WASTE DISCHARGE IDENTIFICATION (WDID) NUMBER: _____

CONCEPTUAL STORMWATER POLLUTION PREVENTION PLAN (CSWPPP)

for

Stage Gulch Road Mitigation - Tree Planting and Creek Channelization
04-Son-116-41.8/44.7

and

all construction activities planned for the first 60 days after contract approval, or until the Contractor's SWPPP is approved by the Engineer. This CSWPPP is a guideline for minimum practices, measures and activities that the Contractor must exercise but does not exclude Contractor's independent investigation of site conditions and subsequent amendment of the CSWPPP to meet the requirements of the Construction General Permit.

CONTRACT NO.: 04-283824
CALTRANS Project Identifier NUMBER: 0400000772

RISK LEVEL: 2

Prepared for:
California Department of Transportation (Caltrans), District 4
111 Grand Avenue
Oakland, CA, 94612

Submitted by:
Caltrans, District 4
111 Grand Avenue
Oakland, CA 94612

Project Site Address
Highway 116 from Adobe Road to 0.4 miles west of Arnold Drive near Schellville, Sonoma County, CA

Contractor's Water Pollution Control (WPC) Manager/Qualified SWPPP Developer(QSD)

Contractor's Qualified SWPPP Developer (QSD) (if SWPPP not developed by WPC Manager)

Contractor's Qualified SWPPP Practitioner (QSP) (if different from WPC Manager)

SWPPP Developed by:

Caltrans, District 4
111 Grand Avenue
Oakland, CA, 94612
(510) 286-4147)
Alex McDonald, Landscape Associate, QSD/P

SWPPP Date
May 23, 2012

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Attachment B .... Notice of Construction (NOC) / Notice of Intent (NOI)
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Appendix B ..... CEM-2009 SWPPP Amendment Log Form
Appendix C ..... CEM-2070 SWPPP/WPCP Annual Certification of Compliance Form
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Appendix I ..... CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary
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Appendix L ..... CEM-2045, CEM-2046, CEM-2047 Rain Event Action Plan Forms
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Appendix N ..... CEM-2048 Storm Event Sampling and Analysis Plan
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Appendix Q ..... CEM-2056 Stormwater Turbidity Meter Calibration Record Form
Appendix R ..... CEM-2057 Stormwater pH Meter Calibration Record Form
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Appendix T ..... CEM-2050 Sample Information, Identification, and Chain-of-Custody Record Form
Appendix U ..... CEM-2051 Stormwater Sampling and Testing Activity Log
Appendix V ..... CEM-2052 Stormwater Sample Field Test Report Form
Appendix W ..... CEM-2054 Stormwater Sample Laboratory Test Report Form
Appendix X ..... CEM-2062 Numeric Action Level Exceedance Report Form
Appendix Y ..... CEM-2063 Numeric Effluent Limitation Violation Report Form
Appendix Z ..... CEM-2065 Discharge Reporting Log Form

SWPPP Files

File Category 20.01 ..... Stormwater Pollution Prevention Plan
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File Category 20.90 ..... Notice of Termination

SECTION 100
SWPPP Certifications and Approval

100.1 Legally Responsible Person Certification and Caltrans Approval

The California Department of Transportation (Caltrans) District Director, as the Legally Responsible Person (LRP), has authorized the Caltrans RE to be the authorized Approved Signatory of Caltrans for approving, signing, and certifying the Stormwater Pollution Prevention Plan (SWPPP) in conformance with Section H, Provision 8.b; and Section M, Provision 10 of the Caltrans Permit (CAS000003, Order No. 99-06-DWQ) and Section IV.I of the Construction General Permit (CGP) (CAS000002, Order No. 2009-0009-DWQ). The LRP authorization for the RE to be the Approved Signatory is provided as Attachment A. The SWPPP was developed by the Contractor and submitted for review and approval to the RE, pursuant to the Special Provisions, the SWPPP / Water Pollution Control Program (WPCP) Preparation Manual, and the Standard Specifications Section 7-1.01G – Water Pollution. The Contractor is responsible and liable at all times for compliance with applicable requirements of the CGP (CAS000002, Order No. 2009-009- DWQ) for which compliance is ultimately determined by the Regional Water Quality Control Board (RWQCB), the State Water Resources Control Board (SWRCB), and/or the U.S. Environmental Protection Agency (USEPA). Copies of the SWRCB-issued Waster Discharge Identification Number and Notice of Intent form are provided as Attachment B.

For Caltrans Use Only
RE's Approval and
Caltrans Certification of the
Stormwater Pollution Prevention Plan

Project Name:	**Stage Gulch Road Mitigation - Tree Planting and Creek Channelization 04-Son-116-41.8/44.7**
Caltrans Contract Number:	**04-283824**
Caltrans Project Identification Number:	**0400000772**

"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 fines and imprisonment for knowing violations."

RE's Signature	Date
RE's Name	RE's Telephone Number

100.2 Contractor and QSD SWPPP Certification

Contractor's Certification of SWPPP

Project Name:	**Stage Gulch Road Mitigation - Tree Planting and Creek Channelization 04-Son-116-41.8/44.7**
Caltrans Contract Number:	**04-283824**
Caltrans Project Identification Number:	**0400000772**

"I certify under a 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, the information submitted, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Contractor's Signature	Date
Contractor's Name	Telephone Number
Contractor's Title	

QSD's Certification of SWPPP

"I certify that the 'required text' portions of this document are unaltered from the original required text and content. I understand that the template language was written in accordance with Caltrans requirements to comply with the Construction General Permit (Order No. 2009-0009)."

Project Name: **Stage Gulch Road Mitigation - Tree Planting and Creek Channelization 04-Son-116-41.8/44.7**

Caltrans Contract Number: **04-283824**

Caltrans Project Identification Number: **0400000772**

Alex McDonald	4/20/2012
QSD's Signature	Date
Alex McDonald	(510) 286-4147
QSD's Name	QSD's Telephone Number
Landscape Associate	
QSD's Title	

100.3 Amendments

100.3.1 SWPPP Amendments Certification and Approval

This SWPPP is meant to be a "living document," therefore, updated and additional information is expected to be added to the SWPPP as the project progresses, including information regarding changes in the field that do not require an amendment, such as the following:

- adding BMPs as required by a *Rain Event Action Plan*.
- increasing or decreasing the quantity of BMPs in the field that are already part of the erosion control plan in the SWPPP,
- moving BMPs shown on the WPCDs to protect water quality during different phases of construction,
- updating WPCDs to reflect actual site conditions, and
- maintenance and repairs to BMPs.

This SWPPP shall be amended when:

- a change in construction or operations affects the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- a contract change order includes additional water pollution control practices, not already specified in the approved SWPPP;
- deemed necessary by the RE;
- SWPPP objectives to reduce or eliminate pollutants in stormwater discharges have not been achieved; or
- a CGP violation has occurred; when the RWQCB determines that a CGP violation has occurred, the SWPPP shall be amended and corrective actions implemented within 14 calendar days after notification by the RWQCB.

The following information shall be included in each amendment:

- who requested the amendment;
- the location of proposed change;
- the reason for the change;
- the original BMP proposed, if any;
- the new BMP proposed; and
- any existing implemented BMP(s).

Approved and certified amendments shall be inserted into the appropriate section or attachment of the SWPPP. All SWPPP amendments prepared by the WPC Manager and approved by the Contractor shall be accepted and certified by the LRP or Approved Signatory. A blank copy of the CEM-2008 SWPPP/WPCP Amendment Certification and Approval form is in Appendix A. For approved amendments, the signed SWPPP Amendment Certification and Approval form shall be attached to the SWPPP amendment.

A copy of each approved and certified amendment shall be inserted into Attachment AA. All SWPPP amendments shall be listed in the SWPPP Amendment Log, available in Appendix B. The Amendment Log shall be kept in SWPPP File Category 20.02 and a copy shall be inserted into Attachment AA.

The SWPPP will be completely revised if either the number of amendments or the amount of information contained in the amendments makes implementation of the SWPPP confusing, as determined by the RE, or the Contractor requests to revise the SWPPP based on planned changes in activities that would require a major SWPPP amendment.

100.3.2 Amendment Log

All approved and certified SWPPP amendments shall be shown on the SWPPP Amendment Log. A blank Amendment Log is available in Appendix B. The SWPPP Amendment Log shall include the following information:

- amendment number;
- amendment date;
- brief description of the amendment;
- name of individual requesting amendment; and
- approval date.

All SWPPP amendment(s) prepared and approved as discussed in Section 100.3.1 shall be documented in the Amendment Log and kept in SWPPP File Category 20.02: Stormwater Pollution Prevention Plan Amendments. A copy of the Amendment Log shall also be inserted into Attachment AA.

100.4 Annual Compliance and Approval

By July 15 of each year, the Contractor shall submit the Contractor's Annual Certification of Compliance to the RE stating that the project is in compliance with the terms and conditions of the Permits and the SWPPP. By August 1 of each year, the Caltrans LRP, or RE as authorized Approved Signatory, will complete an Annual Certification of Compliance stating that the project is in compliance with the terms and conditions of the Permits and the SWPPP. A blank copy of the CEM-2070 SWPPP/WPCP Annual Certification of Compliance form is included in Appendix C. Completed Annual Certification of Compliance forms will be filed in SWPPP File Category 20.70: Annual Certification of Compliance.

SECTION 200
OBJECTIVES

This SWPPP has five (5) main objectives, which are listed below.

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 California 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 the construction activity to the best available technology (BAT) / best conventional technology (BCT) standard.

4. Calculations and design details for site run-on, as well as BMP controls, are complete and correct.

5. Stabilization BMPs designed to eliminate or reduce pollutants after construction is complete have been installed.

This SWPPP was developed to conform to the required elements of the Caltrans Permit (SWRCB Order No. 99-06-DWQ, NPDES No. CAS000003) and with the required elements of the CGP (CAS000002, Order No. 2009-0009-DWQ) issued by the SWRCB.

This SWPPP is designed to be a useful document for those who must implement the SWPPP on a daily basis in the field. Most of the information necessary for the daily implementation of the SWPPP is contained in Attachment BB: Water Pollution Control Drawings, Attachment CC: Water Pollution Control Best Management Practices List, and Attachment DD: Water Pollution Control Schedule.

This SWPPP is also a “living document” because updated and additional information is added to the SWPPP file categories as the project progresses, including:

- SWPPP Amendments;
- Subcontractor and Material Supplier Information;
- Contractor Personnel Training Documentation;
- Site Inspection Reports;
- Weekly Status Reports;
- Rain Event Action Plans;
- Sampling and Analysis Results;
- Equipment Maintenance and Calibration Records; and
- Notice of Discharge Reports.

The SWPPP shall be readily available on site for the duration of the project.

SECTION 300
PROJECT AND CONTRACTOR INFORMATION

300.1 Project Description

This project proposes to perform environmental and visual mitigation for the Stage Gulch Road Curve Correction and Realignment Project (EA 04-283814). The project is located in Sonoma County, near Schellville, at various locations on Route 116, from post mile 41.8 to post mile 44.7. The work involves creek realignment and riparian/habitat enhancement along an 800 foot reach of Champlin Creek south of County Dump Road including riparian and upland planting, upland planting of a 15 acre conservation easement adjacent and contiguous to State right of way and riparian and upland planting on six drainage easements that combined cover 1.14 acres.

The creek realignment and enhancement activities include contour grading, biotechnical stream bank stabilization, removal of two existing reinforced concrete box culverts, roadway drainage system modifications, construction of a Maintenance Vehicle Pullout, metal beam guard railing installation, construction of timber piles for small mammal habitat and implementation of standard erosion control.

The mitigation planting will include 687 oaks and other California appropriate trees for a combined 790 tree total, riparian shrubs and willows along Champlin Creek and within drainage easements, direct seeding of oak acorns throughout planting areas and liner planting of several of the realigned Champlin Creek floodplain shelves, two adjacent depression areas and in three existing bioswales built as part of EA 283814. Floodplain/depression planting will be approximately 6,150 liner plants comprised of sedge, rush and creeping wild rye planting. Bioswale planting will be approximately 900 liner plants equally divided between California barley and creeping wild rye.

Planting holes will be amended with organics and select drainage easements will be cultivated with compost. Project will include temporary irrigation of plants utilizing drip emitters or bubblers feed through truck watering. Some irrigation components will be installed below grade. A five year period of plant establishment for plantings will be provided including, but not limited to, caring for the riparian zone and upland planting to adequately water plants; in-kind replacement of unsuitable plants; weed, rodent and other pest control; trash and debris removal, noxious weed control, plant pruning and fertilizer application, plant basin mulching and installation of foliage protectors or exclusionary fencing around planting clusters as needed or as determined necessary during the establishment period. Plant establishment will also include maintaining three areas of existing willows (forty-five willows) installed in rock slope protection as part of 283814.

Department Staff or their Agents will then Monitor the mitigation sites for a ten year period, post construction, to assess its success by way of site inspection, photo documentation and longitudinal profile/transect survey techniques to measure for plant density/survivability and creek realignment performance. Monitoring activities will be outside the scope of the proposed project but will be concurrent with the plant establishment period.

300.2 Project Risk Level

The risk level assessment of the project site was calculated to be Risk Level **2**. This risk level will determine the minimum level of BMPs that will be acceptable based on the project site and the project construction activities. The risk level is the basis for the minimum level of site-specific monitoring and reporting that will be required. The risk level is based on project duration, proximity to impaired receiving waters, and soil conditions. The Risk Level Determination is discussed in Section 500.1.3 and the calculations are included in Attachment C.

300.3 Construction Sites Estimates

The following are estimates of the construction site.

- Construction site area — 2.87 Acres +/-
- Percentage impervious area before construction — 24% (0.69 Acres)
- Runoff coefficient before construction — 0.46
- Percentage impervious area after construction — 25% (0.71 Acres)
- Runoff coefficient after construction — 0.461

Run-on from off-site areas anticipated: ☒ Yes ☐ No

Anticipated stormwater run-on flow rate to the construction site: Run-on from off-site areas anticipated (Contractor to compute).

Anticipated drainage patterns following the completion of grading activities are shown on the WPCDs from Attachment BB.

Total Project Area: 2.87 Acres, Overall Hydrologic Soil Group for the site: C (The site is a combination of C and D hydrologic groups)

Step 1: Pre-Construction Land Use Conditions:

0.69 acres of impervious area with an
Impervious Runoff Coefficient C1: 0.95
Sub-area/Total Area = 24%
2.18 acres of pervious landscaped areas
Pervious Runoff Coefficient C2: 0.30
Sub-area/Total Area = 76%
Overall Pre-Construction Site Runoff Coefficient = C1(%) + C2(%) =
0.95(24%) + 0.30(76%) = 0.46

Step 2: Post-Construction Land Use Conditions:

0.71 acres of impervious with an
Impervious Runoff Coefficient C1: 0.95
Sub-area/Total Area = 0.753%
2.16 acres of pervious landscaped areas
Pervious Runoff Coefficient C2: 0.30
Sub-area/Total Area = 24.7%
Overall Pre-Construction Site Runoff Coefficient = C1(%) + C2(%) =
0.95 (24.7%) + 0.30(75.3%) = 0.461

Anticipated stormwater run-on flow rate to the construction site: There are a few locations of possible run-on to the

project site. The off-site watershed drainage areas are shown on the Off -Site Watershed Maps included in Attachment BB. The BMPs designed to handle the run-on flows are included in Section 500.3.1 and will be determined in the field as needed. Anticipated flow rates of run-on during a 2-Year storm are as follows, assuming rainfall intensity (i) of 0.23 inches per hour:

Watershed	C	Area (acres)	Q=CIA (cfs)
A-1	0.15	11.85	0.41
A-2	0.15	30.95	1.08
A-3	0.15	74.84	2.62
A-4	0.15	39.34	1.38
A-5	0.15	29.79	1.04
A-6	0.15	211.97	7.42
A-7	0.15	6.95	0.24
A-8 to A-10	0.15	15.25	0.53
A-11	0.15	15.53	0.54
A-12	0.15	9.89	0.35
A-13	0.15	15.02	0.53
A-14	0.15	14.50	0.51
A-13	0.15	74.84	2.62
A-14	0.15	39.34	1.38

The project lies within the Champlin Creek watershed. The Champlin creek flows in a northly direction through the project site, and the project site is situated in an area which mainly consists of rolling hills, farms, and a few wineries.

The project will realign and extend the Champlin Creek to accommodate the new contours caused by the roadway realignment. The new creek will be flow adjacent to the existing creek as well as overlap at several locations to minimize the necessary changes and to keep the existing flow pattern.

The existing drainage system in the project area consists of series of drainage inlets, pipes, and rock slope protection (RSP) spillways. The drainage system collects the storm runoff from the watershed east of the project site along with the runoff from roadway, and discharges into the Champlin creek via RSP spillways. The runoff from watershed west of the project site sheet flows into the Champlin creek.

After construction, all disturbed area will be re-vegetated and slopes will be received with permanent treatment. The post construction runoff will be conveyed through the project site in a very similar manner to the pre-construction project site through newly constructed creek alignments and enhanced storm drain system. An asphalt concrete dike and shoulder pavement will be replaced as part of drainage system modifications. Four areas of rock slope protection will be installed at drainage outfalls as part of two spillway systems that empty from the shallow depressions serving as refugee and dispersal areas for amphibian and other wildlife. The project has 0.018 acre increase of impervious surface area, so the downstream flow only has a slight increase.

Locations of potential run-on with the estimated flow rates shall be noted on the WPCDs. The BMPs designed to handle the run-on flows are included in Section 500.3.1.

300.4 Vicinity and Site Map

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment D. The project contract plan Title Sheet provides additional detail regarding the project location and is also included in Attachment D.

The project lies in the floodplain between the Sonoma Mountains and the Sonoma Valley; the area consisting mainly of

rolling hills, with farms and a few wineries bordering the project limits.

The United State Department of Agriculture, National Resource Conservation Services web soil survey was utilized to determine the pertinent Hydrologic Soil groups (HSGs) for soils within the project. It was concluded that the soils are classified under HSG C and D, which suggests that the project area would have high and very high surface runoff, slow to very slow infiltration rates.

According to the geologic map from Geology of the San Francisco Bay Region, the geologic formation of the area consists of Tertiary volcanic rocks, and Quaternary alluvium, flood basin deposits in Delta.

This project is within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB, R-2). The project lies within the Sonoma Creek Hydrological Area, Undefined Hydrological Sub-Area (HSA#206.40). The receiving water body is Champlin Creek, which is intersected by the project; it is included in the Sonoma Creek watershed, and ultimately outfalls in the San Pablo Bay.

Sonoma Creek and San Pablo Bay are on the 2006 State Water Resource Control Board (SWRCB) 303(d) List of Impaired Water Bodies. The pollutants of concern for Sonoma Creek are Nutrients, Pathogens and Sedimentation/Siltation. Sources of Sedimentation/Siltation are agriculture, channel erosion, land development, and construction. Given the distance of Sonoma Creek from the project area, further impacts to water quality from the project would be minimal, if any. Proposed US Environmental Protection Agency (EPA) approved Total Maximum Daily Load (TMDL) completion date for the pollutant sedimentation/siltation is 2019. The beneficial uses for Sonoma Creek are Cold and Warm Freshwater Habitat, Water Contact and Non-Contact Recreation, Spawning, Reproduction, and/or Early Development, and Wildlife Habitat. The pollutants of concern for San Pablo Bay are Chlordane, DDT, Dieldrin, Dioxin Compounds, Exotic Species, Furan Compounds, Nickel, PCBs, Selenium, and Mercury. Beneficial uses for this water body are Commercial and Sport Fishing, Estuarine Habitat, Industrial Service Supply, Navigation, Water contact and Non-contact Recreation, Shellfish Harvesting, Spawning, Reproduction, and/or Early Development, and Wildlife Habitat.

The Caltrans April 2008 District 4 Work Plan does not list any High Risk Areas within the project limits; there are no Drinking Water Reservoirs and/or Recharge Facilities within project limits.

300.5 Unique Site Features

Project has Fill Material: ☒ Yes ☐ No

Project has Native Material: ☒ Yes ☐ No

Hydrologic Soil Group: ☐ A (high infiltration rate) ☐ B (moderate infiltration rate)
☒ C (slow infiltration rate) ☒ D (very slow infiltration rate

Soil Erodibility: ☒ Slight ☐ Moderate ☐ Severe

Unique Features Onsite: ☐ Water Bodies ☐ Wetlands ☒ Endangered or Protected Species
☒ Environmentally Sensitive Areas ☐ Other ☐ None

No ground disturbing work shall be performed from October 15 to June 15 except water pollution control maintenance and planting work.

No irrigation system components shall be below Champlin Creek's high water mark as established by the Engineer from October 14 to June 16, unless approved by the Engineer.

Prior to beginning work, all Contractor and State field personnel shall complete a 1 hour maximum U.S. Fish and Wildlife Service Biological Opinion training that communicates the details of the requirements and the project area wildlife species information.

California red-legged frog (CRLF; Rana aurora draytonii) is known to exist within the Project limits. The Contractor shall minimize the potential for harm, harassment, injury, or killing of the California red-legged frog resulting from Project related activities by implementation of avoidance and minimization measures such as covering/filling excavations greater than two (2) feet deep at the end of each working day, encouraging a 20-mile per hour maximum speed limit on unpaved roads and visually surveying excavations and the project site in the morning and late afternoon hours to ascertain whether the California red-legged frog has fallen into excavations.

300.6 Contact Information for Responsible Parties

The following parties are responsible for this SWPPP:

WPC Manager

Name:	
Title:	Water Pollution Control Manager
Company:	**Insert Contractor's Company Name-then TAB.**
Address:	**Insert Address 1 and press ENTER to insert Address 2 or TAB to next field**
	Insert City, State, ZIP-then TAB
Phone Number:	**Insert Telephone Number(s)-then TAB.**
Emergency Phone Number (24/7):	**Insert Telephone Number(s)-then TAB.**
Email address:	**Insert email address-then TAB.**

Qualified SWPPP Developer (QSD)

Name:	Alex McDonald
Title:	Landscape Associate, QSD/P
Company:	**Caltrans, District 4**
Address:	**111 Grand Avenue** **Oakland, CA, 94612**
Phone Number:	510-286-4147
Email Address:	**alex_mcdonald@dot.ca.gov**

Resident Engineer

Name:	
Title:	Resident Engineer
Agency:	**California Department of Transportation (Caltrans), District 4**
Address:	**111 Grand Avenue**
	Oakland, CA, 94612
Phone Number:	
Emergency Phone Number (24/7):	**Insert R.E.'s Telephone Number-then TAB.**
Email Address:	**Insert email address-then TAB.**

Contractor

Name:	
Title:	Contractor
Company:	**Caltrans, District 4**
Address:	**111 Grand Avenue**
	Oakland, CA 94612
Phone Number:	
Emergency Phone Number (24/7):	**Insert Telephone-then TAB.**
Email Address:	**Insert email address-then TAB.**

Contractor Site Manager

Name:	**Insert Contractor Site Manager's Name-then TAB.**
Title:	**Insert Title-then TAB**
Company:	**Insert Company Name-then TAB.**
Address:	**Insert Address 1 then press ENTER to insert Address 2 or TAB to next field.**
	Insert City, State, ZIP-then TAB.

Phone Number:	**Insert Telephone Number(s)-then TAB.**
Emergency Phone Number (24/7):	**Insert Telephone Number(s)-then TAB.**
Email Address:	**Insert email address-then TAB.**

Qualified SWPPP Practitioner (QSP)

Name:	
Title:	**Insert Title-then TAB**
Company:	**Insert Company Name-then TAB.**
Address:	**Insert Address 1 then press ENTER to insert Address 2 or TAB to next field.** **Insert City, State, ZIP-then TAB.**
Phone Number:	
Emergency Phone Number (24/7):	**Insert Telephone Number(s)-then TAB.**
Email Address:	**Insert email address-then TAB.**

Erosion and Sediment Control Provider

Name:	**Insert Erosion and Sediment Control Provider Representative's Name-then TAB.**
Title:	**Insert Title-then TAB**
Company:	**Insert Company Name-then TAB.**
Address:	**Insert Address 1 then press ENTER to insert Address 2 or TAB to next field.** **Insert City, State, ZIP-then TAB.**
Phone Number:	**Insert Telephone Number(s)-then TAB.**
Emergency Phone Number (24/7):	**Insert Telephone Number(s)-then TAB.**
Email Address:	**Insert email address-then TAB.**

Stormwater Sampling and Testing Agent

Name:	**Insert Sampling and Testing Agent's Name-then TAB.**

Title:	**Insert Title-then TAB**
Company:	**Insert Company Name-then TAB.**
Address:	**Insert Address 1 then press ENTER to insert Address 2 or TAB to next field.** **Insert City, State, ZIP-then TAB.**
Phone Number:	**Insert Telephone Number(s)-then TAB.**
Emergency Phone Number (24/7):	**Insert Telephone Number(s)-then TAB.**
Email Address:	**Insert email address-then TAB.**

300.7 List of Subcontractor and Materials Suppliers

The following subcontractors will be working on this project:

1. **Insert Subcontractor Name/Company-then TAB.**

   SWPPP Responsibility:

2. **Insert Subcontractor Name/Company-then TAB.**

   SWPPP Responsibility:

3. **Insert Subcontractor Name/Company-then TAB.**

   SWPPP Responsibility:

4. [LIST]

Contact information for each subcontractor will be provided in the SWPPP Notification log in SWPPP File Category 20.21: Subcontractor Contact Information and Notification Letters. Contact information shall include subcontractor name, type of work performed, contact name, phone number and emergency telephone number (24/7).

