DRAFT

Appendix M: Contractors and Subcontractors

DRAFT

DRAFT

Appendix N: Construction General Permit

Documents Included:

WQO2012_0006 Amendment

WQO2009-0009 including WQO2010_0014 revisions

DRAFT

DRAFT

2009-0009-DWQ CONSTRUCTION GENERAL PERMIT

http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wgo_2009_0009_complete.pdf

Copy of CGP to be included for 100% submittal.

DRAFT

DRAFT