The following materials suppliers will be delivering materials to the project site and must comply with pertinent SWPPP requirements:

1. **Insert Material Supplier Name/Company-then TAB.**
2. **Insert Material Supplier Name/Company-then TAB.**
3. **Insert Material Supplier Name/Company-then TAB.**
4. [LIST]

Contact information for each material supplier will be provided in the SWPPP Notification log in SWPPP File Category 20.22: Material Supplier Contact Information and Notification Letters. Contact information shall include company name, type of material supplied, contact name and phone number.

All subcontractors and material suppliers shall be notified that the project is covered by the following permits issued by the SWRCB.

- SWRCB Order No. 99-06-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation. July 15, 1999.

- SWRCB Order No. 2009-0009-DWQ, NPDES General Permit No. CAS000002, National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, September 02, 2009 (Construction General Permit).

Each subcontractor and material supplier shall also be notified that the project has a SWPPP and the pertinent water pollution control BMPs with which the subcontractor or material supplier must comply. If subcontractors or material suppliers are added during the project, appropriate notification that the project has a SWPPP and the pertinent water pollution control BMPs shall be given to the subcontractor or materials supplier prior to working or supplying materials on the project site.

A SWPPP Notification Letter shall be sent to all subcontractors and material suppliers. A sample notification letter and notification letter log is provided in Appendix D. A copy of SWPPP Notification Letters sent to subcontractors and material suppliers are in SWPPP File Category 20.21: Subcontractor Contact Information and Notification Letters or 20.22 Material Supplier Contact Information and Notification Letters. Notification letter logs and contact information are filed in SWPPP File Category 20.21: Subcontractor Contact Information and Notification Letters and File Category 20.22: Material Supplier Contact Information and Notification Letters.

300.8 Training

The Contractor's WPC Manager is a QSD. , the WPC Manager for this project, meets the qualifications and certification requirements of Section VII, Training Qualifications and Certification Requirements, of the CGP based on:

- INSERT COMPANY, NAME AND PROFESSIONAL REGISTRATION OR OTHER QUALIFICATIONS (INCLUDING INFORMATION REGARDING OTHER TRAINING COURSES, SUCH AS CALTRANS SWPPP PREPARATION TRAINING) OF PERSON THAT PREPARED THE SWPPP

The WPC Manager has received the following training.

- [LIST]

The WPC Manager has the following SWPPP development and implementation experience.

- [LIST]

The SWPPP for this project was developed by a QSD. developed the SWPPP and meets the qualifications and certification requirements of Section VII, Training Qualifications and Certification Requirements, of the CGP based on:

- QSD/QSP Certification #21080

The QSD has received the following training.

- Registered Landscape Architect #5382

- Certified Professional in Erosion and Sediment Control Certification #5412

- Wreco, California Construction General Permit Training
- Caltrans, Construction Site BMPs for Design
- Caltrans, Erosion and Sediment Control BMPs
- Caltrans, Water Pollution Control for Caltrans Construction Staff

The QSD has the following SWPPP development experience.

- Has over seven years experience preparing erosion and sediment control contract documents and has developed one SWPPP

A QSP will be assisting the WPC Manager to ensure that: required BMPs are implemented; non-stormwater and stormwater visual observations and sampling and analysis are performed; BMP maintenance is completed; and weekly training is provided. By September 2, 2011, , the QSP for this project, must meet the qualifications and certification requirements of Section VII, Training Qualifications and Certification Requirements, of the CGP based on:

INSERT COMPANY, NAME AND PROFESSIONAL REGISTRATION OR OTHER QUALIFICATIONS (INCLUDING INFORMATION REGARDING OTHER TRAINING COURSES, SUCH AS CALTRANS SWPPP PREPARATION TRAINING) OF PERSON THAT PREPARED THE SWPPP

The QSP has received the following training.

- [LIST]

The QSP has the following SWPPP implementation experience.

- [LIST]

Ongoing, formal training sessions for individuals responsible for SWPPP development and implementation shall be selected from one of the following organizations.

- City of Los Angeles Storm Water Program
- County of Los Angeles Storm Water Program
- State of California RWQCB
- IECA-, ABAG- and/or AGC-sponsored training
- USEPA-sponsored training
- Recognized municipal stakeholder organizations throughout California
- Professional organizations and societies in the building and construction field
- Caltrans, Storm Water Program training

Contractor or subcontractor employees responsible for water pollution control BMP installation, maintenance and repair have received the following training.

- [LIST]

Contractor and subcontractor employees shall be trained prior to working on the site in the following subjects:

- water pollution control rules and regulations
- implementation and maintenance for:
  - temporary soil stabilization,
  - temporary sediment control,
  - tracking control,
  - wind erosion control,
  - material pollution prevention control,
  - waste management, and
  - non-stormwater management
- identification and handling of hazardous substances
- potential dangers to humans and the environment from spills and leaks or exposure to toxic or hazardous substances

Informal employee training shall include tailgate site meetings to be conducted weekly; tailgate meetings should address the following topics:

- water pollution control BMP deficiencies and corrective actions;
- BMPs that are required for work activities during the week;
- spill prevention and control;
- material delivery, storage, use, and disposal;
- waste management; and
- non-stormwater management procedures.

A summary of formal and informal training of various personnel is shown in Attachment E. A copy of all training certificate(s) (e.g., Caltrans 24-Hour Training Class and CGP Training) for the WPC Manager and the Qualified SWPPP Developer are included in Attachment E.

Training records for project personnel shall be updated by completing the CEM-2023 Stormwater Training Record form, available in Appendix E, and the CEM-2024 Stormwater Training Log form, available in Appendix F. Records of training, with training certificates attached, when applicable, and the training log will be kept in SWPPP File Category 20.23: Contractor Personnel Training Documentation. Personnel training records, with required documentation attached and an updated training log, shall be submitted to the RE within five (5) days of completion of training.

Training information, consisting of the following items, shall be provided in the Stormwater Annual Report:

- documentation of all training for individuals responsible for all activities associated with compliance with CGP,
- documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair, and
- documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.

SECTION 400
REFERENCES, OTHER PLANS, PERMITS AND AGREEMENTS

The documents listed below are made a part of this SWPPP by reference.

- Standard Plans and Specifications, dated May 2006.
- Contract Plans and Special Provisions for Contract No. 04-283824, dated December 19, 2011, prepared by Caltrans and Wreco.
- SWRCB Order No. 99-06-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans), July 1999
- SWRCB-Order No. 2009-0009-DWQ, NPDES General Permit No. CAS000002, National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (Construction General Permit), September 2009
- *Caltrans Statewide Storm Water Management Plan* (SWMP), dated May 2003
- *Caltrans SWPPP/WPCP Preparation Manual,* dated June 2011
- *Caltrans Construction Site Monitoring Program Guidance Manual,*
- California Regional Water Quality Control Board (RWQCB) Region 2 "Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region" and all updates through December 31, 2011.

Attachment F includes copies of the Caltrans Statewide Permit, the CGP, and other local, state, and federal plans and permits. A list of the other local, state, and federal plans and permits included in Attachment F is provided below.

- United States Department of the Interior Fish and Wildlife Service Biological Opinion and Conference Opinion, Number 1-1-05-F-0025
- California Department of Fish and Game 1602 Streambed Alteration Agreement, Notification Number 1600-2008-0451-3
- Army Corps of Engineers 404 Nationwide Permit Number SPN-2003-282830 N
- Regional Water Quality Control Board Water Quality Certification for Site No.: 02-49-C0198 (BT), CIWQS Place No.: 725448

SECTION 500
DETERMINATION OF CONSTRUCTION SITE BEST MANAGEMENT PRACTICES

500.1 Pollutant Sources

500.1.1 Inventory of Materials and Activities that May Pollute Stormwater

The following table contains a list of construction activities that have the potential to contribute pollutants, including sediment, to stormwater discharges. All potential pollutants, except sediment, and their locations shall be listed in this section, and, where possible, the locations shall be shown on the WPCDs from Attachment BB. Details for controlling these pollutants using soil stabilization and sediment control BMPs are discussed in Sections 500.3.1 through 500.3.5. Potential non-storm water and waste management-related discharges are further described in Sections 500.4.1 and 500.4.2, respectively.

TABLE 500.1.1
ANTICIPATED CONSTRUCTION SITE ACTIVITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS

☒Demolition	☒Pavement Removal (asphalt concrete, concrete) ☒Structure Demolition/Removal over or Adjacent to Water ☐Building Demolition (Structure, HVAC, insulation) ☐Hardscape Demolition (Parking areas, curbs, gutters, sidewalks)
☒Earthwork	☒Clearing and Grubbing ☒Grading Activities ☒Soil Import and Export ☒Stockpiling ☒Excavation ☒Disturbance of Contaminated Soil ☒Dewatering ☐Temporary Stream Crossing ☒Drainage Construction ☐Dredging ☐Pile Driving ☐Utilities ☐Line Flushing (hydrostatic test water, pipe flushing) ☒Landscaping, Planting and Plant Maintenance, Amending of Soil and Mulching ☒Material and Equipment Use over Water
☒Masonry, Concrete, Asphalt Work	☒Saw Cutting (cement and brick dust, saw cut slurries) ☒Paving and Grinding ☒Concrete Placement (colored chalks) ☒Concrete Curing (curing and glazing compounds)

TABLE 500.1.1 ANTICIPATED CONSTRUCTION SITE ACTIVITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS	
	☒Concrete Finishing (surface cleaners) ☒Concrete Waste Management
☒Building Construction	☐Paint Preparation, Painting, Stenciling, and Etching ☒Material Use ☒Material Delivery and Storage ☒Adhesives (glues, resins, epoxy synthetics, caulks, sealers, putty, sealing agents and coal tars) ☐Cleaning, Polishing (metal, ceramic, tile), and Sandblasting Operations ☐Plumbing [solder (lead, tin), flux (zinc chloride), pipe fitting] ☒Framing (sawdust, particle board dust and treated woods) ☐Interior Construction (tile cutting, flashing, saw-cutting drywall, galvanized metal in nails and fences, and electric wiring)
☒Equipment Use	☒Vehicle and Equipment Cleaning ☒Vehicle and Equipment Fueling ☒Vehicle and Equipment Maintenance
☒Waste Management	☒Hazardous Waste Management ☒Solid Waste Management (litter, trash, and debris) ☒Liquid Waste Management (wash water) ☒Sanitary Septic Waste Management (portable toilets, disturbance of existing sewer lines)

The WPC Manager shall update the list of potential pollutants in accordance with onsite conditions, documenting all materials or equipment that have been received or produced onsite that are not designed to be outdoors and are potential sources of stormwater contamination.

Materials Management Plan

Potential pollutants onsite and the materials management plan to be utilized include but are not limited to:

- Earth material containing lead - Contractor prepared lead compliance plan
- Pressure -treated wood - proper handling, storage, transport and disposal of pressure treated wood and treated wood waste by Contractor

A list of construction materials that will be on site and have the potential to contribute pollutants, other than sediment, to stormwater runoff, which has been prepared to prevent or minimize the off-site discharge of those pollutants, are provided below.

The following stockpiles will be covered and bermed prior to likely precipitation events.

- Selected material and local topsoil stockpiles at; Lt "H"10+35.46, Lt "H" 21+86.39 and Lt "A" 164+53 TO "A" 167+50
- Contaminated soil

- Planting soil amendments, mulch and compost
- Soil, rock and sand
- Asphalt products
- Asphalt or concrete rubble

The following materials will be kept off the ground or bermed and covered prior to likely precipitation events.

- Erosion Control Products
- Pressure-treated wood
- Petroleum materials including fuel, oil and grease

The following materials will be properly stored according to Material Safety Data Sheet requirements.

- Petroleum materials
- Paint Products
- Solvents and thinners
- Pesticide and fertilizer

The following dumpsters shall be covered prior to likely precipitation events.

- Contractor's trash receptacles
- Concrete washouts (portable)

The following areas will be inspected for leaks or spills prior to likely precipitation events.

- Portable toilets
- Vehicle and equipment fueling/storage locations
- Concrete washout (portable) locations
- Contractor staging, storage and disposal locations

Potential pollutants shall not be stored within 50 feet of stormwater conveyance features or concentrated flow paths. In addition, non-stormwater discharges shall not be made within 50 feet of potential pollutants.

500.1.2 Potential Pollutants from Site Features or Known Contaminates

Former site usage or known site contamination may contribute pollutants to stormwater discharges from the site. Based on information available for the project site, the following site usage and historical contamination has been determined:

Former Industrial Operations: ☐ Yes ☒ No

Description of Former Industrial Operations:

Historic Contamination: ☒ Yes ☐ No

- Aerially Deposited Lead (ADL)

The following contaminants are known to exist at the project site locations identified:

- ADL throughout the project site at average concentrations below 1,000 mg/kg total lead and below 5 mg/l soluble lead.

500.1.3 Risk Level Determination

The project has been determined to be risk level 2 based on a medium rating for sediment risk and a high rating for receiving water risk as shown in Attachment C.

Sediment risk is determined by a project's characteristics for rainfall, soil erodability and topography based on EPA, USDA and land management practices. Receiving water risk is determined based on the project discharging into a sediment impaired waterbody or one designated for spawn and cold and migratory beneficial uses.

The project's disturbed soil areas discharge directly into Champlin Creek and ultimately into Sonoma Creek which is listed for Sedimentation/Siltation. The site characteristics yielded a medium risk for sediment and the ultimate discharge to a sediment impaired waterbody yielded a high receiving water risk, which combined, yield a Project risk level 2.

500.2 Pre-Construction Existing Stormwater Control Measures

The following are existing (pre-construction) control measures encountered within the project site.

- Drainage systems (drain inlets and piping and lined wall gutters)
- Flared end sections with rock slope protection energy dissipation
- Stilling basins
- Erosion control (hydroseeding, coir netting, straw wattles and straw wattle check dams)

The previous road realignment project has installed fifteen biofiltration strips and three biofiltration swales within project limits. Willow planting in rock slope protection along the banks of Champlin Creek was also installed at three locations.

500.3 BMP Selection for Erosion and Sediment Control

The Contractor shall control construction site erosion through the implementation of effective erosion and sediment control measures in accordance with the CGP. The Contractor and the WPC Manager shall develop a schedule that includes the sequencing of construction activities and the implementation of effective erosion control BMPs while taking local climate (rainfall, wind, etc.) into consideration, thereby reducing the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking. The SWPPP schedule shall: describe when work activities will be performed that could cause the discharge of pollutants in stormwater; describe the water pollution control practices associated with

each construction phase; and identify the soil stabilization and sediment control practices for all disturbed soil areas. Effective soil cover shall be provided for:

- Inactive disturbed soil areas
- Finished slopes, irrigation trenching backfill and all disturbed soil areas with no future disturbance anticipated

Additional erosion and sediment control BMPs may be required in other locations on the project site as work progresses in order to prevent sediment from leaving the construction site. These measures shall be determined by the Contractor and the WPC Manager in the field. As long as the water pollution control measures consist of additions to the BMPs already selected in the approved SWPPP, then these additional measures do not require a SWPPP amendment and the WPC Manager shall simply show the additional measures on the WPCDs. If erosion control or sediment control BMPs must be changed because of field conditions or because they are determined to be ineffective, the SWPPP must be amended. Once deemed necessary, corrective actions/design changes to the SWPPP shall be reviewed and signed by the WPC Manager, implemented within 72 hours of identification, and completed as soon as possible. Immediate corrective action is required for numeric action level (NAL) exceedances. Routine BMP maintenance or the implementation of an additional quantity of a BMP included in the SWPPP as recommended by the WPC Manager does not require an amendment to the SWPPP.

An effective combination of erosion (soil stabilization) and sediment control BMPs shall be implemented and maintained during the project. The following principles shall be followed to the maximum extent practicable to control erosion and sedimentation in disturbed areas at the site.

- Preserve existing vegetation where feasible
- Schedule earth disturbing activities for months less likely to receive precipitation
- Sequence construction activities to minimize land disturbance and soil exposure
- Disturbing existing slopes only when necessary
- Minimizing cut and fill areas to reduce slope lengths
- Providing cut and fill slopes flat enough to allow re-vegetation
- Stabilize disturbed soil areas
- Slow storm water runoff velocity and release concentrated flows as sheet flows where possible.
- Provide temporary drainage elements to handle runoff until permanent drainage infrastructure can be established
- Retain sediment on-site
- Inspect, repair and maintain BMPs frequently

A more concise listing of the BMP control measures to be implemented and maintained at the project site are denoted in the BMP selection tables in the following sub-sections.

500.3.1 Temporary Run-on Control BMPs

Effectively manage all run-on within the site. Run-on from offsite shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

To enhance the effectiveness of run-on control BMPs, the following principals should be followed to the maximum extent practicable:

- Divert water away from areas of soil disturbance
- Convey water from the top of disturbed slopes to stable discharge points
- Route water around stockpiles, material storage areas or other sensitive areas

TABLE 500.3.1
TEMPORARY RUN-ON CONTROL BMPs

CONSTRUCTION BMP ID NO.(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SS-1	Scheduling		☐	☒	☐	
SS-2	Preservation of Property/ Preservation of Existing Vegetation		☐	☒	☐	
SS-9	Earth Dikes / Drainage Swales & Lined Swales		☐	☒	☐	If deemed necessary.
SS-10	Outlet Protection / Velocity Dissipation Devices		☐	☒	☐	If deemed necessary.
SS-11	Slope Drains		☐	☒	☐	If deemed necessary.
SS-12	Streambank Stabilization		☐	☒	☐	
SC-4	Temporary Check Dam		☒	☒	☐	
SC-5	Fiber Rolls		☒	☒	☐	
SC-6	Temporary Gravel Bag Berm		☐	☐	☒	
SC-8	Temporary Sandbag Barrier		☐	☐	☒	
ALTERNATIVE SEDIMENT CONTROL BMPs USED(3) ☐ Yes ☒ No						IF USED, STATE REASON
CONSTRUCTION	**BMP NAME**					

TABLE 500.3.1 TEMPORARY RUN-ON CONTROL BMPs						
CONSTRUCTION BMP ID NO.(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
BMP ID NO.(1)						

Notes:
(1) The BMP designations (SS-1, SC-5, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
(2) Minimum requirements are based on the required Contract Provisions, Standard Special Provisions, Plans and Specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
(3) Use of alternative BMPs will require written approval by the RE.

Implementation of Temporary Run-on Controls BMPs

BMP deployment will evolve as construction activities progress. As areas of soil disturbance change, run-on controls will be adjusted accordingly.

The following practices (refer to the Project Special Provisions and the March 2003 Caltrans Construction Site BMP Manual for details on BMP installation and maintenance) will be used during construction:

- SS-1 Scheduling - A schedule will be developed that sequences earth disturbing construction activities during months less likely to receive precipitation and in a manner to complete all work in a timely manner (reduce the amount and duration of soil exposure to rain, wind, flows and vehicle tracking) in an area without the need to redisturb the area at a later date.

- SS-2 Preservation of Existing Vegetation - Protection of desirable vegetation that provides erosion and sediment control benefits will be implemented. Preservation of existing vegetation will be exercised prior to clearing/grubbing/soil disturbing activities by installing high visibility exclusionary fencing to protect environmentally sensitive areas (ESAs), other vegetated areas and as directed by the Caltrans Biologist.

- SS-9, SS-10 and SS-11 Earth Dikes/Drainage Swales, Outlet Protection and Slope Drains - These features will be used as needed to divert water around disturbed soil areas and convey water from existing drainage systems to stabilized discharge points in the interim of establishing permanent drainage infrastructure.

- SS-12 Stream bank Stabilization - Stream bank disturbance from construction activities will be stabilized through the use of multiple BMPs and procedures to sequence activities, stabilize exposed soil areas and reduce the discharge of sediment.

- SC-4 Temporary Check Dam - Will be placed across natural and man-made channels/ditches to reduce concentrated flow velocity, reduce scour and encourage sediment to fall out of suspension.

- SC-5 Temporary Fiber Roll - Will be placed at the original ground and disturbed soil area interface to intercept run-on and other storm water flows to slow flow velocity and release flows as sheet flow.

500.3.2 Soil Stabilization (Erosion Control)

Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary soil stabilization requirements, temporary soil stabilization measures required by the contract documents, and other measures selected by the Contractor.

- Preserve existing vegetation where practicable and schedule construction activities to limit the duration of disturbed soil areas exposure as well as exposure to the elements.
- Apply appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for active disturbed soil areas one day prior to forecasted precipitation.
- Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, topsoil, mulch, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).
- Provide effective soil cover for inactive disturbed soil areas (including finished slopes, stockpiles, etc.) as necessary to maintain effective soil stabilization, within 14 days of the stop of earth disturbing activities in a given area and one day prior to forecasted precipitation.
- Apply temporary hydraulic soil stabilization to disturbed soil areas or cover with plastic sheeting.
- Implement permanent erosion control work as disturbed soil areas are finished and an area is ready to receive erosion control materials as directed by the Resident Engineer (RE).

Sufficient soil stabilization materials will be maintained on site to allow implementation in conformance with Caltrans requirements and as described in this SWPPP. This includes implementation requirements for active and non-active areas that require deployment before the onset of rain.

The following soil stabilization BMP selection table indicates the BMPs that shall be implemented to control erosion on the construction site. Temporary soil stabilization BMPs are listed by location in the WPCBMPL in Attachment CC and are shown on the WPCDs from Attachment BB. Any details for temporary soil stabilization BMPs are shown in Attachment BB.

TABLE 500.3.2
TEMPORARY EROSION CONTROL BMPs

CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SS-1	Scheduling	√	☐	☒	☐	
SS-2	Preservation of Property/ Preservation of Existing Vegetation	√	☐	☒	☐	
SS-3	Temporary Hydraulic Mulch (Bonded Stabilized Fiber Matrix)		☒	☒	☐	

TABLE 500.3.2
TEMPORARY EROSION CONTROL BMPs

CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
	Temporary Hydraulic Mulch (Polymer Stabilized Fiber Matrix)		☐	☐	☒	
SS-4	Temporary Erosion Control (With Temporary Seeding)		☐	☐	☒	
SS-5	Temporary Soil Stabilizer		☐	☐	☒	
SS-6	Temporary Erosion Control (Straw Mulch with Stabilizing Emulsion)		☐	☐	☒	
SS-7	Temporary Erosion Control Blanket (On Slope)		☐	☐	☒	
	Temporary Erosion Control Blanket (In swale or ditch)		☐	☐	☒	
SS-7	Temporary Cover (Geotextiles and Mats)		☒	☒	☐	
SS-8	Temporary Mulch (Wood)		☐	☐	☒	
SS-9	Earth Dikes / Drainage Swales & Lined Swales		☐	☐	☒	
SS-10	Outlet Protection/ Velocity Dissipation Devices		☐	☐	☒	
SS-11	Slope Drains		☐	☐	☒	
SS-12	Streambank Stabilization		☐	☒	☐	

TABLE 500.3.2 TEMPORARY EROSION CONTROL BMPs						
CONSTRUCTION BMP ID NO(1)	**BMP NAME**	**CONTRACT MINIMUM REQUIRE-MENT(2)**	**CONTRACT BID ITEM**	**BMP USED**		**IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON**
				YES	**NO**	
SS-13	Polyacrylamide		☐	☐	☒	
ALTERNATIVE SEDIMENT CONTROL BMPs USED(3) ☐ Yes ☒ No						IF USED, STATE REASON
CONSTRUCTION BMP ID NO (1)	**BMP NAME**					

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site BMP Reference Manual is a required contract document.
(2) Minimum requirements are based on the required Contract Provisions, Standard Special Provisions, Plans and Specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
(3) Use of alternative BMPs will require written approval by the RE.

The BMPs selected for the project are listed below along with an explanation of how they will be incorporated into the project.

- SS-1 & SS-2 Scheduling & Preservation of Existing Vegetation - Efforts will be made to sequence earth disturbing and other construction activities with appropriate soil stabilization and sediment control BMP deployment. Existing vegetation requiring removal will be retained where feasible until just prior to earthwork commencement.

- SS-3 Temporary Hydraulic Mulch (Bonded Fiber Matrix) - Utilized on "inactive" disturbed soil areas where permanent erosion control is not yet practical or prior to forecasted precipitation.. Applied in combination with temporary cover (or other RE approved soil stabilization BMPs) and one day prior to forecasted precipitation.

- SS-7 Temporary Cover - Utilized on "inactive" disturbed soil areas where permanent erosion control is not yet practical, on known stockpile locations or prior to forecasted precipitation.. Applied in combination with temporary hydraulic mulch (bonded fiber matrix) (or other RE approved soil stabilization BMPs) and one day prior to forecasted precipitation. Temporary cover should be utilized on steep slopes or where timely application of BFM is not practical.

- SS-12 Stream bank Stabilization - Stream bank disturbance from construction activities will be stabilized through the use of multiple BMPs and procedures to sequence activities, stabilize exposed soil areas and reduce the discharge of sediment.

The above practices (refer to the Project Special Provisions and the March 2003 Caltrans Construction Site BMP Manual for details on BMP installation and maintenance) will be used during construction.

500.3.3 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected soil stabilization (erosion control) measures and reduce sediment discharges from construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary sediment control requirements, temporary sediment control measures required by the contract documents, and other measures selected by the Contractor.

Sediment control BMPs will be installed at all appropriate locations along the site perimeter and at all operational internal inlets to storm drain systems at all times.

Throughout the duration of the project, temporary sediment control materials, equivalent to 10 percent of the materials installed on site, will be maintained on site for implementation in event of predicted rain, or the need for rapid response to failures or emergencies, in conformance with other Caltrans requirements, and as described in the SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

The following sediment control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Temporary sediment control BMPs are listed by location in the WPCBMPL in Attachment CC and are shown on the WPCDs from Attachment BB. Any details for temporary sediment control BMPs are shown in Attachment BB.

TABLE 500.3.3
TEMPORARY SEDIMENT CONTROL BMPs

CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SC-1	Temporary Silt Fence		☒	☒	☐	
SC-2	Temporary Sediment Basin		☐	☐	☒	
SC-4	Temporary Check Dam		☒	☒	☐	
SC-5	Temporary Fiber Rolls		☒	☒	☐	
SC-6	Temporary Gravel Bag Berm		☐	☐	☒	
SC-7	Street Sweeping	√	☒	☒	☐	
SC-8	Temporary Sandbag Barrier		☐	☐	☒	
SC-9	Temporary Straw Bale Barrier		☐	☐	☒	
SC-10	Temporary Drain Inlet Protection	√	☒	☒	☐	
SC-11	Temporary Chemical		☐	☐	☒	

TABLE 500.3.3 TEMPORARY SEDIMENT CONTROL BMPs						
CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
	Treatment					
ALTERNATIVE SEDIMENT CONTROL BMPs USED(3) ☐ Yes ☒ No						IF USED, STATE REASON

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
(2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
(3) Use of alternative BMPs will require written approval by the RE.

The following list of BMPs and associated narratives explain how the selected BMPs will be incorporated into the project.

The following practices (refer to the Project Special Provisions and the March 2003 Caltrans Construction Site BMP Manual for details on BMP installation and maintenance) will be used during construction.

- SC-1 Temporary Silt Fence - Used at the toe of slope and around stockpiles as a perimeter control to reduce the amount of sediment leaving disturbed soil areas by filtering sheet flow runoff, allowing sediment to settle from storm water runoff before water leaves the construction site.

- SC-4 Temporary Check Dam - Used in areas of concentrated flows to reduce low velocity to reduce scour and encourage sediment to fall out of suspension in natural and man-made channels/ditches. This sediment control practice will be used in areas of concentrated flows to slow runoff and in steep channels where high velocities are expected, and during the establishment of grass lined ditches and temporary ditches that do not warrant establishment of erosion-resistant linings.

- SC-5 Temporary Fiber Roll - Placed at toe and along slope face to intercept run-on and other storm water flows to slow their velocity and release flows as sheet flow. Fiber rolls will allow sediment to settle from storm water runoff before water leaves the construction site Used as perimeter control and downstream of disturbed soil areas, along the toe, top, face and at grade breaks of exposed slopes to shorten slope length and encourage sheet flows.

- SC-7 Street Sweeping - Will be conducted to minimize the amount of debris & sediment on the roadway and help prevent it from entering storm drain systems or watercourses. One sweeper must be on the job site at all times during the period that sweeping work is required. Street sweeping will start at the beginning of clearing and grubbing and shall continue until completion of the project. Street sweeping will be performed immediately after soil disturbing activities occur or offsite tracking of material is observed. Street sweeping

will be performed so that dust is minimized. If dust generation is excessive or sediment pickup is ineffective, use of water or a vacuum will be required.

- SC-10 Temporary Drainage Inlet Protection - Used adjacent to areas of soil disturbance, material transport or storage areas and protects both existing and proposed drain inlets.

500.3.4 Tracking Control

Tracking control BMPs are be implemented to reduce sediment tracking from the construction site onto private or public roads. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary tracking control requirements, temporary tracking control measures required by the contract documents, and other measures selected by the Contractor.

The following tracking control BMP selection table indicates the BMPs that shall be implemented to reduce sediment tracking from the construction site onto private or public roads. Temporary tracking control BMPs are listed by location in the WPCBMPL in Attachment CC and shown on the WPCDs from Attachment BB. Any details for temporary tracking control BMPs are shown in Attachment BB.

TABLE 500.3.4
TEMPORARY TRACKING CONTROL BMPs

CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SC-7	Street Sweeping		☒	☒	☐	
TC-1	Temporary Construction Entrance		☒	☒	☐	
TC-2	Stabilized Construction Roadway		☐	☒	☐	If deemed necessary.
TC-3	Temporary Entrance / Outlet Tire Wash		☐	☐	☒	
ALTERNATIVE SEDIMENT CONTROL BMPs USED(3) ☐ Yes ☒ No						IF USED, STATE REASON

TABLE 500.3.4 TEMPORARY TRACKING CONTROL BMPs						
CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
(2) Minimum requirements are based on the required Contract Provisions, Standard Special Provisions, Plans and Specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
(3) Use of alternative BMPs will require written approval by the RE.

The following list of BMPs and associated narratives explain how the selected BMPs will be incorporated into the project.

The following practices (refer to the Project Special Provisions and the March 2003 Caltrans Construction Site BMP Manual for details on BMP installation and maintenance) will be used during construction.

- SC-7 Street Sweeping - Will be conducted to minimize the amount of debris & sediment on the roadway and help prevent it from entering storm drain systems or watercourses.

- TC-1 Temporary Construction Entrance - Will be placed at anticipated entrance and exit points of access from roadway to pervious areas within the project limits. This practice will limit the deposition of sediment from mud and dirt onto paved public roads by construction vehicles. Construction entrances will be placed at defined entrance and exits points within the project limits.

- TC-2 Temporary Construction Roadway: Used as needed to provide an all weather temporary access road for construction equipment to control dust and erosion created by vehicular tracking or as a building pad for work in all weather conditions.

500.3.5 Wind Erosion Control

Wind erosion control BMPs will be implemented to prevent sediment from leaving the construction site. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary wind erosion control requirements, temporary wind erosion control measures required by the contract documents, and other measures selected by the Contractor.

The following temporary wind erosion control BMP selection table indicates the BMPs that shall be implemented to reduce wind erosion at the construction site. Temporary wind erosion control BMPs are listed by location in the WPCBMPL in Attachment CC and shown on the WPCDs from Attachment BB. Any details for temporary wind erosion control BMPs are shown in Attachment BB.

TABLE 500.3.5 TEMPORARY WIND EROSION CONTROL BMPs						
CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
WE-1	Wind Erosion Control	√	☐	☒	☐	

TABLE 500.3.5 TEMPORARY WIND EROSION CONTROL BMPs						
CONSTRUCTION BMP ID NO(1)	**BMP NAME**	**CONTRACT MINIMUM REQUIRE-MENT(2)**	**CONTRACT BID ITEM**	**BMP USED**		**IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON**
				YES	**NO**	
TC-1	Temporary Construction Entrance		☒	◉	○	
TC-2	Stabilized Construction Roadway		☐	◉	○	If deemed necessary.
----	All Soil Stabilization Measures included in Section 500.3.2		☐	◉	○	
ALTERNATIVE SEDIMENT CONTROL BMPs USED(3) ○ Yes ◉ No						**IF USED, STATE REASON**

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
(2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
(3) Use of alternative BMPs will require written approval by the RE.

The following list of BMPs and narrative explain how the selected BMPs shall be incorporated into the project.

The following practices (refer to the Project Special Provisions and the March 2003 Caltrans Construction Site BMP Manual for details on BMP installation and maintenance) will be used during construction.

- WE-1 Wind Erosion Control - Will be practiced when the potential for wind erosion exists. Potable water shall be applied and evenly distributed. All distribution equipment shall be equipped with a positive means of shutoff. Unless water is applied by means of pipelines, at least one mobile unit shall be available at all times to apply water or dust palliative to the project.

- TC-1 Temporary Construction Entrance - Will be placed at anticipated entrance and exit points of access from roadway to pervious areas within the project limits. This practice will limit the deposition of sediment from mud and dirt onto paved public roads by construction vehicles. Construction entrances will be placed at defined entrance and exits points within the project limits.

- TC-2 Temporary Construction Roadway: Used as needed to provide an all weather temporary access road for construction equipment to control dust and erosion created by vehicular tracking or as a building pad for work in all weather conditions.

Section 500.3.2 soil stabilization materials applied as temporary soil stabilizers will also provide wind erosion control benefits.

500.4 BMP Selection for Construction Site Management

Construction site management shall consist of controlling potential sources of water pollution before they come in contact with stormwater systems or watercourses. The Contractor shall control material pollution and manage waste and non-stormwater discharges at the construction site by implementing effective handling, storage, use, and disposal practices.

500.4.1 Non-Stormwater Site Management

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the Caltrans Permit or authorized under a separate NPDES permit, shall be prohibited. The selection of non-stormwater BMPs is based on whether construction activities with a potential for non-stormwater discharges will be conducted, as discussed in the Materials Management Plan and in Section 500.4. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum non-stormwater pollution control requirements, non-stormwater pollution temporary wind erosion control measures required by the contract documents, and other measures selected by the Contractor.

The following non-stormwater control BMP selection table indicates the BMPs that shall be implemented to prevent non-stormwater discharges from construction activities conducted at the project site. Non-stormwater pollution control BMPs are listed by location in the WPCBMPL in Attachment CC and shown on the WPCDs from Attachment BB. Any details for non-stormwater pollution control BMPs are shown in Attachment BB.

TABLE 500.4.1
TEMPORARY NON-STORMWATER POLLUTION CONTROL BMPs

CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
NS-1	Water Control and Conservation		☐	☒	☐	
NS-2	Dewatering(3)		☐	☒	☐	
NS-3	Paving, Sealing, Sawcutting, and Grinding Operations		☐	☒	☐	
NS-4	Temporary Stream Crossing (3)		☐	☐	☒	
NS-5	Clear Water Diversion (3)		☒	☒	☐	
NS-6	Illegal Connection and Illegal Discharge Detection Reporting	√	☐	☒	☐	
NS-7	Potable Water / Irrigation		☐	☒	☐	

TABLE 500.4.1 TEMPORARY NON-STORMWATER POLLUTION CONTROL BMPs						
CONSTRUCTION BMP ID NO(1)	**BMP NAME**	**CONTRACT MINIMUM REQUIRE-MENT(2)**	**CONTRACT BID ITEM**	**BMP USED**		**IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON**
				YES	**NO**	
NS-8	Vehicle and Equipment Cleaning	√	☐	☒	☐	
NS-9	Vehicle and Equipment Fueling	√	☐	☒	☐	
NS-10	Vehicle and Equipment Maintenance	√	☐	☒	☐	
NS-11	Pipe Driving Operations		☐	☐	☒	
NS-12	Concrete Curing		☐	☐	☒	
NS-13	Material and Equipment Used Over Water		☐	☒	☐	Included for Material and Equipment used over Champlin Creek during clear water diversion
NS-14	Concrete Finishing		☐	☐	☒	
NS-15	Structure Demolition / Removal Over or Adjacent to Water		☐	☒	☐	
ALTERNATIVE SEDIMENT CONTROL BMPs USED(4) ☐ Yes ☒ No						**IF USED, STATE REASON**
CONSTRUCTION BMP ID NO (1)	**BMP NAME**					

TABLE 500.4.1 TEMPORARY NON-STORMWATER POLLUTION CONTROL BMPs						
CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
(2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
(3) The BMPs listed above are incidental and do not include operations listed as separated line items in the contract.
(4) Use of alternative BMPs will require written approval by the RE.

The following list of BMPs and associated narratives explain how the selected BMPs will be incorporated into the project.

Refer to Attachment F for other plans/permits/agreements requirements on materials management, staging and storage areas, stockpiles, etc.

The following practices (refer to the Project Special Provisions and the March 2003 Caltrans Construction Site BMP Manual for details on BMP installation and maintenance) will be used during construction.

NS-1 Water Control and Conservation - Water for construction activities should be used in a manner to prevent erosion or discharge sediment or other pollutants into storm drains or watercourses. Obtain approval from the Resident Engineer before washing anything at the job site. Report discharges to storm drains or watercourses immediately.

Water use within project limits will implement water conservation practices. Inspect irrigation areas. Shut off water source to broken lines, sprinklers, or valves, and repair breaks within 24 hours. If possible, reuse water from waterline flushing for landscape irrigation. Sweep and vacuum paved areas; do not wash them with water.

Direct job site water runoff, including water from water line repair, to areas where it can infiltrate into the ground and not enter storm drain systems or watercourses. Do not allow spilled water to escape water truck filling areas. If possible, direct water from off-site sources around the job site. Minimize the contact of off-site water with job site water.

If a water tank is to be utilized, the area shall be added to the Water Pollution Control Drawings via an amendment. The water truck filling area shall be properly stabilized with at least 6” of aggregate base; a stabilized construction entrance shall also be provided.

NS-2 Dewatering - Dewatering may be necessary for creek realignment work, primarily at Location 3 where creek realignment grading work and box culvert removal will occur. Since groundwater levels fluctuate seasonally and depending upon weather conditions, dewatering needs will likely fluctuate also. Discharge water will not be allowed to discharge directly back into Champlin Creek. A Dewatering Plan shall be submitted to Caltrans for review and approval prior to starting any dewatering work. All dewatering effluent shall be adequately collected and reused for dust control or reuse within project limits.

NS-3 Paving, Sealing, Sawcutting, and Grinding Operations - Prevent the following materials from entering storm drain systems or water courses:

1. Cementitious material

2. Asphaltic material

3. Aggregate or screenings

4. Grinding grooving, or sawcutting residue

5. Pavement chunks

6. Shoulder backing

Cover drainage inlets and use linear sediment barriers to protect downhill watercourses until paving, sealing, sawcutting, grooving, or grinding activities are completed and excess material has been removed. Cover drainage inlets and manholes during the application of seal coat, tack coat, slurry seal, or fog seal. If precipitation is predicted, limit paving, sawcutting, and grinding to places where runoff can be captured. Do not start seal coat, tack coat, slurry seal, or fog seal activities if precipitation is predicted during the application or curing period. Do not excavate material from existing roadways during precipitation.

Use a vacuum to remove slurry immediately after slurry is produced. Do not allow slurry to run onto lanes open to traffic or off the pavement. Collect residue from portland cement concrete grinding and grooving activities with a vacuum attachment on the grinding machine. Do not leave any residue on the pavement or allow the residue to flow across the pavement. If approved, material excavated from existing roadways may be stockpiled. Stockpiled material shall be covered with plastic; plastic covers shall be properly covered and repaired or replaced as needed. Stockpiled material shall be removed at least weekly.

Do not coat asphalt trucks and equipment with substances that contain soap, foaming agents, or toxic chemicals. When paving equipment is not in use, park over drip pans or plastic sheeting with absorbent material to catch drips.

NS-5 Clear Water Diversion - Clear water diversion may be necessary for creek realignment work at Location 3 where creek realignment grading work and box culvert removal will occur. Refer to project plan sheet WPC-1 and WPC-2 and Special Provision "Temporary Creek Diversion". Using a system of structures and apparatuses, and as directed by the Caltrans Biologist, intercept surface water runoff upstream of the project site, transport it around the work area, and discharge it downstream with minimal water quality degradation from either the project construction operations or the construction of the diversion. Structures commonly used as part of this system include, but are not limited to diversion ditches, berms, dikes, slope drains, rock, gravel bags, wood, sheet piles, aqua barriers, cofferdams, filter fabric or turbidity curtains, drainage and interceptor swales, pipes, or flumes.

NS-6 Illegal Connection and Illegal Discharge Detection Reporting - Inspect the job site and the site perimeter before starting work for evidence of illegal connections, discharges, or dumping. After starting work, inspect the job site and perimeter on a daily schedule. Whenever illegal connections, discharges, or dumping are discovered, notify the Engineer immediately. Take no further action unless ordered by the Resident Engineer. Assume unlabeled or unidentifiable material is hazardous.

Look for the following evidence of illegal connections, discharges, or dumping:

1. Debris or trash piles

2. Staining or discoloration on pavement or soils

3. Pungent odors coming from drainage systems

4. Discoloration or oily sheen on water

5. Stains or residue in ditches, channels or drain boxes

6. Abnormal water flow during dry weather

7. Excessive sediment deposits

8. Nonstandard drainage junction structures

9. Broken concrete or other disturbances near junction structures

NS-7 Potable Water/Irrigation - This BMP will be utilized to ensure that potable water and irrigation water does not runoff into the storm drain system. Irrigation systems shall be inspected for leaks during truck watering. Water, for use in water trucks, sawcutting operations, etc. will be obtained from an approved source. The contractor shall obtain all necessary permit(s) and approvals prior to using any water source.

NS-8 Vehicle and Equipment Cleaning - Limit vehicle and equipment cleaning or washing at the job site except what is necessary to control vehicle tracking or hazardous waste. Notify the Engineer before cleaning vehicles and equipment at the job site with soap, solvents, or steam. Contain and recycle or dispose of resulting waste under "Liquid Waste", "Waste Management" or "Hazardous Waste" of the special provisions, whichever is applicable. Do not use diesel to clean vehicles or equipment, and minimize the use of solvents.

Clean or wash vehicles and equipment in a structure equipped with disposal facilities. If using a structure is not possible, clean or wash vehicles and equipment in an outside area. The outside area must be:

1. Paved with AC, HMA, or concrete paving

2. Surrounded by a containment berm

3. Equipped with a sump to collect and dispose of wash water

4. Located outside the Champlin Creek floodplain, away from areas of concentrated ground squirrel burrows and at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, and storm drain inlets unless approved by the Resident Engineer

When washing vehicles or equipment with water, use as little water as possible. Hoses must be equipped with a positive shutoff valve.

Discharge liquid from wash racks to a recycle system or to another approved system. Remove liquids and sediment as necessary.

The location of any washing activities must first be approved by the Resident Engineer.

NS-9 Vehicle and Equipment Fueling - If practicable, perform fueling of vehicles and equipment off the job site.

If fueling must be done at the job site, designate a site, or sites, and obtain approval from the Resident Engineer before using them. Minimize mobile fueling activities. If vehicle and equipment fueling must be done at the job site, areas for such activities must be:

1. On level ground

2. Protected from storm water run-on and run-off

3. Located outside the Champlin Creek floodplain, away from areas of concentrated ground squirrel burrows and

at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, and storm drain inlets unless approved by the Resident Engineer

Use containment berms or dikes around the fueling area. Keep adequate quantities of absorbent spill cleanup material and spill kits in the fueling area and on fueling trucks. Dispose of spill cleanup material and kits immediately after use under "Waste Management" of the special provisions. Use drip pans or absorbent pads during fueling.

Fueling activities must not be left unattended. Fueling nozzles must be equipped with an automatic shutoff control. Vapor recovery fueling nozzles must be used where required by the Air Quality Management District. When not in use, nozzles must be secured upright. Do not top-off fuel tanks. Recycle or properly dispose of used batteries and tires under "Waste Management" of the special provisions.

Inspect vehicle and equipment fueling areas:

1. Daily when vehicle and equipment maintenance and fueling occurs daily

2. Weekly when vehicle and equipment maintenance and fueling does not occur daily

Inspect vehicles and equipment at the job site for leaks and spills on a daily schedule. Operators must inspect vehicles and equipment each day of use. If leaks cannot be repaired immediately, remove the vehicle or equipment from the job site.

The location of any vehicle fueling activities must first be approved by the Resident Engineer.

NS-10 Vehicle and Equipment Maintenance - If practicable, perform maintenance on vehicles and equipment off the job site. If maintenance must be done at the job site, designate a site, or sites, and obtain approval from the Resident Engineer before using them.

Minimize onsite maintenance. If vehicle and equipment maintenance must be done at the job site, areas for such activities must be:

1. On level ground

2. Protected from storm water run-on

3. Located outside the Champlin Creek floodplain, away from areas of concentrated ground squirrel burrows and at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, and storm drain inlets unless approved by the Resident Engineer

Use containment berms or dikes around the maintenance area. Keep adequate quantities of absorbent spill cleanup material and spill kits in the maintenance area and on fueling trucks. Dispose of spill cleanup material and kits immediately after use under "Waste Management" of the special provisions.. Use drip pans or absorbent pads during fueling or maintenance.

Maintenance activities must not be left unattended. Recycle or properly dispose of used batteries and tires.

Inspect vehicle and equipment maintenance and fueling areas:

1. Daily when vehicle and equipment maintenance occurs daily

2. Weekly when vehicle and equipment maintenance and fueling does not occur daily

Inspect vehicles and equipment at the job site for leaks and spills on a daily schedule. Operators must inspect vehicles and equipment each day of use. If leaks cannot be repaired immediately, remove the vehicle or equipment from the job site.

The location of any vehicle maintenance activities must first be approved by the Resident Engineer.

NS-13 Material and Equipment Used Over Water - These BMPs shall be implemented to prevent any materials or pollutants from reaching the receiving waters. Use drip pans and absorbent pads under vehicles or equipment used over or adjacent to watercourses. Repair leaking equipment in approved areas or remove from project limits. Drip pans must be used under vehicles or equipment that will be idle for longer than an hour while over or adjacent to watercourses, regardless if leaking is observed. Adequate spill cleanup supplies will be kept on hand in the event any sealant, concrete slurry or other liquid material spills. All spills will be cleaned immediately.

No work will occur during rains. Report discharges to receiving waters immediately upon discovery. Submit a discharge notification to the Engineer.

Equipment shall not be operated in wetted areas (including but not limited to ponded, flowing, or wetland areas). Equipment and/or vehicles operated within or adjacent to Champlin Creek shall be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic/riparian life.

Stationary equipment such as motors, pumps, generators, compressors and welders located within or adjacent to Champlin Creek shall be positioned over drip-pans.

NS-15 Structure Demolition/Removal Over or Adjacent to Waters - Do not allow demolished material to enter storm drain systems and receiving waters. Use covers and platforms approved by the Engineer to collect debris. Use attachments on equipment to catch debris during small demolition activities. Empty debris-catching devices daily.

All demolished material will be collected and immediately removed from the area to a suitable stockpile site until it can be hauled away and properly disposed of.

500.4.2 Waste Management and Materials Pollution Control

An inventory of construction activities, materials, and wastes is provided in Section 500.1.1. The following BMP consideration checklist lists the BMPs that have been selected to control construction site wastes and materials. Locations and details of applicable materials handling and waste management BMPs are shown on the WPCDs from Attachment BB. In the narrative description, a list of waste disposal facilities and the type of waste to be disposed at each facility is also provided. The following list of BMPs and associated narratives explain how the selected BMPs will be incorporated into the project.

TABLE 500.4.2
TEMPORARY WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs

CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
WM-1	Material Delivery and Storage	√	☐	☒	☐	
WM-2	Material Use	√	☐	☒	☐	

TABLE 500.4.2
TEMPORARY WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs

CONSTRUCTION BMP ID NO(1)	BMP NAME	CONTRACT MINIMUM REQUIRE-MENT(2)	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
WM-3	Stockpile Management	√	☐	☒	☐	
WM-4	Spill Prevention and Control	√	☐	☒	☐	
WM-5	Solid Waste Management	√	☐	☒	☐	
WM-6	Hazardous Waste Management (3)		☐	☒	☐	
WM-7	Contaminated Soil Management (3)		☐	☒	☐	
WM-8	Concrete Waste Management		☐	☒	☐	
	Temporary Concrete Washout Facility		☐	☐	☒	
	Temporary Concrete Washout (Portable)		☒	☒	☐	Must be a commercially available watertight container.
WM-9	Sanitary/Septic Waste Management	√	☐	☒	☐	
ALTERNATIVE SEDIMENT CONTROL BMPs USED(4) ☐ Yes ☒ No						**IF USED, STATE REASON**
CONSTRUCTION BMP ID NO (1)	**BMP NAME**					

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
(2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
(3) The BMPs listed above are incidental and do not include operations listed as separated line items in the contract.
(4) Use of alternative BMPs will require written approval by the RE.

Refer to Attachment F for other plans/permits/agreements requirements on materials management, staging and storage areas, stockpiles, etc.

The following practices (refer to the Project Special Provisions and the March 2003 Caltrans Construction Site BMP Manual for details on BMP installation and maintenance) will be used during construction.

WM-1 Material Delivery and Storage - Take delivery of, store and use construction materials in a manner that minimizes or eliminates the discharge of material into the air, storm drain systems, and receiving waters. Contain construction materials when they are not actively being used. Construction materials include but are not limited to:

1. Hazardous chemicals, including acids, lime, glues, adhesives, paints, solvents, and curing compounds

2. Soil stabilizers and binders

3. Fertilizers

4. Detergents

5. Plaster

6. Petroleum materials, including fuel, oil, and grease

7. Asphalt and concrete components

8. Pesticides and herbicides

Employees trained in emergency spill cleanup procedures must be present during the unloading of hazardous materials or chemicals. Use less hazardous materials if practicable.

The following activities must be performed outside the Champlin Creek floodplain, away from areas of concentrated ground squirrel burrows and at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, and storm drain inlets unless approved by the Resident Engineer:

1. Stockpiling materials

2. Storing pile-driving equipment and liquid waste containers

3. Washing vehicles and equipment in outside areas

4. Fueling and maintaining vehicles and equipment

Material Safety Data Sheets (MSDS) sheets, a Spill Prevention and Control Plan, up to date Contact List and an up to date Inventory shall be provided to the Resident Engineer prior to the storage of any materials onsite. The location of the storage location shall be on the Water Pollution Control Drawings. Any change in storage locations shall be provided to Caltrans via a SWPPP Amendment.

Materials that are stored on-site will abide by the following procedures/practices:

1. Store liquids, petroleum materials, and substances listed in 40 CFR 110, 117, and 302 and place them in secondary containment facilities as specified by US DOT for storage of hazardous materials.

2. Secondary containment facilities must be impervious to the materials stored there for a minimum contact time of 72 hours.

3. Cover secondary containment facilities during non-working days and whenever precipitation is forecasted. Secondary containment facilities must be adequately ventilated.

4. Keep secondary containment facilities free of accumulated rainwater or spills. After precipitation, or in the event of spills or leaks, collect accumulated liquid and place it into drums within 24 hours. Handle the liquid as hazardous waste under "Waste Management" of these special provisions unless testing confirms that the liquid is nonhazardous.

5. Do not store incompatible materials, such as chlorine and ammonia, in the same secondary containment facility.

6. Store materials in their original containers with the original material labels maintained in legible condition. Immediately replace damaged or illegible labels.

7. Secondary containment facilities must have the capacity to contain precipitation from a 24-hour-long, 25-year storm, plus 10 percent of the aggregate volume of all containers or the entire volume of the largest container within the facility, whichever is greater.

8. Store bagged or boxed material on pallets. Protect bagged or boxed material from wind and rain during non-working days and whenever precipitation is forecasted.

9. Provide sufficient separation between stored containers to allow for spill cleanup or emergency response access. Storage areas must be kept clean, well organized, and equipped with cleanup supplies appropriate for the materials being stored.

10. Repair or replace perimeter controls, containment structures, covers, and liners as necessary. Inspect storage areas before and after precipitation and at least weekly during other times.

WM-2 Material Use - Utilize BMPs as a general practice to help prevent discharges of construction materials during use. Spill clean-up materials, MSDS, a material inventory, and emergency contact numbers shall be maintained and stored kept on site. Adequate spill kits and absorbent pads shall be on hand during all liquid material use. Secondary containment shall be provided for all paints, solvents, gas, diesel, curing compounds, tank sprayers, etc. when not in use.

Applying or using materials that are potential sources of pollutants before a forecasted rain event shall be avoided. Applied materials that are not dry shall be protected from rainfall and runoff.

WM-3 Stockpile Management - Minimize stockpiling of materials at the job site.

Implement water pollution control practices within 72 hours of stockpiling material or before a forecasted storm event, whichever occurs first. Unless approved by the Resident Engineer, locate stockpiles outside the Champlin Creek floodplain, away from areas of concentrated ground squirrel burrows and at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, and storm drain inlets. If stockpiles are being used, do not allow soil, sediment, or other debris to enter storm drains, open drainages, and watercourses.

Active and inactive soil stockpiles must be:

1. Covered with soil stabilization material or a temporary cover

2. Surrounded with a linear sediment barrier

Stockpiles of asphalt concrete and PCC rubble, HMA, aggregate base, or aggregate subbase must be:

1. Covered with a temporary cover

2. Surrounded with a linear sediment barrier

Stockpiles of pressure-treated wood must be:

1. Placed on pallets

2. Be covered with waterproof material

2. Covered with impermeable material

Stockpiles of cold mix asphalt concrete must be:

1. Placed on an impervious surface

2. Covered with an impermeable material

3. Protected from stormwater run-on and runoff

Control wind erosion year round under Section 10, "Dust Control," of the Standard Specifications or through the use of temporary cover or temporary hydraulic mulch (Bonded Fiber Matrix).

Repair or replace linear sediment barriers and covers as needed to keep them functioning properly. Whenever sediment accumulates to 1/3 of the linear sediment barrier height, remove the accumulated sediment.

WM-4 Spill Prevention and Control - Implement spill and leak prevention procedures for chemicals and hazardous substances stored at the job site. If you spill or leak chemicals or hazardous substances at the job site, you are responsible for all associated cleanup costs and related liability.

As soon as it is safe, contain and clean up spills of petroleum products, sanitary and septic waste substances listed under CFR Title 40, Parts 110, 117, and 302.

Minor Spills

Clean up minor spills using the following procedures:

1. Contain the spread of the spill

2. Recover the spilled material by absorption

3. Clean the contaminated area

4. Dispose of the contaminated material promptly and properly

Semi-significant Spills

Clean up semi-significant spills immediately by the following procedures:

1. Contain the spread of the spill

2. Recover the spilled material using absorption whenever a spill occurs on a paved surface or an impermeable surface

3. Contain the spill with an earthen dike and dig up the contaminated soil for disposal whenever a spill occurs on soil

4. If the spill occurs during precipitation, cover the spill with plastic or other material to prevent contaminated runoff

5. Dispose of the contaminated material promptly and properly

Significant or Hazardous Spills

Immediately notify qualified personnel of significant or hazardous spills. Do not let construction personnel attempt to clean up the spill until qualified staff have arrived. Do the following:

1. Notify the Engineer and follow up with a written report

2. Obtain the services of a spills contractor or hazardous material team immediately

3. Notify the local emergency response team by dialing 911 and county officials at the emergency phone numbers kept at the job site

4. Notify the Governor's Office of Emergency Services Warning Center at (805) 852-7550

5. Notify the National Response Center at (800) 424-8802 regarding spills of Federal reportable quantities under CFR Title 40, Parts 110, 119, and 302

6. Notify other agencies as appropriate, including:

6.1. Fire Department

6.2. Public Works Department

6.3. Coast Guard

6.4. Highway Patrol

6.5. City Police or County Sheriff Department

6.6. Department of Toxic Substances

6.7. California Division of Oil and Gas

6.8. Cal OSHA

6.9. Regional Water Resources Control Board

Report minor, semi-significant, and significant spills to the WPC Manager. The WPC Manager must notify the Resident Engineer immediately. The WPC Manager must oversee and enforce proper spill prevention and control measures.

Prevent spills from entering storm water runoff before and during cleanup. Do not bury spills or wash spills with water. Keep material or waste storage areas clean, well organized, and equipped with enough cleanup supplies for the material being stored.

WM-5 Solid Waste Management - Do not allow litter, trash, or debris to accumulate anywhere on the job site, including storm drain grates, trash racks, and ditch lines. Pick up and remove litter, trash, and debris from the job site at least once a week. Monitor solid waste storage and disposal procedures on the job site.

If practicable, recycle nonhazardous job site waste and excess material. If recycling is not practicable, dispose of it under Section 7-1.13, "Disposal of Materials Outside the Highway Right of Way," of the Standard Specifications. Furnish enough closed-lid dumpsters of sufficient size to contain the solid waste generated by work activities. When

refuse reaches the fill line, empty the dumpsters. Dumpsters must be watertight. Do not wash out dumpsters at the job site.

Furnish additional containers and pick up dumpsters more frequently during the demolition phase of construction.

Solid waste includes:

1. Brick
2. Mortar
3. Timber
4. Metal scraps
5. Sawdust
6. Pipe
7. Electrical cuttings
8. Nonhazardous equipment parts
9. Styrofoam and other packaging materials
10. Vegetative material and plant containers from highway planting
11. Litter and smoking material, including litter generated randomly by the public
12. Other trash and debris

Furnish and use trash receptacles in the job site yard, field trailers, and locations where workers gather for lunch and breaks. All solid waste containers shall be covered at the end of each business day and before anticipated precipitation. Accumulated water in waste containers must be handled as concrete waste and in accordance with WM-8.

WM-6 Hazardous Waste Management - Use hazardous waste management practices if waste is generated at the job site from the following substances:

1. Petroleum products
2. Asphalt products
3. Concrete curing compound
4. Pesticides
5. Acids
6. Paints
7. Stains

8. Solvents

9. Wood preservatives and treated posts

10. Roofing tar

11. Road flares

12. Lime

13. Glues and adhesives

14. Materials classified as hazardous by California Code of Regulations, Title 22, Division 4.5; or listed in CFR Title 40, Parts 110, 117, 261, or 302

The WPC Manager must oversee and enforce hazardous waste management practices. Minimize the production of hazardous materials and hazardous waste at the job site. If damaged, repair or replace perimeter controls, containment structures, and covers. If hazardous material levels are unknown, use a laboratory certified by ELAP under CDPH to sample and test waste to determine safe methods for storage and disposal.

Separate potentially hazardous waste from nonhazardous waste at the job site. Hazardous waste must be handled, stored, and disposed of under California Code of Regulations, Title 22, Division 4.5, Section 66262.34; and in CFR Title 49, Parts 261, 262, and 263.

Store hazardous waste in sealed containers constructed and labeled with the contents and date accumulated under California Code of Regulations, Title 22, Division 4.5; and in CFR Title 49, Parts 172, 173, 178, and 179. Keep hazardous waste containers in temporary containment facilities under "Material Storage" of the special provisions.

Furnish containers with adequate storage volume at convenient locations for hazardous waste collection. Do not overfill hazardous waste containers. Do not mix hazardous waste. Do not allow potentially hazardous waste to accumulate on the ground. Store containers of dry waste that are not watertight on pallets. Store hazardous waste away from storm drains, watercourses, moving vehicles, and equipment.

Clean water based or oil based paint from brushes or equipment within a contained area and in a way that does not contaminate soil, watercourses, and storm drain systems. Handle and dispose of the following as hazardous waste: paints, thinners, solvents, residues, and sludges that cannot be recycled or reused. When thoroughly dry, dispose of the following as solid waste: dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths. Dispose of hazardous waste within 90 days of being generated. Use a licensed hazardous waste transporter to take hazardous waste to a Class I Disposal Site. Submit a copy of uniform hazardous waste manifest forms within 24 hours of transporting hazardous waste.

The WPC Manager must inspect the following daily:

1. Storage areas for hazardous materials and waste

2. Hazardous waste disposal and transporting activities

WM-7Contaminated Soil Management - Identify contaminated soil from spills or leaks by noticing discoloration, odors, or differences in soil properties. Soil with evidence of contamination must be sampled and tested by a laboratory certified by ELAP. If levels of contamination are found to be hazardous, handle and dispose of the soil as hazardous waste.

Prevent the flow of water, including ground water, from mixing with contaminated soil by using one or a combination of the following measures:

1. Berms

2. Cofferdams

3. Grout curtains

4. Freeze walls

5. Concrete seal course

If water mixes with contaminated soil and becomes contaminated, sample and test the water using a laboratory certified by ELAP. If levels of contamination are found to be hazardous, handle and dispose of the water as hazardous waste.

WM-8 Concrete Waste Management & Temporary Concrete Washout (Portable) - Use practices that will prevent the discharge of portland cement concrete, AC, or HMA waste into storm drain systems or watercourses.

Collect and dispose of portland cement concrete, AC, or HMA waste at locations where:

1. Concrete material, including grout, is used

2. Concrete dust and debris result from demolition

3. Sawcutting, coring, grinding, grooving, or hydro-concrete demolition of portland cement concrete, AC, or HMA creates a residue or slurry

4. Concrete truck or other concrete-coated equipment is cleaned at the job site

A portable concrete washout facility will be used on this project to capture and properly dispose of all concrete slurry and washout, in accordance with section 10-1.09 of the Special Provisions. All washouts shall be located outside the Champlin Creek floodplain, away from areas of concentrated ground squirrel burrows and at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, and storm drain inlets unless approved by the Resident Engineer.

The washout shall be a commercially available watertight container. Washouts shall have at least a 55-gallon capacity.

All washouts, wherever located, shall have a 2 feet x 4 feet sign labeling the washout for the exclusive use as a concrete waste and washout facility. Stencil "Concrete Waste material" in 3-inch high black letters on white background. Top of stenciling must be 12 inches from the top of the container.

Washouts shall be inspected daily when in use. Washouts shall also be inspected within 24 hours prior to rain events, daily during rain events and within 24 hours following a rain event. If a rain event is anticipated, washouts shall be covered. The contractor shall routinely cleanout and dispose of washout waste to prevent overtopping. If overtopping does occur, the spill shall be contained and adequately cleaned up immediately.

WM-9 Sanitary/Septic Waste Management - Do not bury or discharge wastewater from a sanitary or septic system within the project limits. Place portable sanitary facilities outside the Champlin Creek floodplain, away from areas of concentrated ground squirrel burrows and at least 50 feet away from storm drains, receiving waters, and flow lines. Portable sanitary facilities shall be located and maintained as appropriate for the duration of the project or until no longer needed. Weekly maintenance shall be provided and wastes shall be disposed offsite. All facilities must be placed over secondary containment and secured to prevent tipping.

500.5 Water Pollution Control Drawings

The WPCDs are the component of the project SWPPP that show the BMPs, by project phase/stage, that are necessary for the project to be in compliance with the CGP. The construction activity phases used in this SWPPP are the preliminary phase, grading phase, highway construction phase, and the highway planting / erosion control establishment phase. These phases are defined below.

Preliminary Phase (Pre-Construction Phase – Part of the Grading Phase)

Includes rough grading/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading.

Grading Phase

Includes reconfiguring the topography for the highway, including excavation for roadway (e.g., necessary blasting of hard rock), highway embankment construction (fills); mass grading, and stockpiling of select material for capping operations.

Highway Construction Phase

Encompasses both highway and structure construction. Highway construction includes final roadway excavation, placement of base materials and highway paving, finish grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm drain systems and/or other drainage improvements, highway lighting, traffic signals and/or other highway electrical work, guardrail, concrete barriers, sign installation, pavement markers, traffic striping and pavement markings. Structure construction includes structure footings, bridges, retaining walls, major culverts, overhead sign structures and buildings.

Highway Planting / Erosion Control Establishment Phase

Includes clearing and grubbing operations, soil preparation (grading, incorporation of soil amendments, and placement of topsoil), irrigation (trenching, installation and trench backfilling), minor grading (top dressing and fine grading of lawn and ground cover areas), planting (seeding and planting of vegetation), mulching (application of wood chips or other mulches) and plant establishment (weeding, plant replacement, and, if needed, fertilizer application, irrigation maintenance, and reapplication of mulch). Erosion control includes placement of permanent erosion control materials and maintenance of temporary sediment controls during the erosion control establishment period.

The WPCDs provide field staff with the information on where to install BMPs so that they are effective. The WPCDs, WPCBML and Water Pollution Control Schedule provide the necessary tools for a Contractor to plan and implement BMPs to meet the requirements of the project SWPPP.

The WPCD cover sheet(s) shall include a listing of the BMPs that will be used along with the associated BMP symbols used on the WPCDs.

WPCDs are provided for all areas that are directly related to the construction activity, including but not limited to staging areas, storage yards, material borrow areas and storage areas, access roads, etc., whether or not they reside within the Caltrans rights-of-way.

The WPCDs shall show the construction project site in detail, including:

- the construction site perimeter;
- geographic features within or immediately adjacent to the site; include surface waters such as lakes, streams, springs, wetlands, estuaries, ponds, and the ocean;

- site topography before and after construction; include roads, paved areas, buildings, slopes, drainage facilities, and areas of known or suspected contamination; and

- permanent (post-construction) BMPs.

The WPCDs shall show the following site information:

- discharge points from the project to off-site storm drain systems or receiving waters;

- tributary areas and drainage patterns across the project area (show using flow arrows) into each on-site stormwater inlet or receiving water;

- tributary areas and drainage patterns to each on-site stormwater inlet, receiving water or discharge point;

- off-site tributary drainage areas that generate run-on to the project;

- temporary on-site drainage(s) to carry concentrated flows;

- drainage patterns and slopes anticipated after major grading activities are completed;

- outlines of all areas of existing vegetation, soil cover, or native vegetation that will remain undisturbed during the project;

- outlines of all areas of planned soil disturbance (disturbed soil areas, DSAs);

- known location(s) of contaminated or hazardous soils;and

- any potential non-stormwater discharges and activities, such as dewatering operations, concrete saw-cutting or coring, pressure washing, waterline flushing, diversions, cofferdams, and vehicle and equipment cleaning; if operations can't be located on the WPCDs, a narrative description should be provided.

The WPCDs show proposed locations of all construction site BMPs. Additional detail drawings are provided if necessary to convey site-specific BMP configurations. The WPCDs shall show construction site BMPs including the following:

- temporary soil stabilization and temporary sediment control BMPs that will be used during construction; any temporary on-site drainage(s) to carry concentrated flows, BMPs implemented to divert off-site drainage around or through the construction site, and BMPs that protect stormwater inlets;

- construction entrances used for site ingress and egress points and any proposed temporary construction roads;

- BMPs to mitigate or eliminate non-stormwater discharges;

- BMPs for waste management and materials pollution control, including, but not limited to storage of soil or waste; construction material loading, unloading, storage and access areas; and areas designated for waste handling and disposal; and

- BMPs for vehicle and equipment storage, fueling, maintenance, and cleaning.

The WPCDs can be found in Attachment BB of the SWPPP.

500.6 Water Pollution Control BMP List

The Water Pollution Control Best Management Practices List (WPCBMPL) provides, by location and project phase/stage, the BMPs necessary for the project to be in compliance with the CGP. The WPCBMPL provides field staff both with a list of necessary BMPs and with an estimated quantity for each BMP by location and phase/stage of the project. The construction activity phases are typically the Preliminary Phase, Grading Phase, Highway Construction Phase, and the Highway Planting / Erosion Control Establishment Phase. The construction activity phases are defined in Section 500.5.

The WPCBMPL, water pollution control drawings and water pollution control schedule provide the tools necessary for the Contractor to plan and implement BMPs to meet the requirements of the project SWPPP. The BMPs listed on the WPCBMPL are the base line for site inspections and visual monitoring.

The WPCBMPL cover sheet includes a list of all BMPs to be used on the project based on Section 500 Determination of Construction Site Best Management Practices.

The names and number of locations listed on the WPCBMPL were established so that field staff and inspectors can easily identify where BMPs need to be located. The WPCBMPL includes all locations that are directly related to the construction activity, including but not limited to staging areas, storage yards, material borrow areas and storage areas, access roads, etc., whether or not they reside within Caltrans rights-of-way.

Necessary additional information to convey site-specific BMP configurations or BMP modifications are noted on the WPCBMPL.

All construction site BMPs are listed on the WPCBMPL including the following:

- temporary soil stabilization and temporary sediment control BMPs that will be used during construction; include temporary on-site drainage(s) to carry concentrated flows
- BMPs implemented to divert off-site drainage around or through the construction site, and BMPs that protect stormwater inlets
- BMPs to mitigate or eliminate non-stormwater dischargesBMPs for waste management and materials pollution control, including, but not limited to storage of soil or waste; construction material loading, unloading, storage and access areas; and areas designated for waste handling and disposal
- BMPs for vehicle and equipment storage, fueling, maintenance, and cleaning
- permanent BMPs that are a component of the project SWPPP

The WPCBMPL can be found in Attachment CC of the SWPPP.

500.7 Water Pollution Control Schedule

The Water Pollution Control Schedule (WPCS) is the component of the project SWPPP that shows the timeline for when BMPs will be installed so that the project is in compliance with the CGP. The WPCS provides field staff with the information necessary to plan for adequate materials and crews to install BMPs at the right time so that they are effective. The WPCS, WPCBMPL, and WPCDs provide the necessary tools for the Contractor to plan and implement BMPs to meet the requirements of the project SWPPP.

The WPCS shall contain an adequate level of detail to show major activities sequenced with the implementation of construction site BMPs, including:

- project start and finish dates, including each stage of the project
- SWPPP review and approval
- annual certifications
- mobilization dates
- mass clearing and grubbing/roadside clearing dates
- major grading/excavation dates
- dates named in other permits such as Fish and Game and Army Corps of Engineers Permits
- dates for submittal of SWPPP amendments as required in the contract specifications

The WPCS shall show by location the dates for the deployment of:

- temporary soil stabilization BMPs
- temporary sediment control BMPs
- wind erosion control BMPs
- tracking control BMPs
- non-stormwater BMPs
- waste management and materials pollution control BMPs

The WPCS shall include:

- paving, saw-cutting, and any other pavement-related operations;
- major planned stockpiling operations;
- dates for other significant long-term operations or activities that may cause non-stormwater discharges, such as dewatering, grinding, etc; and
- final stabilization activities for each disturbed soil area of the project.

The WPCS shall be updated quarterly and the quarterly updates shall be filed in SWPPP File Category 20.03: Water Pollution Control Schedule Updates.

The Water Pollution Control Schedule can be found in Attachment DD of the SWPPP.

SECTION 600
PROJECT SITE IMPLEMENTATION PROGRAM

600.1 Water Pollution Control Manager Responsibilities

The WPC Manager shall have primary responsibility and authority to implement the SWPPP and ensure the project is in compliance with the CGP. The WPC Manager is responsible for implementing the SWPPP and amending the SWPPP when any of the conditions specified in Section 100.3 are met. The Contractor has assigned authority to the WPC Manager to mobilize crews and subcontractors, as necessary, for SWPPP and CGP compliance. The WPC Manager will be available at all times throughout duration of the project.

Duties of the Contractor's WPC Manager include but are not limited to the following

- ensuring full compliance with the SWPPP and the CGP
- implementing all elements of the SWPPP, including but not limited to implementing:
  - prompt and effective erosion and sediment control measures
  - all non-stormwater management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); performing general site cleanup; cleaning vehicles and equipment, performing fueling and maintenanceactivities; providing spill control; ensuring that no materials other than stormwater are discharged in quantities that will have an adverse effect on receiving waters or storm drain systems, etc.
- overseeing and ensuring that the following site inspections and visual site monitoring are conducted:
  - daily required BMP inspectections
  - weekly routine stormwater site BMP inspections
  - quarterly non-stormwater site inspections
  - pre-storm inspections prior to forecasted storm events
  - daily inspections during extended forecasted storm events
  - post-storm inspections for qualifying rain events
- mobilizing crews to repair, replace, and/or implement additional BMPs due to deficiencies, failures or other shortcomings identified during inspections, to be completed within 72 hours of identification (the contractor's WPC Manager shall be assigned authority by the Contractor to mobilize crews)
- coordinating with the RE to assure that if design changes to BMPs are required due to deficiencies, failures or other shortcomings identified during inspections, the changes are completed as soon as possible and the SWPPP is revised accordingly
- monitoring NWS Forecast Office forecasts for both forecasted storm events and qualifying rain events; these events are defined as follows:
  - a forecasted storm event is defined as a 50% or greater likelihood that 0.10 inch or more of precipitation

will fall within a 24-hour period

- a qualifying rain event is defined as a rain event that may produce or has produced ½ inch or greater of precipitation at the time of discharge, with a 72-hour dry period between events

- monitoring weather at the project site
- preparing and implementing qualifying rain event sampling and analysis plans
- preparing and implementing Rain Event Action Plans for forecasted stormevents
- preparing and implementing qualifying rain event sampling and analysis plans
- mobilizing crews immediately, in the event of NAL exceedances, to repair existing BMPs and/or implement additional BMPs (the Contractor's WPC Manager shall be assigned authority by the Contractor to mobilize crews),
- coordinating with the RE in the event of NAL exceedances to assure that any SWPPP revisions (corrective actions) are made immediately, either to prevent pollutants and authorized non-stormwater discharges from contaminating stormwater, or to substantially reduce the pollutants to levels consistently below the NALs, so that the project complies with the SWPPP, the CGP and approved plans at all times,
- submitting NAL exceedances reports to the RE
- submitting test results for stormwater samples to the RE
- preparing amendments to the SWPPP when required
- preparing contractor's SWPPP Annual Compliance Certification
- preparing the Stormwater Annual Reports
- ensuring elimination of all unauthorized discharges
- preparing and submitting Notice of Discharge reports to the RE
- preparing and submitting reports of illicit connections or illegal discharges to the RE

600.2 Site Inspections

Stormwater site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the CGP. Project site visual monitoring requirements are covered in Section 700 Construction Site Monitoring Program. Project site inspections of stormwater BMPs are conducted to identify and record:

- that BMPs are properly installed
- what BMPs need maintenance to operate effectively
- what BMPs have failed

- what BMPs could fail to operate as intended.

Routine stormwater site inspections shall be conducted by the contractor's WPC Manager or other 24-hour trained staff at the following minimum frequencies:

- daily inspections of;
    - storage areas for hazardous materials and waste
    - hazardous waste disposal and transporting activities
    - hazardous material delivery and storage activities
    - vehicle and equipment cleaning facilities if vehicle and equipment cleaning occurs daily
    - vehicle and equipment maintenance and fueling areas if vehicle and equipment maintenance and fueling occurs daily
    - vehicles and equipment at the job site to verify that operators are inspecting vehicles and equipment each day of use.
    - demolition sites within 50 feet of storm drain systems and receiving waters
    - pile driving areas for leaks and spills if pile driving occurs daily
    - temporary concrete washouts if concrete work occurs daily
    - paved roads at job site access points for street sweeping if earthwork and other sediment or debris generating activities occur daily
    - dewatering work if dewatering work occurs daily
    - temporary active treatment system if temporary active treatment system activities occur daily
    - work over water if work over water occurs daily
- daily inspections for projects within the Lake Tahoe Hydrologic Unit
- weekly inspection of site BMPs

Stormwater site inspections shall be documented on CEM-2030 Stormwater Site Inspection Report, in Appendix G. Completed stormwater inspection reports shall be submitted to the RE within 24 hours after completion of the inspection. Copies of completed inspection reports will be kept in SWPPP File Category 20.31: Contractor Stormwater Site Inspection Reports,

Deficiencies identified during site inspections and correction of deficiencies will be tracked on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix I. Corrective Action Summary forms shall be submitted to the RE when corrections are completed but must be submitted within five (5) days after completion of the site inspection. Completed Stormwater Site Inspection Report Corrective Actions Summary forms shall be filed in SWPPP File Category 20.35: Corrective Actions Summary. A copy of the completed Corrective Actions Summary form will also be attached to the corresponding Stormwater Site Inspection Report that generated the need for the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary

600.3 Weather Forecast Monitoring

The WPC Manager shall have primary responsibility to monitor the National Weather Service Forecast Office for forecasted precipitation based on project site location. Precipitation forecast information shall be obtained from the National Weather Service Forecast Office accessible at: http://www.srh.noaa.gov/.

The project site location to be used for obtaining forecast from National Weather Forecast Office website is Sonoma, CA.

The WPC Manager shall monitor the weather forecast on a daily basis for predicted precipitation within the following 96 hours. The WPC Manager shall monitor the forecast for the next 24, 48, 72 and 96 hours to determine if the forecast for precipitation is 50 percent or greater for any 6-hour period. If the forecast for precipitation is 50 percent or greater, the WPC Manager shall calculate the amount of precipitation forecasted for each 24-hour period and the total precipitation for the forecasted storm event and record the information. Weather forecast monitoring shall be recorded on CEM-2040 Weather Forecast Monitoring Form, in Appendix J. The completed CEM-2040 Weather Forecast Monitoring forms shall be filed in File Category 20.40: Weather Monitoring Logs. Within 2 working days of the last date shown on a completed Weather Forecast Monitoring Log form, a copy of the completed log will be submitted to the RE.

When the forecast for precipitation is 50 percent or greater and the forecasted amount of precipitation is 0.10 inch or more for any 24-hour period within the next 72 hours, the WPC Manager shall perform a pre-storm site inspection and ensure that the site is prepared for the likely forecasted storm event.

For Risk Level 2 and 3 the WPC Manager will prepare a Rain Event Action Plan for forecasted storm events.

Forecasted storm event site preparation shall include, but is not limited to, the installation of soil stabilization and sediment BMPs on active disturbed soil areas and stockpiles.

600.4 Weather Monitoring

The WPC Manager shall have primary responsibility to monitor weather at the project site. The WPC Manager, on a daily basis, shall monitor the weather and record the weather conditions on the CEM-2041 Weather Monitoring Log form.

When there is precipitation, the WPC Manager shall ensure that storm precipitation data is obtained from the project site rain gauge. Precipitation monitoring will be performed at least every two hours during normal working hours and will include recording the time, amount of precipitation measured in the project site rain gauge, amount of precipitation within a 24-hour period, and total cumulative amount of precipitation for the forecasted storm event.

If no pre-storm visual site monitoring was performed, and the amount of precipitation for any 24-hour period is 0.10 inch or greater, the WPC Manager will implement during storm visual site monitoring, as discussed in Section 700.1.

When a forecasted storm event was not forecasted to be a qualifying rain event, but the measured cumulative amount of precipitation for the storm event and the expected severity of the continuing storm event results in ½ inch or more of precipitation, the WPC Manager will implement a Qualifying Rain Event Sampling and Analysis Plan as soon as possible.

Weather monitoring will be documented daily on the CEM-2041 Weather Monitoring Log form, available in Appendix K. Completed weather monitoring log forms shall be kept in File Category 20.40: Weather Monitoring Logs. Within 2 working days of the last date shown on a completed weather monitoring log, a copy of the completed log will be submitted to the RE.

600.5 Best Management Practices Status Report

The WPC Manager shall prepare a weekly status report of the water pollution control BMPs (site BMPs) installed on the project site and BMPs that will be deployed during the following week. The weekly BMP status report will be based on the progress of the work and the WPCBMPL for the project, with any additional BMPs the WPC Manager has determined are necessary based on the stage of construction and construction activities.

Because the SWPPP, including the WPCBMPL and WPCDs, are based on the entire project site and all construction activities, the weekly BMP status report should be a “snapshot” of which BMPs are deployed on the project site and which BMPs will be deployed the following week, so a project inspector or reviewer can easily determine what could be

expected to be seen on the project site that week. The weekly status report will be used by stormwater inspectors and contractor pesonnel to ensure SWPPP compliance.

The weekly status report will be used to ensure that weekly training meetings cover BMPs that are required for work activities during the week. The weekly status report will be provided to regulatory agency staff who visit the project site to indicate which BMPs should be in place and which are schedueled to be implemented during the coming week.

The weekly status of stormwater BMPs will be documented on CEM-2034 Stormwater Best Management Practices Status Report form, in Appendix H. Completed weekly status reports shall be submitted to the RE 48 hours prior to the beginning of the work week. Copies of the completed reports will be kept in SWPPP File Category 20.34: Best Management Practices Weekly Status Reports.

600.6 Rain Event Action Plans

REAPs will be prepared by the WPC Manager when there is a forecasted storm event. A forecasted storm event is any weather pattern that is forecasted to have a 50 percent or greater probability of producing precipitation of 0.10 inch or more within any 24-hour period at the project site location. The WPC Manager will prepare the REAP for the forecasted storm event based on the current construction activity phase of the project. For REAPs, the construction activity phases are the Highway Construction Phase, Highway Planting / Erosion Control Establishment Phase or Inactive Project Phase. The construction activity phases are defined in Section 500.5.

When the NWS forecast for 72 hours and greater predicts a forecasted storm event, the WPC Manager will prepare a REAP using the REAP form appropriate to the current project stage. REAP forms are available in Appendix L. Prepared REAPs shall be submitted to the RE at least 48 hours prior to a forecasted stormevent. If the NWS forecast changes and a storm event is forecasted to occur within 24-72 hours then a REAP must be prepared. If the NWS forecast changes and a storm event is forecasted to occur within the next 24 a REAP will not be prepared and the WPC Manager will take immediate actions to ready the project site for the forecasted storm event.

The WPC Manager shall implement a REAP within the 48 hours prior to the forecasted storm event. A copy of the REAP shall be available on the job site at least 48 hours prior to the forecasted storm event. Copies of REAPs will be maintained in SWPPP File Category 20.45: Rain Event Action Plans in reverse chronologic order.

SECTION 700
CONSTRUCTION SITE MONITORING PROGRAM

700.1 Site Visual Monitoring Inspection

This Construction Site Monitoring Program includes conducting site visual monitoring inspections of the project site to address the following objectives:

- determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives
- determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater dischagres and authorized non-stormwater discharges
- determine whether BMPs included in the REAP are effective in preventing or reducing pollutants in stormwater dischagres and authorized non-stormwater discharges
- demonstrate that the site is in compliance with the discharge prohibitions and applicable NALs and NELs of the CGP
- determine whether immediate corrective actions, additional BMP implementation, or SWPPP amendments are necessary to reduce pollutants in stormwater and authorized non-stormwater discharges
- demonstrate that the site is in compliance with the discharge prohibitions
- document the presence or evidence of any non-stormwater discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source, if applicable, and the response taken to eliminate unauthorized non-stormwater discharges and to reduce or prevent pollutants from contacting non-stormwater discharges

700.1.1 Visual Monitoring Locations

Locations of Visual Monitoring Prior To A Storm Event

Visual monitoring (a pre-storm inspection) of the project site is required when the forecast for precipitation is greater than 50 percent within the next 24, 48, 72, 96 hours, and the amount of precipitation forecasted for any 24-hour period is 0.10 inch or greater. Within 48 hours of a forecasted storm event, a stormwater visual monitoring site inspection shall be performed and shall include observations of:

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

14 drainage area(s) on the project site and the Contractor's yard, staging areas, and storage areas have been identified as required forecasted storm event visual observation location(s), according to Section I.3.e of Attachments C, D, and E of the CGP. Drainage area(s) are shown on the WPCDs in Attachment BB and are listed by drainage area location number

and location description in Table 700.1.1.1: Drainage Areas.

TABLE 700.1.1.1 DRAINAGE AREAS	
Drainage Area No.	**Location**
1	Adobe Rd. and Stage Gulch Rd. (State Route (SR) 116) intersection to 0.5 miles east along southern edge of State Route 116 edge of pavement to the south (Location #1).
2	Adobe Road and SR 116 intersection to 0.5 miles east from southern SR 116 edge of pavement to the north (Location #2).
3	Area 3 is a portion of Location #3 south of SR 116 edge of pavement and following the flow line of a tributary to Champlin Creek to the south.
4	Area 4 is the remainder of Location #3 from SR 116 southern edge of pavement.
5	Area 5 is from SR 116 southern edge of pavement north and includes Location #3's Champlin Creek.
6	Area 6 is north and south of SR 116 and meets both area 3 and 5's western/southwestern edges.
7	Area 7 is north of SR 116 on both banks (sides) of Champlin Creek from area 5's northern edge (Location #3) and downstream from County Dump Road.
8	Area 8 (Location #4) is from centerline of SR 116 north and includes Champlin Creek..
9	Area 9 (Location #5) is from centerline of SR 116 north and includes a tributary to Champlin Creek.
10	Area 10 (Location #5) is from centerline of SR 116 south and includes a tributary to Champlin Creek.
11	Area 11 (Location #6) is from centerline of SR 116 north.
12	Area 12 (Location #7) is from centerline of SR 116 north.
13	Area 13 (Location #8) is from centerline of SR 116 north and includes Champlin Creek.
14	Area 14 (Location #9) is from centerline of SR 116 north into (includes) Champlin Creek.

The drainage area(s) have been identified as required forecasted storm event visual observation location(s) or "sheds" as the locations of construction vary throughout the project site. More discharge/sampling locations exist than drainage areas to reflect existing drainage infrastructure and the spot location nature of construction, rather than a discharges off the State right-of-way.

7 stormwater storage or containment area(s) are located on the project site. These stormwater storage and containment area(s) have been identified as required forecasted storm event visual observation location(s). Stormwater storage or containment area(s) are shown on the WPCDs from Attachment BB and are listed by storage or containment area location number and location description in Table 700.1.1.2: Stormwater Storage and Containment Areas.

TABLE 700.1.1.2 STORMWATER STORAGE AND CONTAINMENT AREAS	
Location No.	**Location**
1	Biofiltraion Swale #1 (Location of Construction #2)
2	Refugia and Dispersal Area No. 1 (Location of Construction #3)
3	Refugia and Dispersal Area No. 2 (Location of Construction #3)
4	Rock Slope Protection Stilling Basin - Down Stream from Co. Dump Rd.(Drainage System (DS) #21) (Location of Construction #3)
5	Rock Slope Protection Stilling Basin - Down Stream from SR 116 (DS #26) (Location of Construction #5)
6	Biofiltraion Swale #2 (Location of Construction #6)
7	Biofiltraion Swale #3 (Location of Construction #7)

See Contract Plans for Locations of Construction.

Locations of Visual Monitoring during Extended Forecasted Storm Events and within 48 Hours After a Qualifying Rain Event

During any extended forecasted storm events and within 48 hours after a qualifying rain event (a rain event that has produced ½ inch or more of precipitation), a stormwater visual monitoring site inspection is required to observe:

- stormwater discharges at all discharge locations
- BMPs to identify and record those that need maintenance to operate effectively, those that have failed, and those that could fail to operate as intended
- the discharge of stored or contained stormwater

13 discharge location(s) are located on the project site. These stormwater discharge location(s) have been identified as required visual observation location(s). Stormwater discharge location(s) are shown on the WPCDs in Attachment BB and and are listed in Table 700.1.1.3: Stormwater Discharge Locations.

TABLE 700.1.1.3 STORMWATER DISCHARGE LOCATIONS	
Unique Sampling Location Identifier	**Location**
N/A	Downstream of Location #1.
01DL01	Downstream of Location #2 (Biofiltration Swale #1).
04DL02	Location #3 Conservation Easement, Champlin Creek at DS #12.
05DL03	Location #3 Conservation Easement, tributary to Champlin Creek at DS #14
07DL04	Location #3 Conservation Easement, tributary to Champlin Creek at DS #15
10DL05	Location #3 at Champlin Creek and State right of way.
14DL06	Location #3 downstream of County Dump Road at Champlin Creek..
16DL07	Downstream of Location #4 at Champlin Creek.
19DL08	Downstream of Location #5 at Champlin Creek.
22DL09	Downstream of Location #6 (Biofiltration Swale #2).
24DL10	Downstream of Location #7 (Biofiltration Swale #3).
26DL11	Downstream of Location #8 at Champlin Creek.

28DL12	Downstream of Location #9 at Champlin Creek.

Location # refers to Locations of Construction (See Contract Plans for locations of construction).

BMP locations shown on the WPCDs in Attachment BB and are listed on the WPCBMPL in Attachment CC.

7 stormwater storage or containment area(s) are located on the project site. Stormwater storage or containment area(s) are shown on the WPCDs in Attachment BB and are listed on Table 700.1.1.2: Stormwater Storage and Containment Areas.

Locations of Visual Monitoring for Non-Stormwater Discharges

A visual monitoring site inspection for non-stormwater discharges requires that each drainage area be observed for the presence of or indications of prior unauthorized and authorized non-stormwater discharges.

14 drainage area(s) are located on the project site and in the contractor's yard, staging areas, and storage areas that have been identified as observation location(s) for non-stormwater discharges. Drainage area(s) are shown on the WPCDs in Attachment BB and are listed in Table 700.1.1.1: Drainage Areas.

700.1.2 Visual Monitoring Schedule

On a daily basis contractor personnel will visual monitor the project site for discharges and report any discharges to the WPC Manager.

Stormwater site visual monitoring inspections shall be conducted at a minimum:

- within 48 hours prior to a forecasted storm event (any weather pattern that is forecasted to have a 50 percent or greater probability of producing 0.1 inches or more of precipitation in the project area within a 24 period)
- at 24-hour intervals during any extended forecasted storm event
- within 48 hours after a qualifying rain event (a rain event that has produced ½ inch or more of precipitation)

Non-stormwater discharge site visual monitoring inspections shall be conducted, at a minimum, during each of the following periods: January-March, April-June, July-September, and October-December.

If visual monitoring of the site for stormwater is unsafe because of dangerous weather conditions, such as flooding and electrical storms, then the site inspector shall document the conditions that prevented the inspection. The documentation of the site visual monitoring inspection shall be filed in SWPPP File Category 20.33: Site Visual Monitoring Inspection Reports.

700.1.3 Visual Monitoring Procedures

Site visual monitoring inspections shall be overseen by the contractor's WPC Manager. Stie visual monitoring will be conducted by the WPC Manager , appointed QSP or stormwater inspector.

The name(s) and contact number(s) of the site visual monitoring inspection personnel are listed below and their training qualifications are provided in Attachment E:

- Assigned inspector:NAME OF INSPECTOR Contact phone: TELEPHONE NUMBER

- Alternate inspector: NAME OF INSPECTOR Contact phone: TELEPHONE NUMBER

Daily Visual Monitoring of the Site

On a daily basis, the contractor personnel on the site shall be observant of any discharges or evidence of a prior discharge. If a discharge or evidence of a prior discharge is discovered by the contractor, the WPC Manager or contractor shall immediately notify the RE, and shall file a written report on the CEM-2061 Notice of Discharge form with the RE within 24 hours of the discharge or discovery of evidence of a prior discharge. Corrective measures shall be implemented immediately following the discovery of the discharge. Form CEM-2061 for reporting discharges is available in Appendix M.

Caltrans will notify the owner/operator of the MS4 and the RWQCB as soon as practicable, but no later than 24 hours after onset of or threat of discharge which can cause adverse conditions to the storm sewer system or the receiving water. This applies to any such discharge that is not covered by Office of Emergency Services (OES) procedures for discharges from a highway to a storm sewer system subject to a MS4 permit.

Discharges requiring reporting include:

- stormwater from a DSA discharged to a waterway without treatment by an effective combination of temporary erosion and sediment control BMPs
- non-stormwater, except conditionally exempted discharges, discharged to a waterway or a storm drain system, without treatment by an approved control measure (BMP)
- stormwater discharged to a waterway or a storm drain system where the control measures (BMPs) have been overwhelmed or not properly maintained or installed
- discharge of hazardous substances above the reportable quantities, as provided in 40 CFR 110.3, 117.3 or 302.4
- stormwater runoff containing hazardous substances from spills discharged to a waterway or storm drain system

The initial notification to the RWQCB of a discharge or threat of discharge will be made immediately for any discharge that can cause adverse conditions to the storm sewer system or the receiving water, with a followup in writing within 24 hours. Adverse conditions include, but are not limited to, serious violations or serious threatened violations of Waste Discharge Requirements (WDRs), significant spills of petroleum products or toxic chemicals, or serious damage to control facilities that could affect compliance. Caltrans shall perform follow-up monitoring of major spills and/or perform confirmation sampling to ensure that threats to waters of the U.S. have been eliminated as determined by the local RWQCB.

Visual Monitoring Prior To A Forecasted Storm Event

Visual monitoring of the project site is required when the forecast for precipitation is greater than 50 percent within the next 24, 48, 72, or 96 hours and the amount of precipitation forecasted for any 24-hour period during the storm event is 0.10 inch or greater within a 24-hour period. Site visual monitoring shall be conducted within 48 hours prior to a forecasted storm event. The pre-storm site visual monitoring shall include observations of:

- all drainage areas identified in Table 700.1.1.1 to identify any spills, leaks, or uncontrolled pollutant sources;
- all stormwater storage and containment areas identified in Table 700.1.1.2 to detect leaks and ensure maintenance of adequate freeboard
- all BMPs for proper installation and adequate maintenance.

Observations of the site and any recommended corrective actions will be documented in the CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced in the stormwater site inspection report. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented prior to the forecasted storm event.

Any corrective actions identified by a pre-storm visual monitoring site inspection shall be included in the REAP for the forecasted storm event.

Visual Monitoring during Extended Forecasted Storm Events

Stormwater visual monitoring site inspections shall be conducted at least once each 24-hour period during any extended forecasted storm events. During any extended forecasted storm event, the site visual monitoring inspector shall visually observe:

- stormwater discharges at all discharge locations (Table 700.1.1.3)
- all stored or contained stormwater that is derived from and discharged subsequent to the qualifying rain event producing precipitation of ½ inch or more at the time of discharge; stored or contained stormwater that will likely discharge after working hours, due to anticipated precipitation, shall be observed prior to the discharge during working hours

Stormwater discharges and stored or contained stormwater will be observed for the presence or absence of floating and suspended materials, sheens on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

During any forecasted storm event, stormwater visual monitoring site inspections will include the observation of all site BMPs for:

- proper installation
- achievement of maintenance requirements
- possible failure
- BMPs that could fail to operate as intended
- effectiveness, so that design changes can be implemented as soon as feasible if needed

Observations of the site and any recommended corrective actions will be documented in the CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on the stormwater site inspection report. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented within 72 hours of identification and completed as soon as possible. If BMPs require design changes, the changes shall be implemented and the SWPPP shall be amended to includethe changes.

Visual Monitoring Within 48 Hours after a Qualifying Rain Event

Site visual monitoring post-qualifying rain events shall be conducted within 48 hours after the qualifying rain event. The post-storm site visual monitoring inspection shall include observations of:

- discharges of stormwater that have not been processed by a BMP or evidence of stormwater that has not been processed by a BMP at all discharge locations
- evidence of a breach at stored or contained stormwater that is derived from and discharged subsequent to the

qualifying rain event producing precipitation of ½ inch or more at the time of discharge; stored or contained stormwater that will likely discharge after working hours, due to anticipated precipitation, shall be observed prior to the discharge during working hours

Stormwater discharges and stored or contained stormwater will be observed for the presence or absence of floating and suspended materials, sheens on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

Post-qualifying rain event stormwater visual monitoring site inspections will include observation of all site BMPs to determine if BMPs have failed to operate as intended because of:

- improper installation
- lack of maintenance
- lack of effectiveness

Observations of the site and any recommended corrective actions will be documented in the CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on the stormwater site inspection report. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented within 72 hours of identification and completed as soon as possible. If BMPs require design changes, the changes shall be implemented and the SWPPP shall be amended to include the changes.

Visual Monitoring of Non-Stormwater Discharges

For non-stormwater site visual monitoring, each drainage area will be monitored quarterly for the presence or prior indications of unauthorized and authorized non-stormwater discharges, and their sources. The presence or absence of non-stormwater discharges based on site observations will be documented in the CEM-2030 Stormwater Site Inspection Report. Documentation of observed non-stormwater discharges will include presence or absence of floating and suspended materials, sheens on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

Site observations of the site and any recommended corrective actions will be documented. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented within 72 hours of identification and completed as soon as possible. If BMPs require design changes, the changes shall be implemented and the SWPPP shall be amended to include the changes. Corrective actions shall be documented in the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary. Any photographs used to document observations will be referenced in the CEM-2030 Stormwater Site Inspection Report.

700.1.4 Visual Monitoring Follow-up and Tracking Procedures

For deficiencies identified during visual monitoring (site inspections), the required repairs or maintenance of BMPs shall begin and be completed as soon as possible, while taking into consideration worker safety. For deficiencies identified during visual site inspections that require design changes, including additional BMPs, the implementation of changes will begin within 72 hours of identification of the deficiency and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended, including the WCBMPL and WPCDs. If NALs are exceeded, corrective actions shall be approved by the WPC Manager and implemented immediately.

Deficiencies identified on site inspection reports, as well as corrections of deficiencies, will be tracked on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix I. Corrective action summaries shall be submitted to the RE when corrections are completed, but must be submitted within five (5) days of a site inspection.

700.1.5 Data Management and Reporting

The results of site visual monitoring (pre-storm, during storm, post-storm, and quarterly inspections) shall be recorded on the CEM-2030 Stormwater Site Inspection Report, in Appendix G. A copy of each report shall be kept in SWPPP File Category 20.33: .

All reports shall be provided to the RE within 24 hours of the site inspection.

Deficiencies identified during visual monitoring (site inspections) and correction of deficiencies will be tracked on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix I. Corrective Action Summary forms shall be submitted to the RE when corrections are completed, but must be submitted within five (5) days of the site inspection. Completed Stormwater Site Inspection Report Corrective Actions Summary forms shall be filed in SWPPP File Category 20.35: Corrective Actions Summary. A copy of the completed Corrective Actions Summary form will also be attached to the corresponding inspection report and shall be kept in the SWPPP Category 20.33.

If a discharge or evidence of a prior discharge is discovered by the Contractor, the WPC Manager or Contractor shall immediately notify the RE, and will file a written report to the RE within 24 hours of the discovery of evidence of a prior discharge. The written report to the RE will contain:

- the date, time, location, and type of unauthorized discharge;
- The nature of the operation that caused the discharge;
- An initial assessment of any impacts caused by the discharge;
- the BMPs deployed before the discharge;
- the date of deployment and type of BMPs deployed after the discharge, including additional measures installed or planned to reduce or prevent re-occurrence
- steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Reporting of discharges shall be documented on the CEM-2061 Notice of Discharge form, in Appendix M. Completed Notice of Dischage reports shall be submitted to the RE within 24 hours of discovery of evidence of a discharge. Copies of the Notice of Discharge reports will be kept in SWPPP File Category 20.61: Notice of Discharge Reports.

700.2 Sampling and Analysis Plans

700.2.1 General SAP

A sampling and analysis plan (SAP) describes how samples will be collected, under what conditions, where and when the samples will be collected, what the sample will be tested for, what test methods and detection limits will be used, and what methods/procedures will be performed to ensure the integrity of the sample during collection, storage, shipping and testing (i.e., quality assurance/quality control protocols). Therefore, a SAP shall include the components listed below.

1. Scope of Monitoring Activities
2. Monitoring Preparation
3. Monitoring Strategy

4. Sample Collection and Handling
5. Sampling Analysis
6. Quality Control and Assurance
7. Data Management and Reporting
8. Data Evaluation
9. Change of Conditions

This SWPPP contains a non-visible pollutants SAP. The SWPPP may also contain four additional specific SAPS based on the project risk level, project dewatering requirements, RWQCB sampling and analysis requirements, and a SAP for monitoring an active treatment system.

Sampling and analysis for Risk Level 1 projects will be documented on the CEM-2048 Storm Event Sampling and Analysis Plan, available in Appendix N. For Risk Level 2 and Risk Level 3 projects, sampling and analysis will be documented on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, available in Appendix O.

700.2.1.1 Scope of Monitoring Activities

For specific details with regard to monitoring activities, refer to the specific SAP identified below.

- Non-visible Pollutants (Section 700.2.2.1)
- Non-Stormwater Discharges (Section 700.2.3.1)
- Stormwater pH and Turbidity (Section 700.2.4.1)
- Monitoring required by the Regional Board (Section 700.2.5.1)
- Monitoring for Active Treatment Systems (ATS) (Section 700.2.6.1)

700.2.1.2 Monitoring Preparation

To ensure an effective construction site monitoring program, the following monitoring preparation activities are required:

- identifying qualified sampling personnel
- ensuring the availability of an adequate quantity of monitoring supplies
- ensuring the availability of field instruments; field instruments must be properly maintained and calibrated prior to sampling events
- identifying a qualified testing laboratory that is capable of performing stormwater and non-stormwater analysis for those constituents that must be tested in a laboratory

700.2.1.2.1 Qualified Sampling Personnel

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program (SWAMP) *2008 Quality Assurance Program Plan* (QAPrP).

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

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

Company Name:	**Insert Company Name-then TAB.**
Address:	**Insert Address 1 then press ENTER to insert Address 2**
	Insert City, State, and ZIP-then TAB.
Contact Name:	**Insert Contact Name-then TAB.**
Title:	**Insert Title-then TAB**
Phone Number:	**Insert Telephone Number(s)-then TAB.**
Emergency Phone Number (24/7):	**Insert Telephone Number(s)-then TAB.**
Email Address:	**Insert Email Address TAB.**

- Stormwater sampling and field analysis will be performed by the following primary and alternative stormwater samplers:[Insert name of the primary stormwater sampler and telephone number]
- [Insert name of the alternative stormwater sampler and telephone number

The primary stormwater sampler has received the following stormwater sampling training:

- [LIST]

The primary stormwater sampler has the following stormwater sampling experience:

- [LIST]

The alternate stormwater sampler has received the following stormwater sampling training:

- [LIST]

The alternate stormwater sampler has the following stormwater sampling experience:

- [LIST]

Training records of designated contractor sampling personnel are provided in Attachment E, Contractor Personnel Stormwater Training.

Safety practices for sample collection will be in accordance with the.

700.2.1.2.2 Monitoring Supplies

An adequate stock of monitoring supplies and equipment for sampling 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 prevent the supplies/equipment from coming into contact with rain or direct sunlight. Supplies maintained at the project site will

include, but are not limited to, surgical 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 the CEM-2050 Sample Information, Identification, and Chain-of-Custody Record forms.

The contractor will obtain and maintain the field testing instruments, identified in Section 700.2.1.2.3, for analyzing samples in the field by contractor sampling and testing personnel.

[specify laboratory or environmental consultant] will provide monitoring supplies and equipment, including, but not limited to, surgical 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 CEM-2050 Sample Information, Identification, and Chain-of-Custody Record forms.

[specify laboratory or environmental consultant] will obtain and maintain the field testing instruments, identified in Section 700.2.1.2.3, for analyzing samples in the field by their sampling and testing personnel.

700.2.1.2.3 Field Instruments

The field instrument(s) shown in Table 700.2.1.2.3: Field Instruments will be used to analyze the constituents shown:

TABLE 700.2.1.2.3
FIELD INSTRUMENTS

Field Instrument	Constituent
Hanna pH meter, or equal pH	pH
LaMotte turbidity meter, or equal	turbidity

The instrument(s) shall be maintained in accordance with manufacturer's instructions.

The instrument(s) shall be calibrated before each sampling and analysis event.

A Standard Operating Procedure (SOP) for calibration and maintenance of field instruments shall be implemented based on the meter manufacturer's instructions. A copy of the manufacture's instructions shall be attached to the SOP so that they are readily available.

Instrument maintenance shall be documented on the CEM-2055 Stormwater Equipment Maintenance Log, in Appendix P. Instrument calibration shall be documented using the following forms:

- CEM-2056 - Stormwater Turbidity Meter Calibration Record (Appendix Q)
- CEM-2057 - Stormwater pH Meter Calibration Record (Appendix R)
- CEM-2058 - Stormwater Meter Calibration Record (Appendix S)

Maintenance and calibration records shall be maintained in SWPPP File Category 20.55: Field Testing Equipment Maintenance and Calibration Records.

700.2.1.2.4 Testing Laboratory

Samples collected on the project site that require laboratory testing will be tested by a laboratory certified by the State Department of Health Services. Samples collected on the project site will be analyzed by:

Laboratory Name:	**Insert Laboratory Name - Then TAB**
Address:	**Insert Address 1 and press ENTER to insert Address 2 or TAB to next field. Insert City, State, ZIP-then TAB**
Contact Name:	**Insert Contact Name- Then TAB.**
Title:	**Insert Title-then TAB**
Phone Number:	**Insert Telephone Number(s)-then TAB.**
Emergency Phone Number (24/7:	**Insert Telephone Number(s)-then TAB.**
Email Address:	**Insert Email Address - then TAB.**

700.2.1.3 Monitoring Strategy

The monitoring strategy includes identifying analytical constituents, potential sampling locations, identification of actual sampling locations, and sampling schedule,

700.2.1.3.1 Analytical Constituents

Stormwater and non-stormwater discharges shall be monitored for the analytical constituents specified in the specific SAP(s) in this SWPPP.

700.2.1.3.2 Potential Sampling Locations

Potential sampling locations must be representative of the stormwater and non-stormwater discharges from the construction site. Existing conditions and associated construction activities within each drainage area form the basis for determining representative stormwater sampling locations.

Project drainage areas and potential sampling locations have been determined by:

- reviewing project plans
- visiting project site
- reviewing topography maps

The WPCDs show the demarcation of all drainage areas that are either:

- within the project site
- cover part of the project site

The QSD must identify potential sampling locations where concentrated run-off:

- leaves the Caltrans right-of-way
- drains into an MS4
- discharges into a receiving water

Potential run-on sampling locations were determined where concentrated run-on:

- enters the right-of-way
- combines with the stormwater on site and then discharges into an MS4, including the location(s) of discharge into the MS4

The following locations were determined when runoff discharges directly into receiving water bodies:

- the discharge location(s) into the receiving water
- a potential sampling location upstream of all discharge locations
- a potential sampling location downstream from all discharge location(s) into the receiving water.

Necessary potential sampling locations were determined when:

- there are potential sources of non-visible pollutants, as discussed in Section 500.1, and discharge locations are down gradient
- run-on locations are present that may contribute non-visible pollutants
- there are potential non-stormwater discharges and corresponding discharge locations are down gradient
- there are proposed dewatering construction activities

If an ATS is used on site, then sample locations must be included in Section 700.2.6.

Potential stormwater and non-stormwater sampling locations must be shown on the WPCDs in Attachment BB and listed in Attachment EE: Stormwater Sample Locations. The QSD has identified each of the potential sampling locations with a unique sample location identification code, as shown below. The identification code must start with a number and must be different for each location. If the construction site lies in a west-to-east orientation, starting with one (01) from the east, the potential sampling locations shall be numbered toward the west. If the construction site lies in a south-to-north orientation, the potential sampling locations shall be numbered toward the north.

To further distinguish among the locations, each potential sampling location has been identified with one of the following abbreviations based on the sampling location type:

- discharge locations leaving Caltrans right-of-way: DL
- discharge locations from areas with known non-visible pollutants: NVP
- discharge locations up gradient of areas with known non-visible pollutants: UNVP
- discharge locations to an MS4: MS

- run-on locations: RO
- discharge locations into a receiving water: RW
- downstream of all discharge locations: RWD
- upstream of all discharge locations: RWU
- dewatering discharge locations: DDL
- contained stormwater discharge locations: CSDL
- discharge locations for ATS: ATS

The unique sample location identification code shall follow this format, **SSSTTTTXX**, where:

SSS	=	sampling location identifier number (e.g., 010)
TTTT	=	sampling location type (e.g. DL)
XX	=	identifier number for the type of sampling location

For example, the sampling location identification for the 15th sampling location based on starting from the south end of the project for a stormwater discharge location that has been identified to be the ninth discharge location would be **015DL09.**

Potential sampling locations shown on the WPCDs shall be identified with unique sampling location identifiers. Each potential sample location must be listed on Stormwater Sample Locations in Attachment EE. The unique identification of each potential sampling location based on its number and abbreviation of type shall be used on all sampling documentation.

The WPC Manager may have to revise and/or add additional sampling locations during the course of construction as conditions dictate.

700.2.1.3.3 Identification of Actual Sampling Locations

For each forecasted storm event, actual sampling locations will be determined by the WPC Manager based on the strategy described in each specific SAP. Sampling and analysis locations for Risk Level 1 projects will be documented on the CEM-2048 Storm Event Sampling and Analysis Plan, in Appendix N. For Risk Level 2 and Risk Level 3 projects, sampling and analysis locations will be documented on CEM-2048 Storm Event Sampling and Analysis Plan, in Appendix N, or CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, in Appendix O, based on the forecasted storm event.

700.2.1.3.4 Sampling Schedule

For the sampling schedule, see the specific SAPs in this CSMP. If a scheduled sampling activity is unsafe because of dangerous weather conditions, such as flooding and electrical storms, then the stormwater sampler shall document why an exception to performing the sampling was necessary.

700.2.1.4 Sample Collection and Handling

Sample collection procedures shall be used to ensure that representative samples are collected and that the potential for

contamination of samples is minimized. Sample handing procedures are followed to ensure that samples are identified accurately and that the required analysis is clearly documented. Chain-of-custody requirements for samples are necessary to trace the possession of the sample from collection through analysis.

700.2.1.4.1 Sample Collection Procedures

Samples shall be collected, maintained and shipped in accordance with the SWAMP's 2008 QAPrP.

Grab samples shall be collected and preserved in accordance with the methods identified in each specific SAP. Only personnel trained in proper water quality sampling shall collect samples.

Samples from areas of sheet flow shall be collected using the collection procedures described below to concentrate the flow in order to collect a sample or follow other procedures approved by the RE.

- Place several rows of sandbags in a half circle directly in the path of the sheet flow to pond water, and wait for enough water to spill over. Then place a cleaned or decontaminated flexible hose along the top, and cover with another sandbag so that ponded water will only pour through the flexible hose and into sample bottles. Do not reuse the same sandbags during future sampling events as they may cross-contaminate future samples.

- Place a cleaned or decontaminated dustpan with open handle in the path of the sheet flow so that water will pour through the handle and into sample bottles.

For receiving water sampling, upstream samples shall be collected to represent the water body up gradient of the construction site. Downstream samples shall be collected to represent the water body mixed with direct discharge from the construction site. Samples shall not be collected directly from ponded, sluggish, or stagnant water.

Receiving water upstream and downstream samples shall be collected using one of the following methods:

- placing a sample bottle directly into the stream flow in or near the main current upstream of sampling personnel and allowing the sample bottle to fill completely;

  OR

- placing a decontaminated or sterile bailer or other sterile collection devise in or near the main current to collect the sample and then transferring the collected water to appropriate sample bottles allowing the sample bottle to fill completely.

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

- Wear a clean pair of surgical gloves donned prior to the collection and handling of each sample at each location.

- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water. Dispose of decontamination water/soaps appropriately (i.e., do not discharge to the storm drain system or receiving water).

- Do not allow the inside of the sample bottle to come into contact with any material other than the run-off sample.

- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.

- Do not leave the cooler lid open for an extended period of time once samples are placed inside.

- Do not sample near a running vehicle where exhaust fumes may impact the sample.
- Do not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Do not eat, smoke, or drink during sample collection/field measurement.
- Do not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample.

700.2.1.4.2 Sample Handling Procedures

Immediately following collection, sample bottles to be forwarded for laboratory analytical testing shall be capped, labeled, documented on the Stormwater Sampling Information, Identification, and Chain-of-Custody Record form, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at 0 ±4 degrees Celsius, and delivered within 24 hours to the laboratory shown in sub-section 700.2.1.2.4.

Immediately following collection, samples used for field analysis shall be tested in accordance with the field instrument manufacturer's instructions and results recorded on the CEM-2052 Stormwater Sample Field Test Report form.

700.2.1.4.3 Sample Documentation Procedures

All original data documented on sample bottle identification labels, the CEM-2050 Stormwater Sample Information, Identification and Chain-of-Custody Record form, and the CEM-2051 Stormwater Sampling and Testing Activity Log, 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.

The following forms, used for sample documentation, are provided in the SWPPP appendices:

- CEM-2050 Stormwater Sampling Information, Identification, and Chain-of-Custody Record, in Appendix T
- CEM-2051 Stormwater Sampling and Testing Activity Log, in Appendix U

Duplicate samples shall be identified in a manner consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the CEM-2051 Stormwater Sampling and Testing Activity Log.

<u>Sample Bottle Identification Labels:</u> Sampling personnel shall attach an identification label to each sample bottle, which shall include, at a minimum, the following information:

- project name
- contract number and/or project identifier number
- unique sample identification code, which shall follow this format, **SSSSSYYMMDDHHmmTT**, where:

SSSSS = sampling location identifier number (e.g., 01MS1)

YY	=	last two digits of the year (e.g. 11)
MM	=	month (01-12)
DD	=	day (01-31)
HH	=	hour sample collected (00-23)
mm	=	minute sample collected (00-59)
TT	=	Type or QA/QC Identifier (if applicable)
G	=	grab
FS	=	field duplicate

For example, the sample number for a grab sample collected at Station 01MS1, collected at 4:15PM on December 8, 2011 would be **01MS11112081615G**.

- constituent to be analyzed
- initials of person who collected the sample

Stormwater Sampling and Testing Activity Log: A log of sampling events and test results shall include:

- sampling date
- separate times for collected samples and QA/QC samples, recorded to the nearest minute
- unique sample identification number and location
- constituent analyzed
- names of sampling personnel
- weather conditions (including precipitation amount)
- test results
- other pertinent data

Sample Information, Identification and Chain-of-Custody Record Forms: All samples to be analyzed by a laboratory will be accompanied by a CEM-2059 Sample Information, Identification and Chain-of-Custody Record form. The samplers will sign the Sample Information, Identification and Chain-of-Custody Record form when samples are turned over to the testing laboratory. Chain-of-custody procedures will be strictly adhered to for QA/QC purposes.

700.2.1.5 Sample Analysis

For the analytical methods to be used to determine the presence of pollutant(s), see the specific SAPs in this CSMP.

700.2.1.6 Quality Assurance/Quality Control

For verification of laboratory or field analysis, duplicate samples shall be collected at a rate of 10 percent or 1 minimum duplicate per sampling event. The duplicate sample shall be collected, handled, and analyzed using the same protocols as primary samples. A duplicate sample shall be collected immediately after the primary sample has been collected. Duplicate samples shall not influence any evaluations or conclusions; however, they shall be used as a check on laboratory or field analysis quality assurance.

700.2.1.7 Data Management and Reporting

All test results shall be documented on either the CEM-2052 Stormwater Sample Field Test Report form, or the CEM-2054 Stormwater Sample Laboratory Test Report form, and entered on the CEM-2051 Stormwater Sampling and Testing Activity Log. 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.

For field tests, the submitted information shall include a signed copy of the CEM-2050 Sample Information, Identification and Chain-of-Custody Record form and CEM-2052 Stormwater Sample Field Test Report form. Appendix V contains the CEM-2052 Stormwater Sample Field Test Report form , which must accompany the Sample Information, CEM-2050 Identification and Chain-of-Custody Record form from Appendix T. The test results shall be recorded on the CEM-2051 Stormwater Sampling and Testing Activity Log, in Appendix U.

For laboratory testing, all laboratory analysis results shall be reported on CEM-2054 Stormwater Sample Laboratory Test Result form, in Appendix W. If the CEM-2054 Stormwater Sample Laboratory Test Report form is not completed by the testing laboratory, then the laboratory report used to complete the CEM-2054 Stormwater Sample Laboratory Test Report form shall be attached to the completed CEM-2054 Stormwater Sample Laboratory Test Report form. For each test report, the CEM-2054 Stormwater Sample Laboratory Test Report and CEM-2050 Sample Information, Identification and Chain-of-Custody Record form shall be reviewed for consistency among laboratory methods, sample identifications, dates, and times for both primary samples and QA/QC samples. The test results shall be recorded on the CEM-2051 Stormwater Sampling and Testing Activity Log form.

All sampling and testing documentation, including CEM-2050 Sample Information, Identification, and Chain-of-Custody Record forms, CEM-2051 Stormwater Sampling and Testing Activity Logs, CEM-2052 Stormwater Sample Field Test Reports, and CEM-2054 Stormwater Sample Laboratory Test Reports shall be kept in the appropriate SWPPP file category. Sampling and testing documentation shall be filed in the appropriate following SWPPP file category based on the specific SAP that required the sampling and analysis:

- non-visible pollutant sampling and testing – SWPPP File Category 20.51;
- non-stormwater discharge sampling and testing – SWPPP File Category 20.50
- turbidity, pH, and SSC sampling and testing – SWPPP File Category 20.52
- required RWQCB sampling and testing – SWPPP File Category 20.53
- ATS sampling and testing – SWPPP File Category 20.54

If corrective actions are taken as a result of the data evaluation, a copy of the completed CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary shall be filed in File Category 20.35: Corrective Actions Summary.

A copy of completed sampling records and reports and an updated CEM Stormwater Sampling and Testing Log shall be submitted to the RE. All water quality analytical results, including QA/QC data, shall be submitted to the RE within 48 hours of sampling for field analyzed samples, and within 30 days for laboratory analyses.

In addition to a paper copy of the water quality test results, the test results shall be submitted electronically in Microsoft

Excel (.xls) format, and shall include, at a minimum, the following information from the lab: Sample ID Number, Contract Number, Constituent, Reported Value, Laboratory Name, Method Reference, Method Number, Method Detection Limit, and Reported Detection Limit. Electronic copies of stormwater data shall be forwarded by email to at Insert email address-then TAB. for inclusion into a statewide database.

700.2.1.8 Data Evaluation

For data evaluation of stormwater sample test results, see specific SAPs.

700.2.1.9 Change of Conditions

Whenever stormwater visual monitoring site inspections indicate a change in site conditions that might affect the appropriateness of sampling locations, sampling and testing protocols shall be revised accordingly. All such revisions shall be implemented as soon as feasible, and the SWPPP updated or amended.

700.2.2 Sampling and Analysis Plan for Non-Visible Pollutants

This SAP has been prepared for monitoring non-visible pollutants in stormwater and non-stormwater discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of the CGP and applicable requirements of the Caltrans *Construction Site Monitoring Program Guidance Manual,* . This SAP for monitoring non-visible pollutants includes all of the components listed in Section 700.2.1.

700.2.2.1 Scope of Monitoring Activities

The scope of monitoring for discharges of non-visible pollutants from the construction site is based on the construction materials and construction activities to be performed on the project site, potential for the presence of non-visible pollutants, based on the historical use of the site, and potential non-visible pollutants in run-off from areas where soil amendments have been used on the project site.

The construction materials, wastes or activities listed below, and identified in Section 500.1.1, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment BB.

- Concrete curing and glazing compounds
- Solvents, thinners and non colored paint products
- Non visible petroleum materials
- Soil tackifier/stabilizers
- Pesticides and fertilizers

The existing site features listed below, and identified in Section 500.1.2, are potential sources of non-visible pollutants to stormwater discharges from the project.

- Aerially Deposited Lead

The soil amendments listed below have the potential to change the chemical properties, engineering properties, or

erosion resistance of the soil and will be used on the project site.

- Polyacrylamide and copolymer of acrylamide
- Pesticides and fertilizers
- Soil amendments, compost and wood chip mulch

700.2.2.2 Monitoring Preparation

Refer to the general requirements in General SAP Section 700.2.1.2 for monitoring preparation.

700.2.2.2.1 Qualified Sampling Personnel

Refer to the general requirements in General SAP Section 700.2.1.2.1 for Qualified Sampling Personnel.

700.2.2.2.2 Monitoring Supplies

Refer to the general information in General SAP Section 700.2.1.2.2 regarding monitoring supplies.

700.2.2.2.3 Field Instruments

Refer to the general information in General SAP Section 700.2.1.2.3 regarding field instruments.

700.2.2.2.4 Testing Laboratory

Refer to the contact information found in General SAP Section 700.2.1.2.4 for the Testing Laboratory.

700.2.2.3 Monitoring Strategy

The monitoring strategy for non-visible pollutants in stormwater discharges is to identify all potential non-visible pollutants that may be on the project site, non-visible pollutant sources, and water quality indicators that will indicate the presence of the non-visible pollutant in stormwater discharges. Locations will be identified where sources of non-visible pollutants will be used, stored or exist because of historical use of the project site so that these areas are monitored prior to and during forecasted storm events.

Non-visible pollutant monitoring is only required where a discharge can cause or contribute to an exceedance of a water quality standard based on one of the following triggers:

- construction materials are waste are exposed
- the site contains historical non-visible pollutants
- construction activity has occurred or material has been placed within the past 24 hours that may cause an exceedance of a water quality standard
- there is run-on to the site that may contains non-visible pollutants
- there is a breach, malfunction, leak or spill from a BMP

When one of the triggers that indicates a non-visible pollutant source may have come in contact with stormwater is discovered during a site inspection conducted prior to, during or after a forecasted storm event, the WPC Manager will require that sampling and analysis of the stormwater discharge be conducted for the applicable non-visible pollutant water quality indicator(s).

For the forecasted storm event in which a trigger for a non-visible pollutant sampling and analysis has occurred, the WPC Manager will also require the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. The WPC Manager will perform an evaluation of the analysis results from the non-visible pollutant stormwater discharge sampling location and the analysis results from the uncontaminated run-off sampling location to determine if there is an increased level of the tested non-visible pollutant analyte in the stormwater discharge.

700.2.2.3.1 Analytical Constituents

Identification of Potential Non-Visible Pollutants

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

TABLE 700.2.2.3.1
POTENTIAL NON-VISIBLE POLLUTANTS AND WATER QUALITY INDICATOR CONSTITUENTS

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Portland concrete cement & masonry products	Masonry products and non-pigmented curing compounds	Acidity, alkalinity, pH, VOC or SVOC
Landscaping and other products	Fertilizers (organic/inorganic), herbicides and pesticides	Nitrate, phosphate, organic nitrogen, potassium, TOC's, COD's, herbicide, pesticide or other (actual compounds in products used)
Painting products	Sealants, solvents, resins and thinners	SVOC's, VOC's and COD's
Adhesives	Adhesives	COD's, phenols, SVOC's
Vehicle	Batteries	Sulfiric acid, lead and pH
Soil amendment/stabilization products	Aluminum, calcium, vanadium, zinc and polymer/copolymer	Ash, organic nitrogen, BOD's, COD's, DOC's, Nitrate, Sulfate and nickel
Treated wood waste	Ammoniacal-Copper-Zinc-Arsenate, Copper-Chromium-Arsenic, Ammoniacal-Copper-Arsenate and Copper Naphthenate	Arsenic, total chromium, copper and zinc (actual compounds in products used or products existing on-site)

700.2.2.3.2 Potential Sampling Locations

Using the criteria in Section 700.2.1.3.2, the potential sampling locations on the project site for monitoring non-visible pollutants were identified. Sampling locations are based on: proximity to planned non-visible pollutant storage; occurrence or use; accessibility for sampling and personnel safety; and other factors in accordance with the applicable requirements in the *Caltrans Construction Site Monitoring Program Guidance Manual*, latest edition. Sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

12 sampling location(s) on the project site and the contractor's support facilities have been identified as potential locations for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant

producing construction activities are planned. Potential non-visible pollutant sampling locations are listed in the Table 700.2.2.3.2.1: Potential Non-Visible Pollutant Sampling Locations.

TABLE 700.2.2.3.2.1
POTENTIAL NON-VISIBLE POLLUTANT SAMPLING LOCATIONS

Sampling Location Identifier	Location Description
01DL01	SR 116 A Line Station 19+90 Outfall (Location 2)
04DL02	SR 116 A Line Station 73+10 Champlin Creek Box Culvert Inlet (Location 3 Conservation Easement)
05DL03	SR 116 A Line 75+95 Tributary to Champlin Creek Corrugated Steel Pipe Inlet (Location 3 Conservation Easement)
07DL04	SR 116 A Line 77+80 Tributary to Champlin Creek Corrugated Steel Pipe Inlet (Location 3 Conservation Easement)
10DL05	SR 116 A Line 87+00 Champlin Creek flow line (Location 3)
14DL06	SR 116 A Line 91+30 Champlin Creek flow line (Location 3)
16DL07	SR 116 A Line 97+10 Champlin Creek Corrugated Steel Pipe Inlet (Location 4)
19DL08	SR 116 A Line 114+00 Tributary to Champlin Creek flow line (Location 5)
22DL09	SR 116 A Line 130+25 "L" Headwall (Location 6)
24DL10	SR 116 A Line 137+25 "L" Headwall (Location 7)
26DL11	SR 116 A Line 156+00 Champlin Creek flow line (Location 8)
28DL12	SR 116 A Line 167+75 Champlin Creek flow line (Location 9)

Potential non-visible pollutant sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

12 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 (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.1.1; (2) potential non-visible pollutants due to historical use of the site, as identified in Section 500.1.2; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soils areas. Potential non-visible pollutant uncontaminated sampling locations are listed in Table 700.2.2.3.2.2: Potential Uncontaminated Non-visible Pollutant Sampling Locations.

TABLE 700.2.2.3.2.2
POTENTIAL UNCONTAMINATED NON-VISIBLE POLLUTANT SAMPLING LOCATIONS

Sampling Location Identifier	Location Description

02RO01	SR 116 A Line Station 22+30 Earthen Swale flow line (Location 2)
03RO02	SR 116 A Line Station 69+50 Champlin Creek flow line(Location 3 Conservation Easement)
06RO03	SR 116 A Line Station 77+80 Earthen Drainage flow line (Location 3 Conservation Easement - top of site)
08RO04	SR 116 A Line 79+10 Champlin Creek flow line (Location 3)
12RO05	SR 116 A Line 90+00 Champlin Creek flow line (Location 3)
15RO06	SR 116 A Line 96+90 Champlin Creek flow line (Location 4)
17RO07	SR 116 A Line 113+10 Tributary to Champlin Creek flow line (Location 5)
18RO08	SR 116 A Line 113+95 Tributary to Champlin Creek flow line (Location 5)
21RO09	SR 116 A Line 128+00 Earthen Swale flow line (Location 6)
23RO10	SR 116 A Line 135+75 Earthen Swale flow line (Location 7)
25RO11	SR 116 A Line 155+05 Champlin Creek flow line at Box Culvert Outlet (Location 8)
27RO12	SR 116 A Line 165+75 Champlin Creek flow line (Location 9)

Potential non-visible pollutant uncontaminated sampling locations shall be shown on the WPCDs from Attachment BB and listed on Stormwater Sampling Locations in Attachment EE.

700.2.2.3.3 Actual Sampling Locations

Sampling for non-visible pollutants at any potential non-visible pollutant sampling location will be based on any of the conditions listed below having been identified during the visual monitoring site inspections.

- Locations where 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.

- Locations where 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 forecasted storm event, and (3) the potential exists for discharge of non-visible pollutants to surface waters or a storm drain system.

- Locations where a construction activity (including but not limited to those identified in Section 500.1.1) with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the forecasted storm event, (2) involved the use of applicable BMPs that were observed to be breached, malfunctioning, or improperly implemented, and (3) resulted in the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

- Locations where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and the potential exists for discharge of non-visible pollutants to surface waters or a storm drain system.

- Locations where stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and the potential exists for discharge of non-visible pollutants to surface waters or a storm drain system.

If the presence of a material storage, waste storage, or operations area where spills have been observed or the potential for the discharge of non-visible pollutants to surface waters or a storm drain system was noted during a site inspection conducted prior to or during a forecasted storm event and such an area has not been identified on the list of potential non-visible pollutant sampling locations, the WPC Manager must identify the corresponding discharge location and the corresponding upgradient sampling location as actual non-visible sampling locations. The additional sampling location for non-visible pollutant monitoring shall be shown on the WPCDs from Attachment BB and added to Attachment EE: Stormwater Sampling Locations.

For forecasted storm events, the selection of the actual sampling locations for non-visible pollutants by the WPC Manager will be documented on the CEM-2048 Storm Event Sampling and Analysis Plan form, in Appendix N. The completed SAP for each storm event will be filed in File Category 20.46: Storm/Rain Event Action, Sampling and Analysis Plans. Within 24 hours prior to a storm event, a copy of the storm event SAP shall be submitted to the RE.

For qualifying rain events, the selection of the actual sampling locations for non-visible pollutants by the WPC Manager will be documented on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, in Appendix O. The completed SAP for each qualifying rain event will be filed in File Category 20.46: Storm/Rain Event Sampling and Analysis Plans. Within 24 hours prior to a storm event, a copy of the SAP shall be attached to the REAP and submitted to the RE.

700.2.2.3.4 Sampling Schedule

In addition to the general scheduling requirements in General SAP Section 700.2.1.3.4, samples for non-visible pollutant monitoring, including both the non-visible pollutants samples and uncontaminated background samples, shall be collected during the first two hours of discharge from storm events that result in a sufficient discharge for sample collection. Samples shall be collected during working hours.

700.2.2.4 Sample Collection and Handling

Refer to the general requirements for sample collection and handling in General SAP Section 700.2.1.4.

700.2.2.4.1 Sample Collection Procedures

Refer to the general procedures for sample collection in General SAP Section 700.2.1.4.1.

700.2.2.4.2 Sample Handling Procedures

Refer to the general procedures for sample handling in General SAP Section 700.2.1.4.2.

700.2.2.4.3 Sample Documentation Procedures

In addition to the general sample documentation procedures provided in General SAP Section 700.2.1.4.3, when applicable, the contractor's stormwater inspector will document in the CEM-2030 Stormwater Site Inspection Report,

that samples for non-visible pollutants were taken during a storm event, based on the criteria for non-visible pollutant sampling described in Section 700.2.2.3.3.

700.2.2.5 Sample Analysis

Samples collected for monitoring of non-visible pollutants will be analyzed by the laboratory identified in Section 700.2.1.2.4. Samples shall be analyzed for the constituents identified in Table 700.2.2.3.1, using the analytical methods identified in the following table, entitled "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants."

TABLE 700.2.2.5
SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING NON-VISIBLE POLLUTANTS

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
VOCs-Solvents	EPA 601/602 or EPA 624 (VOC)	3 x 40 mL	VOA-glass	Store at 4˚C, HCl to pH<2	1 µg/L	14 days
SVOCs	EPA 625 (SVOC)	1 x 1 L	Glass-Amber	Store at 4˚C	10 µg/L	7 days
Herbicides	EPA 8151A	1 x 1 L	Glass-Amber	Store at 4˚C	Check Lab	7 days
Pesticides/PCBs	EPA 8081A/8082	1 x 1 L	Glass-Amber	Store at 4˚C	0.1 µg/L	7 days
BOD	EPA 405.1	1 x 500 mL	Polypropylene	Store at 4˚C	1 mg/L	48 Hours
COD	EPA 410.4 (COD)	1 x 250 mL	Glass-Amber	Store at 4˚C, H2SO4 to pH<2	5 mg/L	28 days
DO	SM 4500-O G	1 x 250 mL	Glass-Amber	Store at 4˚C	Check Lab	8 Hours
TOC	SM 5310 C (TOC)	1 x 100 mL	Polypropylene	Store at 4˚C	0.1 mg/L	48 hours
Nitrate	EPA 300.0 (Nitrate)	1 x 100 mL	Polypropylene	Store at 4˚C	0.1 mg/L	48 hours
Organic Nitrogen	SM4500-NH3 C (TKN)/EPA 351.3 (TKN)	1 x 100 mL	Polypropylene	Store at 4˚C	0.1 mg/L	48 hours
Phosphate	EPA 365.3 (Phosphate)	1 x 100 mL	Polypropylene	Store at 4˚C	0.1 mg/L	48 hours
pH	Field test with calibrated portable pH Meter or EPA 150.2 (pH)	1 x 100 mL	Polypropylene	None	Unit less	15 minutes
Alkalinity	Field test with calibrated portable pH Meter or SM 2320 (Alkalinity)	1 x 250 mL	Polypropylene	Store at 4˚C	1 mg/L	14 days

TABLE 700.2.2.5
SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING NON-VISIBLE POLLUTANTS

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
Metals (Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, K, Pb, Mg, Mn, Mo, Ni, Se, Na, Th, Va, Zn)	EPA 200.8/1631 (Metal), 200.7 (Calcium)	1 x 250 mL	Polypropylene	Store at 4˚C, HNO_3 to pH<2	0.1 mg/L	6 months
Acidity	Field test with calibrated portable pH Meter or SM 2310B (Acidity)	1 x 100mL	Glass-Amber	Store at 4˚C	Unit less	14 days
Phenols	EPA 420.1 (Phenol)	1 x 250 mL	Glass-Amber	Store at 4˚C, H2SO4 to pH<2	5 mg/L	28 days
Sulfiric Acid	EPA 300.0 (Sulfate)	1 x 100 mL	Polypropylene	Store at 4˚C	0.1 mg/L	48 hours

Notes:
°C – Degrees Celsius
BOD – Biochemical Oxygen Demand
COD – Chemical Oxygen Demand
DO – Dissolved Oxygen
DOC – Dissolved Organic Carbon
EPA – Environmental Protection Agency
HCl – Hydrochloric Acid
HNO_3 – Nitric Acid
L – Liter
mg/L – Milligrams per Liter
µg/L – Micrograms per Liter
mL – Milliliter
PCB – Polychlorinated Biphenyl
SVOC – Semi-Volatile Organic Compound
SM – Standard Method
TKN – Total Kieldah Nitrogen
TOC – Total Organic Carbon
H_2SO_4 – Sulfuric Acid
VOA – Volatile Organic Analysis
VOC – Volatile Organic Compound

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

Refer to General SAP Section 700.2.1.2.3 for general information regarding field instrument identification and requirements.

700.2.2.6 Quality Assurance/Quality Control

Refer to the general requirements regarding Quality Assurance/Quality Control (QA/QC) in General SAP Section 700.2.1.6.

700.2.2.7 Data Management and Reporting

Refer to general requirements for data management and reporting in Section General SAP 700.2.1.7.

700.2.2.8 Data Evaluation

Water quality sample analytical results for non-visible pollutants shall be compared to the uncontaminated background sample results. Should the discharge (downgradient) sample show an increased level of the tested non-visible pollutant analyte relative to the background sample, 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-visual pollutant concentrations. Once deemed necessary, corrective actions shall be implemented within 72 hours of identification, completed as soon as possible, and documented on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary. Revisions/design changes to BMPs required as a result of data evaluation and site assesment shall be implemented based on an amendment to the SWPPP.

700.2.2.9 Change of Conditions

Refer to the general requirements for change of conditions in General SAP Section 700.2.1.9.

700.2.3 Sampling and Analysis Plan for Non-Stormwater Discharges

This SAP has been prepared for monitoring non-stormwater discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of the CGP and applicable requirements of the *Caltrans Construction Site Monitoring Program Guidance Manual,* . This SAP for monitoring non-stormwater discharges includes all of the components listed in Section 700.2.1.

700.2.3.1 Scope of Monitoring Activities

Non-stormwater discharges can be authorized by a separate NPDES permit or conditional exemption. For non-stormwater discharges that are unauthorized or non-exempt where runoff is discharged off site, sampling and testing of the discharge must be conducted in compliance with the CGP and Caltrans Permit.

Conditionally exempt non-stormwater discharges include: water line and fire hydrant flushing, irrigation water, landscape irrigation, uncontaminated ground water dewatering, and other discharges not subject to a separate general NPDES permit adopted by a region. Conditionally exempt discharges are not prohibited (i.e., they are authorized) if they are identified as not being sources of pollutants to receiving waters, or if appropriate control measures (BMPs) to minimize the adverse impacts of such sources are developed and implemented.

Examples of unauthorized non-stormwater discharges common to construction activities include:

- vehicle and equipment wash water, including concrete washout water
- slurries from concrete cutting and coring operations, or grinding operations
- slurries from concrete or mortar mixing operations
- residue from high-pressure washing of structures or surfaces
- wash water from cleaning painting equipment
- runoff from dust control applications of water or dust palliatives
- sanitary and septic wastes
- chemical leaks and/or spills of any kind, including but not limited to, petroleum, paints, cure compounds, etc

When an unauthorized non-stormwater discharge is discovered, the WPC Manager will require sampling and analysis of the effluent to detect whether non-visible pollutants are present in the discharge. Sampling and analysis of non-stormwater discharges shall be performed in accordance with Section 700.2.2, the SAP for non-visible pollutants.

Non-stormwater from dewatering operations or impounded stormwater may be discharged off site during this project. Stored stormwater isdefined as rain collected in trenches, foundation excavations, and excavations for pavement structural sections. Non-stormwater dewatering discharges or discharges of impounded stormwater shall be monitored for turbidity, pH and potential non-visible pollutants.

Sampling and analysis for pH and turbidity of stored or impounded stormwater discharges subsequent to a qualifying rain event (a rain event that has produced ½ inch or more of precipitation at the time of discharge) shall be performed in accordance with Section 700.2.4, the SAP for stormwater pH and turbidity.

700.2.3.2 Monitoring Preparation

Refer to the general requirements for monitoring preparation in General SAP Section 700.2.1.2.

700.2.3.2.1 Qualified Sampling Personnel

Refer to the general requirements for Qualified Sampling Personnel in General SAP Section 700.2.1.2.1.

700.2.3.2.2 Monitoring Supplies

Refer to the general information regarding monitoring supplies in General SAP Section 700.2.1.2.2.

700.2.3.2.3 Field Instruments

Refer to the general information regarding field instruments in General SAP Section 700.2.1.2.3.

700.2.3.2.4 Testing Laboratory

Refer to the contact information for the testing laboratory found in General SAP Section 700.2.1.2.4.

700.2.3.3 Monitoring Strategy

Non-stormwater discharges from the construction site will be monitored for exceedances of water quality standards.

700.2.3.3.1 Analytical Constituents

For non-stormwater dewatering discharges and discharges of stored stormwater, samples shall be analyzed for the following constituents:

- turbidity
- pH

700.2.3.3.2 Potential Sampling Locations

Using the criteria in Section 700.2.1.3.2, potential sampling locations on the project site for monitoring dewatering discharges, discharges of impounded stormwater, and other non-stormwater discharges were identified. Sampling locations were based on: proximity to planned non-stormwater dewatering; non-stormwater occurrence or use; accessibility for sampling and personnel safety; and other factors in accordance with the applicable requirements in the *Caltrans Construction Site Monitoring Program Guidance Manual*, . Sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

No sampling location(s) on the project site have been identified as potential locations for the collection of non-stormwater dewatering samples and the sampling location(s) are listed in Table 700.2.3.3.2.1: Potential Non-stormwater Dewatering Sampling Locations.

TABLE 700.2.3.3.2.1
POTENTIAL NON-STORMWATER DEWATERING SAMPLING LOCATIONS

Sampling Location Identifier	Location Description
N/A	None identified.

Four sampling location(s) on the project site been identified as potential locations for the collection of discharge samples of impounded stormwater and the sampling location(s) are listed in Table 700.2.3.3.2.2: Potential Impounded Stormwater Discharge Sampling Locations.

TABLE 700.2.3.3.2.2
POTENTIAL IMPOUNDED STORMWATER DISCHARGE SAMPLING LOCATIONS

Sampling Location of Construction Identifier	Location Description
09CSDL01	Refugia and Dispersal Area No. 1 (Location of Construction #3)
11CSDL02	Refugia and Dispersal Area No. 2 (Location of Construction #3)
13CSDL03	Rock Slope Protection Stilling Basin - Location 3, Down Stream from Co. Dump Rd.(DS #21) (Location of Construction #3)
20CSDL04	Rock Slope Protection Stilling Basin - Location 5, Down Stream from SR 116 (DS #26) (Locations of Construction #5)

See Contract Plans for Locations of Construction.

700.2.3.3.3 Actual Sampling Locations

Actual sampling locations will be determined by the WPC Manager when dewatering activities are in progress based on the potential dewatering discharge sample locations initially selected.

When stormwater is impounded in excavations on the project site and the impounded stormwater has the pontential to create runoff from the project site, the WPC Manager will determine the actual sampling location for collecting impounded stormwater discharge samples.

If new locations for dewatering discharges or impounded stormwater discharges that have not been identified on the list of potential stormwater and non-stormwater sampling locations are identified during the course of construction, the WPC Manager must create sampling location identifiers for the dewatering discharge sampling location. The additional sampling location for dewatering discharge monitoring shall be shown on the WPCDs in Attachment BB and added to Attachment EE: Stormwater Sampling Locations.

700.2.3.4 Sample Collection and Handling

Refer to the general requirements for sample collection and handling in General SAP Section 700.2.1.4.

700.2.3.4.1 Sample Collection Procedures

Refer to the general procedures for sample collection in General SAP Section 700.2.1.4.1.

700.2.3.4.2 Sample Handling Procedures

Refer to the general procedures for sample handling in General SAP Section 700.2.1.4.2.

700.2.3.4.3 Sample Documentation Procedures

In addition to the general procedures for sample documentation in General SAP Section 700.2.1.4.3, when applicable, the contractor's stormwater inspector will document on the CEM-2030 Stormwater Site Inspection Report that samples for non-stormwater discharge pollutants were taken based on a visual monitoring site inspection.

700.2.3.5 Sample Analysis

Samples from non-stormwater discharges shall be analyzed for pH and turbidity.

The WPC Manager may determine that samples of non-stormwater discharges, need to be analyzed for non-visible pollutants. If the WPC Manager determines that non-visible pollutants may have contaminated the discharge, the samples shall be analyzed for the suspected pollutants. Sampling and analysis for non-visible pollutants in non-stormwater discharges shall be performed following the guidance in Section 700.2.2, the SAP for non-visible pollutants.

Samples shall be analyzed for the constituents indicated in the following table, titled "Sample Collection, Preservation and Analysis for Monitoring Water Extracted by Dewatering or Impounded Stormwater Discharges."

TABLE 700.2.3.5
SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING WATER EXTRACTED BY DEWATERING OR IMPOUNDED STORMWATER DISCHARGES

Parameter	Test Method	Sample Preservation	Minimum Sample Volume(1)	Sample Bottle	Maximum Holding Time	Detection Limit (min)
Turbidity	Field test with calibrated portable instrument	Store at 4˚ C (39.2˚ F)	100 mL	Polypropylene or Glass	48 hours	1 NTU
pH	Field test with calibrated portable instrument	Store at 4˚ C (39.2˚ F)	100 mL	Polypropylene	48 hours	0.2

TABLE 700.2.3.5 SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING WATER EXTRACTED BY DEWATERING OR IMPOUNDED STORMWATER DISCHARGES						
Parameter	**Test Method**	**Sample Preservation**	**Minimum Sample Volume(1)**	**Sample Bottle**	**Maximum Holding Time**	**Detection Limit (min)**

Notes: (1) Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions.
°C – degrees Celsius
°F – degrees Fahrenheit
L – liter
Ml – milliliters
NTU – Nephelometric Turbidity Unit

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

Refer to general information for field instrument identification and requirements in General SAP Section 700.2.1.2.3.

700.2.3.6 Quality Assurance/Quality Control

Refer to the general requirements regarding Quality Assurance/Quality Control (QA/QC) in Section General SAP 700.2.1.6. For samples analyzed for turbidity and pH the following replaces the requirements for QA/QC in Section 700.2.1.6:

The contractor shall coordinate with the Caltrans RE on sampling locations and timing for quality assurance verification of field sampling and analysis. The contractor shall notify the RE at least 24 hours prior to dewatering discharge or impounded stormwater discharge sampling events.

700.2.3.7 Data Management and Reporting

Refer to the general requirements for data management and reporting in General SAP Section 700.2.1.7.

700.2.3.8 Data Evaluation

An evaluation of the water quality sample analytical results, including sampling locations and the QA/QC data, shall be submitted to the RE for every day that the water from dewatering is discharged. Should the dewatering discharge concentrations exceed applicable water quality standards, discharging will be stopped and the WPC Manager or other personnel shall evaluate the dewatering BMPs to determine the probable cause for the exceedance.

Samples of non-stormwater collected during discharge shall be evaluated by determining if suspected contaminants are present. Unauthorized discharges will be stopped as soon as possible and a report of discharge shall be completed and submitted to the RE. Authorized discharges shall be sampled for pH and Turbidity and all suspected pollutants. For pH and turbidity, sample results shall be compared to the NAL and NELs.

As determined by the data evaluation and project site assesment, appropriate BMPs shall be repaired or modified to mitigate the exceedances. Corrective actions taken shall be documents on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary. Any revisions/design changes to BMPs shall be implemented based on an amendment to the SWPPP.

700.2.3.9 Changes of Conditions

Refer to the general requirements for changes of conditions in General SAP Section 700.2.1.9.

700.2.4 Sampling and Analysis Plan for Stormwater pH and Turbidity

This SAP has been prepared for monitoring pH and turbidity in stormwater discharges from the project site and off-site activities directly related to the project in accordance with the requirements of the CGP and applicable requirements of the Caltrans *Construction Site Monitoring Program Guidance Manual, January*. This SAP for monitoring pH and turbidity includes all of the components listed in Section 700.2.1.

700.2.4.1 Scope of Monitoring Activities

The scope of monitoring for this SAP includes monitoring for pH and turbidity in stormwater discharges from the project site and, run-on to the project site.

700.2.4.2 Monitoring Preparation

Refer to the general requirements for monitoring preparation in General SAP Section 700.2.1.2.

700.2.4.2.1 Qualified Sampling Personnel

Refer to the general requirements for Qualified Sampling Personnel in General SAP Section 700.2.1.2.1.

700.2.4.2.2 Monitoring Supplies

Refer to the general information regarding monitoring supplies in General SAP Section 700.2.1.2.2.

700.2.4.2.3 Field Instruments

Refer to the general information regarding field instruments in General SAP Section 700.2.1.2.3.

700.2.4.2.4 Testing Laboratory

Refer to the contact information for the testing laboratory found in General SAP Section 700.2.1.2.4.

700.2.4.3 Monitoring Strategy

Monitor representative stormwater discharges from the project site for pH and turbidity during qualifying rain events (a rain event that has produced ½ inch or more of precipitation at the time of discharge).

700.2.4.3.1 Analytical Constituents

Stormwater discharge samples are to be analyzed for pH and turbidity.

700.2.4.3.2 Potential Sampling Locations

Using the criteria in Section 700.2.1.3.2, the potential sampling locations on the project site for monitoring pH and turbidity were identified. Potential sampling locations for monitoring stormwater discharges for pH and turbidity are based on drainage areas; run-on and runoff locations; accessibility for sampling and personnel safety; and other factors in accordance with the applicable requirements in the *Caltrans Construction Site Monitoring Program Guidance Manual*, . Stormwater discharge locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sample

Locations in Attachment EE:

The stormwater discharge locations on the project site are listed in Table 700.2.4.3.2.1 “Stormwater Discharge Locations.”

TABLE 700.2.4.3.2.1
STORMWATER DISCHARGE LOCATIONS

Sampling Location Identifier	Location
01DL01	Downstream of Location #2 (Biofiltration Swale #1).
04DL02	Location #3 Conservation Easement, Champlin Creek at DS #12.
05DL03	Location #3 Conservation Easement, tributary to Champlin Creek at DS #14
07DL04	Location #3 Conservation Easement, tributary to Champlin Creek at DS #15
10DL05	Location #3 at Champlin Creek and State right of way.
14DL06	Location #3 downstream of County Dump Road at Champlin Creek..
16DL07	Downstream of Location #4 at Champlin Creek.
19DL08	SR 116 A Line 114+00 Tributary to Champlin Creek flow line (Location 5)
22DL09	SR 116 A Line 130+25 "L" Headwall (Location 6)
24DL10	SR 116 A Line 137+25 "L" Headwall (Location 7)
26DL11	SR 116 A Line 156+00 Champlin Creek flow line (Location 8)
28DL12	SR 116 A Line 167+75 Champlin Creek flow line (Location 9)

The project receives run-on with the potential to combine with stormwater discharges at the locations listed in Table 700.2.4.3.2.4 “Run-on Locations With Potential to Combine With Stormwater Discharges.”

TABLE 700.2.4.3.2.4
RUN-ON LOCATIONS WITH POTENTIAL TO COMBINE WITH STORMWATER DISCHARGES

Sampling Location Identifier	Location
02RO01	SR 116 A Line Station 22+30 Earthen Swale flow line (Location 2)
03RO02	SR 116 A Line Station 69+50 Champlin Creek flow line(Location 3 Conservation Easement)
06RO03	SR 116 A Line Station 77+80 Earthen Drainage flow line (Location 3 Conservation Easement - top of site)
08RO04	SR 116 A Line 79+10 Champlin Creek flow line (Location 3)

12RO05	SR 116 A Line 90+00 Champlin Creek flow line (Location 3)
15RO06	SR 116 A Line 96+90 Champlin Creek flow line (Location 4)
17RO07	SR 116 A Line 113+10 Tributary to Champlin Creek flow line (Location 5)
18RO08	SR 116 A Line 113+95 Tributary to Champlin Creek flow line (Location 5)
21RO09	SR 116 A Line 128+00 Earthen Swale flow line (Location 6)
23RO10	SR 116 A Line 135+75 Earthen Swale flow line (Location 7)
25RO11	SR 116 A Line 155+05 Champlin Creek flow line at Box Culvert Outlet (Location 8)
27RO12	SR 116 A Line 165+75 Champlin Creek flow line (Location 9)

Potential run-on sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

700.2.4.3.3 Actual Sampling Locations

The WPC Manager shall select sampling locations from the list of potential sampling locations for stormwater discharge sampling shown on the WPCDs from Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:. If the construction activity has not started within the drainage area at a sampling location, and there is no disturbed soil within a drainage area, sampling from the stormwater discharge location from that drainage area is not required.

Within 72 to 48 hours prior to each qualifying rain event, the WPC Manager must identify the drainage areas that must be sampled. To identify these drainage areas, the WPC Manager must refer to the WPCDs and consider the conditions described below and activities within each drainage area that could have an effect on the stormwater discharge pH or turbidity.

1. Turbidity: The area of the disturbed soil at the time of precipitation could have an impact on the stormwater run-off turbidity. The area of the disturbed soil at the time of predicted precipitation must be expressed as a percentage of the total drainage area. It is reasonable to assume that a larger percentage of disturbed soil area could result in a more turbid run-off.

2. pH: The type of construction activities that could have an impact on stormwater run-off pH (for example, concrete work and saw cutting, lime stabilization work, use of crushed concrete, etc).

For representative sampling of construction site discharges, 20 percent of the drainage areas with disturbed soil areas and 20 percent of the drainage areas where activities that could potentially have an impact on the discharge pH must be sampled. At least five (5) drainage area discharge locations for each qualifying rain event must be sampled. If there are five (5) or fewer drainage area sampling locations in a project, then all drainage area sampling locations must be sampled. The drainage areas with the largest percentage of disturbed soil area must be included in the selected drainage areas to be sampled. The drainage areas where the most extensive activities (activities that potentially can alter discharge pH) are in progress must be included in the selected drainage areas to be sampled.

This representative monitoring strategy for stormwater discharges requires collection of additional samples based upon the preceding sampling event stormwater discharge pH or turbidity analysis results when the:

- turbidity analysis results – even in one sampling location – in the previous sampling event have exceeded 200 NTU, the number of drainage areas with disturbed soil areas requiring sampling will be raised to 50 percent.

- turbidity analysis results – even in one sampling location – in the previous sampling event have exceeded 250 NTU, the number of drainage areas with disturbed soil areas requiring sampling will be raised to 100 percent.

- pH analysis results – even in one sampling location – in the previous sampling event have not fallen within 6.5 to 8.5 pH unit range, the number of drainage areas requiring sampling where construction activities could have an impact on the discharge pH readings will be raised to 50 percent.

- pH analysis results – even in one sampling location – in the previous sampling event have not fallen within 6.0 to 9.0 pH unit range, the number of drainage areas requiring sampling where construction activities could have an impact on the discharge pH readings will be raised to 100 percent.

The selection of additional sampling locations, based on turbidity results, will involve drainage areas with the highest percentage of disturbed soil area. The selection of additional sampling locations, based on pH results, will be involve drainage areas with construction activities that are most likely to affect stormwater discharge pH. Selection of stormwater discharge sampling locations shall be documented on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, in Appendix O. Completed qualifying rain event SAPs shall be kept in SWPPP File Category 20.46: Storm/Rain Event Sampling and Analysis Plans.

This project receives run-on from surrounding area that may contribute to exceedances of NALs or NELs. Potential sampling locations have been selected from locations where run-on enters the Caltrans right-of-way.

1 potential sampling location(s) have been identified for the collection of samples of run-on with the potential to combine with runoff from the construction site, which discharge either to an MS4 or to a sediment-sensitive water body. Run-on samples taken from these locations will be analyzed to identify potential turbidity and pH that originates off the project site and contributes directly to stormwater discharges from the construction site to the MS4 or sediment-sensitive water body.

The selection of run-on sampling locations will be made by the WPC Manager. Run-on sampling locations will be selected based on stormwater discharge locations. If there is an NAL or NEL exceedance at a stormwater discharge location, any stormwater run-on location that contributes to the stormwater discharges from the construction site shall be selected for sampling. The selection of stormwater run-on sampling locations shall be documented on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan by the WPC Manager for every forecasted qualifying rain event. Completed CEM-2049 plans shall be kept in SWPPP File Category 20.45: Storm/Rain Event Action and Sampling and Analysis Plans.

700.2.4.3.4 Sampling Schedule

Discharge samples shall be collected for turbidity and pH for qualifying rain events that result in a discharge from the project site. When applicable, upstream, downstream, and run-on samples shall be collected for analysis of turbidity and pH. Sampling and testing for turbidity and pH will be performed daily during all qualifying rain events. Samples shall be collected during working hours.

At least 48 hours prior to each qualifying rain event, the WPC Manager must prepare the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan that includes a list of sampling locations that must be sampled for the qualifying rain event.

The Qualifying Rain Event Sampling and Analysis Plan shall include all of the following sampling location types:

- discharge locations from the drainage areas with the largest percentage of disturbed soil areas,
- discharge locations from the drainage areas where construction activities that could have an impact on stormwater run-off pH are in progress, and
- if applicable, at least one sampling location from drainage areas where the disturbed soil areas have been stabilized.

For the purposes of the sampling schedule, the sampling locations must be arranged in the following order: starting with the sampling location on the northwest corner of the WPCDs as the first entry, move clockwise on the WPCDs and enter all the sampling location identifiers on the Qualifying Rain Event SAP schedule.

Within 48 to 24 hours prior to a qualifying rain event, the Qualifying Rain Event SAP shall be distributed to the individual collecting stormwater samples, and to the RE.

The Caltrans stormwater site inspector and contractor inspector must coordinate and select the sampling locations and the time to meet and collect simultaneous samples for the purposes of QA/QC.

Every reasonable attempt has to be made to collect at least three grab samples per day from each sampling location identified on the Qualifying Rain Event SAP during the qualifying rain event.

Sampling must start immediately after the flow begins or as soon as possible thereafter. The individual responsible for collecting samples must begin sampling with the first sampling location identified on the Qualifying Rain Event SAP and move on to the next sampling location until all locations are sampled. It is preferable that the three rounds of sampling are performed over the first three hours of the flow; however, depending on the time of the day or other dictating conditions in the field, the three rounds of sampling could be performed over a shorter period of time to ensure that three samples per location are collected.

If stormwater sampling is unsafe because of dangerous weather conditions, such as flooding and electrical storms, then the stormwater sampler shall document the conditions resulting in the sampling not being performed as planned. The documentation for the sampling exception shall be filed in SWPPP 20.52, Turbidity and pH Sampling and Test Results.

700.2.4.4 Sample Collection and Handling

Refer to the general requirements for sample collection and handling in General SAP Section 700.2.1.4.

700.2.4.4.1 Sample Collection Procedures

In addition to the general procedures for sample collection in General SAP Section 700.2.1.4.1, the procedures described below apply to sample collection for monitoring of pH and turbidity.

- Grab samples shall be collected and preserved in accordance with the methods identified in Table 700.2.4.5.1: Sample Collection, Preservation and Analysis for Monitoring Turbidity and pH, provided in Section 700.2.4.5.
- Only personnel trained in proper water quality sampling shall collect samples.

700.2.4.4.2 Sample Handling Procedures

Refer to the general procedures for sample handling in General SAP Section 700.2.1.4.2.

700.2.4.4.3 Sample Documentation Procedures

Refer to the general procedures for sample documentation in General SAP Section 700.2.1.4.3.

700.2.4.5 Sample Analysis

Samples shall be analyzed for the constituents indicated in Table 700.2.4.5.1: "Sample Collection, Preservation and Analysis for Monitoring Turbidity and pH."

TABLE 700.2.4.5.1
SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING TURBIDITY AND PH

Parameter	Test Method	Sample Bottle	Minimum Sample Volume[1]	Sample Preservation	Maximum Holding Time	Detection Limit (min)
Turbidity	Field test with calibrated portable instrument	Polypropylene or Glass	100 mL	Store at 4˚ C (39.2˚ F)	48 hours	1 NTU
pH	Field test with calibrated portable instrument	Polypropylene	100 mL	Store at 4˚ C (39.2˚ F)	15 minutes	0.2

Acronyms/Notes:
C = Celsius
F = Fahrenheit
Min = minutes
mL = milliliter
NTU = Nephelometric Turbidity Units
[1] Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions.

Samples collected for field analysis shall meet the requirements of the field instrument manufacturer's instructions.

Refer to the general information regarding field instruments in General SAP Section 700.2.1.2.3, which includes field instrument calibration and maintenance documentation requirements.

700.2.4.6 Quality Assurance/Quality Control

Refer to the general requirements regarding Quality Assurance/Quality Control (QA/QC) in General SAP Section 700.2.1.6. The following replaces the requirements for QA/QC in Section 700.2.1.6 for turbidity and pH quality assurance testing. However, Section 700.2.1.6 requirements apply for SSC quality assurance testing: The contractor shall coordinate with Caltrans RE on sampling locations and timing for quality assurance verification of field sampling and analysis activities. The contractor shall notify the RE at least 24 hours prior to sampling events.

700.2.4.7 Data Management and Reporting

Refer to general requirements for data management and reporting in General SAP Section 700.2.1.7.

In addition to the general requirements for data managementment and reporting in Section 700.2.1.7, the additional

reporting described below is required.

Numeric Action Limit Exceedance Reporting - This project is subject to NALs for pH and turbidity as shown in Table 700.2.4.7.1 "NALs for Monitoring pH and Turbidity."

TABLE 700.2.4.7.1
NALs FOR MONITORING pH AND TURBIDITY

Parameter	Test Method	Detection Limit (Min)	Unit	Numeric Action Level
pH	Field test with calibrated portable instrument	0.2	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	Field test with calibrated portable instrument	1	NTU	250 NTU

Acronyms:

NAL = numeric action level

NTU = Nephelometric Turbidity Units

If an NAL is exceeded, then form CEM-2062 NAL Exceedance Report will be completed and submitted to the RE within 48 hours after the sampling and analysis event. The NAL Exceedance Report will include:

- test results, analytical methods, reporting units, and detection limits
- date, sampling location, time of sampling, and visual observations
- predicted quantity of precipitation of the forecasted storm event, and estimated quantity of precipitation at the time of sampling
- description of BMPs
- corrective actions taken to manage the NAL exceedance

Once deemed necessary, corrective actions shall be immediately implemented and documented. Appendix I contains the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary form and Appendix X contains the CEM-2062 NAL Exceedance Report form. NAL exceedance reports will be filed in SWPPP File Category 20.62: Numeric Action Level Exceedance Reports.

700.2.4.8 Data Evaluation

An evaluation of the water quality sample analytical results, including sampling locations and the QA/QC data, shall be submitted to the RE for every day of stormwater sampling. If the stormwater discharge concentrations exceed applicable water quality standards, the WPC Manager or other personnel shall evaluate the project site BMPs to determine the probable cause for the exceedance.

As determined by the data evaluation and project site assesment, appropriate BMPs shall be repaired or modified to mitigate the exceedances. Corrective actions taken shall be documented on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary. Any revisions/design changes to BMPs shall be implemented based onan amendment to the SWPPP.

700.2.4.9 Change of Condition

Refer to the general requirements for changes of conditions in General SAP Section 700.2.1.9.

700.2.5 Sampling and Analysis Plan for Monitoring Required by Regional Board

This project does not require a Sampling and Analysis Plan for Monitoring required by a RWQCB.

700.2.6 Sampling and Analysis Plan for Monitoring of Active Treatment System

This project does not require a SAP for an ATS because deployment of such a system is not planned.

SECTION 800
POST-CONSTRUCTION CONTROL PRACTICES

800.1 Post-Construction Control Practices

The following are the post-construction BMPs for the project site

- Storm drain infastructure; drain inlets, culvert down drains, flared end sections with Rock Slope Protection (RSP) dissipation and RSP spillway with timber check dam
- Biotechnical bank stabilization (brush layering)
- Refugia and dispersal areas (infiltration basin)
- Biofiltration strip and biofiltration swale planting enhancement
- Erosion control; compost mulch/incorporation, coir rolled erosion control products, fiber rolls, check dams and hydroseeding
- Mitigation planting

800.2 Post-Construction Operation/Maintenance

The post-construction BMPs that are listed above will be funded and maintained in the following manner.

- short-term funding: Caltrans; construction contract for mitigation construction and 5-year plant establishment period.
- long-term funding: Caltrans; after contract acceptance, Caltrans will continue to provide a funding mechanism for monitoring activities necessary to meet the specific mitigation requirements. The Conservation Easement is held in perpetuity per the Agreement for Possession and Use in accordance with the land's Grant Deed. Mitigation planting will not be maintained past the 5-year plant establishment period. Other typical maintenance activities that may be conducted within the State right-of-way by Caltrans Maintenance may include, but not limited to: weed management for wildfire prevention, maintenance and repair/replacement of drainage facilities, drainage ditches, repair and/or replacement of damaged right-of-way fences, tree and shrub pruning and limb removal, and repair of storm damage. These activities are described in more detail in the Caltrans storm water quality handbook maintenance staff guide (Caltrans 2003) and are subject to the availability of Maintenance resources.

The responsible party for the long-term maintenance of post-construction BMPs is Caltrans.

SECTION 900
SWPPP REPORTING REQUIREMENTS

900.1 Recordkeeping

To manage the various documents required by the SWPPP and to provide easy access to the documents, the following SWPPP file categories will be used to file SWPPP compliance documents:

File Category 20.01 ..... Stormwater Pollution Prevention Plan (SWPPP)
File Category 20.02 ..... Stormwater Pollution Prevention Plan Amendments
File Category 20.03 ..... Water Pollution Control Schedule Updates
File Category 20.05 ..... Notice of Construction or Notice of Intent
File Category 20.06 ..... Legally Responsible Person Authorization of Approved Signatory
File Category 20.10 ..... Correspondence
File Category 20.21 ..... Subcontractor Contact Information and Notification Letters
File Category 20.22 ..... Material Supplier Contact Information and Notification Letters
File Category 20.23 ..... Contractor Personnel Training Documentation
File Category 20.31 ..... Contractor Stormwater Site Inspection Reports
File Category 20.32 ..... Caltrans Stormwater Site Inspection Reports
File Category 20.33 ..... Site Visual Monitoring Inspection Reports
File Category 20.34 ..... Best Management Practices Weekly Status Reports
File Category 20.35 ..... Corrective Actions Summary
File Category 20.40 ..... Weather Monitoring Logs
File Category 20.45 ..... Rain Event Action Plans
File Category 20.46 ..... Storm/Rain Event Sampling and Analysis Plans
File Category 20.50 ..... Non-Stormwater Discharge Sampling and Test Results
File Category 20.51 ..... Non-Visible Pollutant Sampling and Test Results
File Category 20.52 ..... Turbidity, pH and SSC Sampling and Test Results
File Category 20.53 ..... Required Regional Water Board Monitoring Sampling and Test Results
File Category 20.54 ..... ATS Monitoring Sampling and Test Results
File Category 20.55 ..... Field Testing Equipment Maintenance and Calibration Records
File Category 20.61 ..... Notice of Discharge Reports
File Category 20.62 ..... Numeric Action Level Exceedance Reports
File Category 20.63 ..... Numeric Effluent Limitation Violation Reports
File Category 20.70 ..... Annual Certification of Compliance
File Category 20.80 ..... Stormwater Annual Reports
File Category 20.90 ..... Notice of Termination

Records shall be retained for a minimum of three years for the following items:

- approved SWPPP document and amendments
- Stormwater Site Inspection Reports
- Site Inspection Report Corrections Summary
- Rain Event Action Plans (REAPs)
- Notice of Discharge Reports
- Numeric Action Limit (NAL) Exceedance Reports
- Numeric Effluent Limitaion (NEL) Violation Reports
- sampling records and analysis reports
- Annual Compliance Certifications
- copies of all applicable permits

900.2 Stormwater Annual Report

A Stormwater Annual Report will be prepared for this project to document the stormwater monitoring information and training information.

The stormwater monitoring information listed below shall be included in the Stormwater Annual Report.

- A summary and evaluation of all sampling and analysis results, including copies of laboratory reports.
- The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter.
- A summary of all corrective actions taken during the compliance year.
- Identification of any compliance activities or corrective actions that were not implemented.
- A summary of all violations of the CGP.
- The names of individual(s) who performed site inspections, sampling, site visual monitoring inspections and/or measurements.
- The date, place, and time of site inspections, sampling, site visual monitoring inspections, and/or measurements, including precipitation (rain gauge).
- Any site visual monitoring inspection and sample collection exception records.

The stormwater training information listed below shall be included in the Stormwater Annual Report.

- Documentation of all training for individuals responsible for all activities associated with compliance with the CGP.
- Documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair.
- Documentation of all training for individuals responsible for overseeing, revising and amending the SWPPP.

900.3 Discharge Reporting

If an unauthorized discharge is discovered or evidence of a previously unseen discharge is discovered, the Contractor shall notify the RE within 6 hours of the discovery, and will file a written report with the RE within 24 hours after the discovery. The written report to the RE will contain the following items:

- date, time, location, and type of unauthorized discharge
- nature of operation that caused the discharge
- initial assessment of any impacts caused by the discharge
- BMPs deployed before the discharge event and date(s) of deployment
- BMPs deployed after the discharge event, including re-installation, maintenance or repair of initial BMPs
- steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Reporting of discharges shall be documented on the CEM-2061 Notice of Discharge form in Appendix M. A log of all reportable discharges shall be documented onCEM-2065 Discharge Reporting Log form in Appendix Z. Completed CEM-2061 Notice of Discharge forms shall be submitted to the RE within 24 hours after the discharge event or discovery of evidence of a prior discharge. Copies of completed forms will be kept in File Category 20.61: Notice of Discharge Reports.

900.4 Regulatory Agency Notice or Order Reporting

If a written notice or order is issued to the project by any regulatory agency, the Contractor will notify the RE within 6 hours of receiving the notice or order and will file a written report to the RE within 48 hours of receiving the notice or order. Corrective measures will be implemented immediately following receipt of the notice or order.

The report to the RE will contain the following items:

- the date, time, location, and cause or nature of the notice or order
- the BMPs deployed prior to receiving the notice or order
- the date of deployment and type of BMPs deployed after receiving the notice or order, including additional BMPs installed or planned to reduce or prevent reccurrence
- an implementation and maintenance schedule for any affected BMPs

900.5 Illicit Connection/Illegal Discharge Reporting

If the Contractor discovers an illicit connection to a storm drain system or any pipe discharging onto the project site, not shown on the project plans, the Contractor shall notify the RE within 6 hours of the discovery and shall file a written report to the RE within 48 hours of the discovery.

If the Contractor discovers any illegal discharge, including illegal disposing of material on the project site, the Contractor shall immediately notify the RE and shall file a written report to the RE within 3 days of discovery.

The report to the RE will contain the following items:

- the date, time, and location of the discovery
- the details for the illicit connection or illegal discharge, including any photographs taken
- any actions taken to contain the illegal discharge
- any sampling and testing performed on material that was illegally disposed of or discharged

Attachment A

Legally Responsible Person Authorization of Approved Signatory

ATTACHMENT A - Legally Responsible Person Authorization of Approved Signatory

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

LEGALLY RESPONSIBLE PERSON
AUTHORIZATION OF APPROVED SIGNATORY

CEM-2006 (REV. 8/2010)

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
LEGALLY RESPONSIBLE PERSON NAME AND TITLE	LEGALLY RESPONSIBLE PERSON ADDRESS

The above person appoints the following person:

Authorized approved signatory name and title

Authorized approved signatory address

I hereby agree and further authorize the above-named designated authorized approved signatory to certify all permit registration documents, Numeric Action Limit Exeedance Reports, Numeric Effluent Limitation Violation Reports, Annual Reports, and Notices of Termination in accordance with Section IV.I, Section IV.XVI, Attachment D, and Attachment E of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002.

I hereby further authorize the above-named designated approved signatory to submit documents electronically to the State Water Resources Control Board SMARTS database.

EXECUTED THIS _____ DAY OF _____, 20 _____ AT _____ CALIFORNIA.

Legally responsible person signature	Approved signatory signature
Legally responsible person name	Approved signatory name
Phone number	Phone number

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

Attachment B

Notice of Construction (NOC) / Notice of Intent (NOI)

Attachment 2

State Water Resources Control Board

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH CONSTRUCTION ACTIVITY (WQ ORDER No. 99-08-DWQ)

I. NOI STATUS (SEE INSTRUCTIONS)

MARK ONLY ONE ITEM 1. ☐ New Construction 2. ☐ Change of Information for WDID#

II. PROPERTY OWNER

Name	Contact Person		
California Department of Transportation	Jason Mac		
Mailing Address	Title		
111 Grand Avenue	Regional Project Manager		
City	State	Zip	Phone
Oakland	CA	94612	(510) 622-8891

Owner Type (*check one*) 1.[ ] Private Individual 2.[ ]Business 3.[ ]Municipal 4.[X]State 5.[ ]Federal 6.[ ]Other

III. DEVELOPER/CONTRACTOR INFORMATION

Developer/Contractor	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone

IV. CONSTRUCTION PROJECT INFORMATION

Site/Project Name	Site Contact Person		
Stage Gulch State Route 116			
Physical Address/Location	Latitude	Longitude	County
State Route 116 between Old Adobe Rd to Arnold Dr	38.2433°	122.50°	Sonoma
City (or nearest City)	Zip	Site Phone Number	Emergency Phone Number
Petaluma	94954		

A. Total size of construction site area: 2.87 Acres

B. Total area to be disturbed: 2.87 Acres (% of total 100)

C. Percent of site imperviousness (including rooftops):
Before Construction: 24.0 %
After Construction: 24.7 %

D. Tract Number(s): _____, _____

E. Mile Post Marker: R41.7/44.8

F. Is the construction site part of a larger common plan of development or sale?
☐ YES ☒ NO

G. Name of plan or development:

H. Construction commencement date: 06 / 15 / 2012

I. % of site to be mass graded: _____

J. Projected construction dates:
Complete grading: ____/____/____ Complete project: 10 / 15 / 2012

K. Type of Construction (Check all that apply):
1. ☐ Residential 2. ☐ Commercial 3. ☐ Industrial 4. ☐ Reconstruction 5. ☒ Transportation
6. ☐ Utility Description: _____ 7. ☐ Other (Please List): _____

V. BILLING INFORMATION

SEND BILL TO:	Name	Contact Person	
☒ OWNER (as in II. above)			
☐ DEVELOPER (as in III. above)	Mailing Address	Phone/Fax	
☐ OTHER (enter information at right)	City	State	Zip

VI. REGULATORY STATUS

A. Has a local agency approved a required erosion/sediment control plan? ☒ YES ☐ NO

Does the erosion/sediment control plan address construction activities such as infrastructure and structures? ☒ YES ☐ NO

Name of local agency: California Department of Transportation Phone: (510) 286-5664

B. Is this project or any part thereof, subject to conditions imposed under a CWA Section 404 permit of 401 Water Quality Certification? ☒ YES ☐ No

If yes, provide details: Commence onsite riparian restoration construction activities no later than June 15

VII. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (Check all that apply):

1. ☐ **Indirectly to waters of the U.S.**
2. ☒ **Storm drain system - Enter owner's name:** Caltrans storm drain system
3. ☒ **Directly to waters of U.S. (e.g. , river, lake, creek, stream, bay, ocean, etc.)**

B. Name of receiving water: (river, lake, creek, stream, bay, ocean): Champlin Creek

VIII. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (check one)

☐ A SWPPP has been prepared for this facility and is available for review: Date Prepared: ____/____/____ Date Amended: ____/____/____

☐ A SWPPP will be prepared and ready for review by (enter date): ____/____/____

☒ A tentative schedule has been included in the SWPPP for activities such as grading, street construction, home construction, etc.

B. MONITORING PROGRAM

☐ A monitoring and maintenance schedule has been developed that includes inspection of the construction BMPs before anticipated storm events and after actual storm events and is available for review.

If checked above: A qualified person has been assigned responsibility for pre-storm and post-storm BMP inspections to identify effectiveness and necessary repairs or design changes. ☐ YES ☐ NO

Name: _____ Phone: _____

C. PERMIT COMPLIANCE RESPONSIBILITY

A qualified person has been assigned responsibility to ensure full compliance with the Permit, and to implement all elements of the Storm Water Pollution Prevention Plan including:

1. Preparing an annual compliance evaluation. ☐ YES ☐ NO

Name: _____ Phone: _____

2. Eliminating all unauthorized discharges. ☐ YES ☐ NO

IX. VICINITY MAP AND FEE (must show site location in relation to nearest named streets, intersections, etc.)

Have you included a vicinity map with this submittal? ☒ YES ☐ NO

Have you included payment of the annual fee with this submittal? ☐ YES ☐ NO

X. CERTIFICATIONS

"I certify under penalty of law that this document and all attachments were prepared under my direction and 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, 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 or imprisonment. In addition, I certify that I have read the entire General Permit, including all attachments, and agree to comply with and be bound by all of the provisions, requirements, and prohibitions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan will be complied with."

Printed Name: _____

Signature: _____ **Date:** _____

Title: _____

Attachment C

Risk Level Determination

This project has been determined to be a Risk Level 2.

	A	B	C
1	**Sediment Risk Factor Worksheet**		**Entry**
2	**A) R Factor**		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	**R Factor Value**		9
6	**B) K Factor (weighted average, by area, for all site soils)**		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9	**K Factor Value**		0.32
10	**C) LS Factor (weighted average, by area, for all slopes)**		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	**LS Factor Value**		5.62
14			
15	**Watershed Erosion Estimate (=RxKxLS) in tons/acre**		16.1856
16	**Site Sediment Risk Factor**		**Medium**
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
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 check the attached worksheet or visit the link below: 2006 Approved Sediment-impared WBs Worksheet http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml **OR**	**Yes**	**High**
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? http://www.ice.ucdavis.edu/geowbs/asp/wbquse.asp		

Combined Risk Level Matrix

Receiving Water Risk	Sediment Risk: Low	Sediment Risk: Medium	Sediment Risk: High
Low	Level 1	Level 2	
High	Level 2		Level 3

Project Sediment Risk: Medium

Project RW Risk: High

Project Combined Risk: Level 2

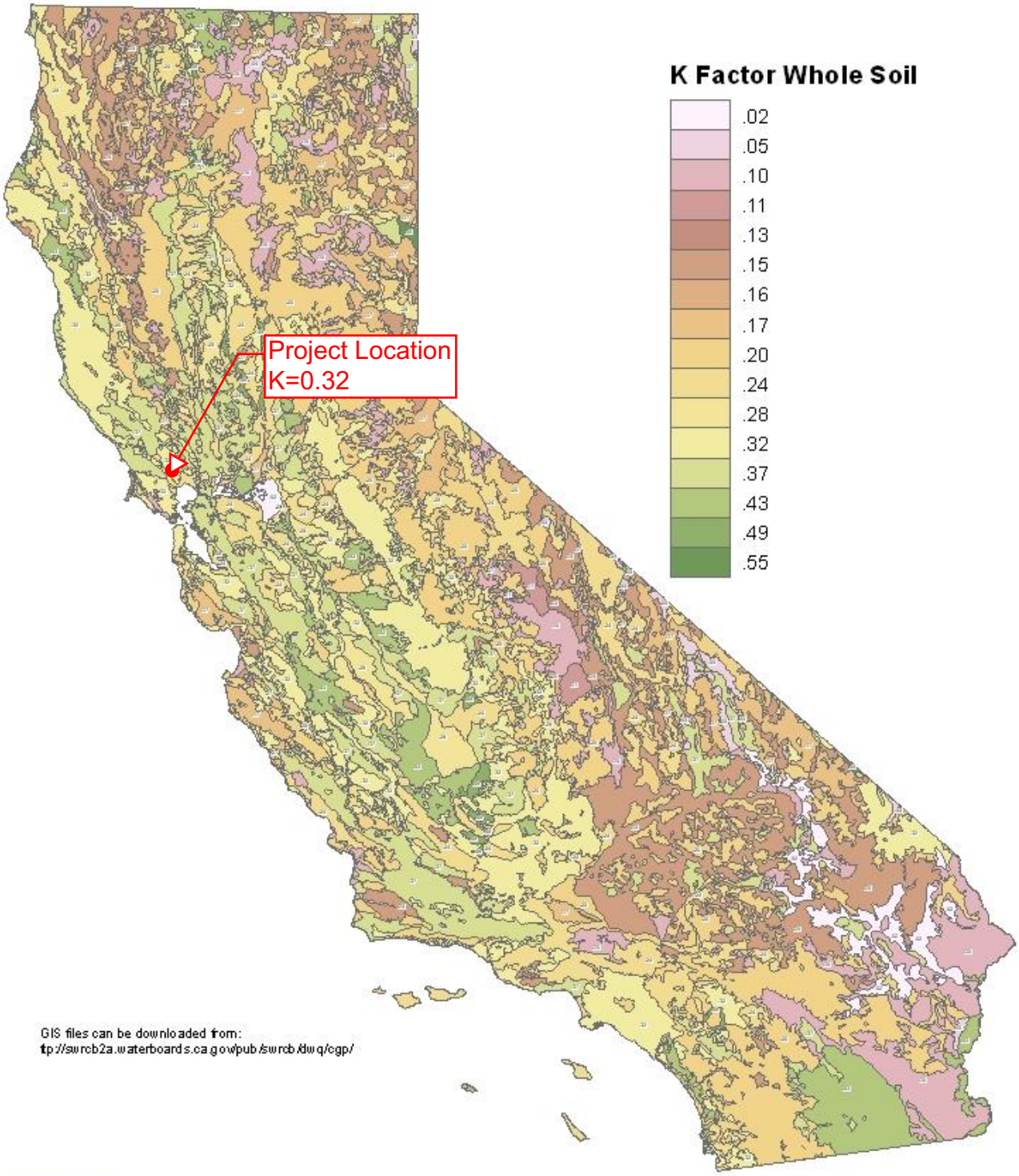
THE CALCULATION OF EROSIVITY FACOTR " R"

The project latitude is 38.24330, longitude is 122.50584

The EI Zone is 20 for the project area (Figure 1, Erosivity Index Zone Map). Referring to Table 1 (Erosivity Index), the project period will span from 6/15/12 to 10/15/12 , the difference in values between these two dates is 63.2%-48.2%=15%,. Since the annual erosion index for this location is about 60 (Figure 2 Isoerodent Map), the R factor for this scheduled construction project is 15% of 60, or 9

R is determined to be 9

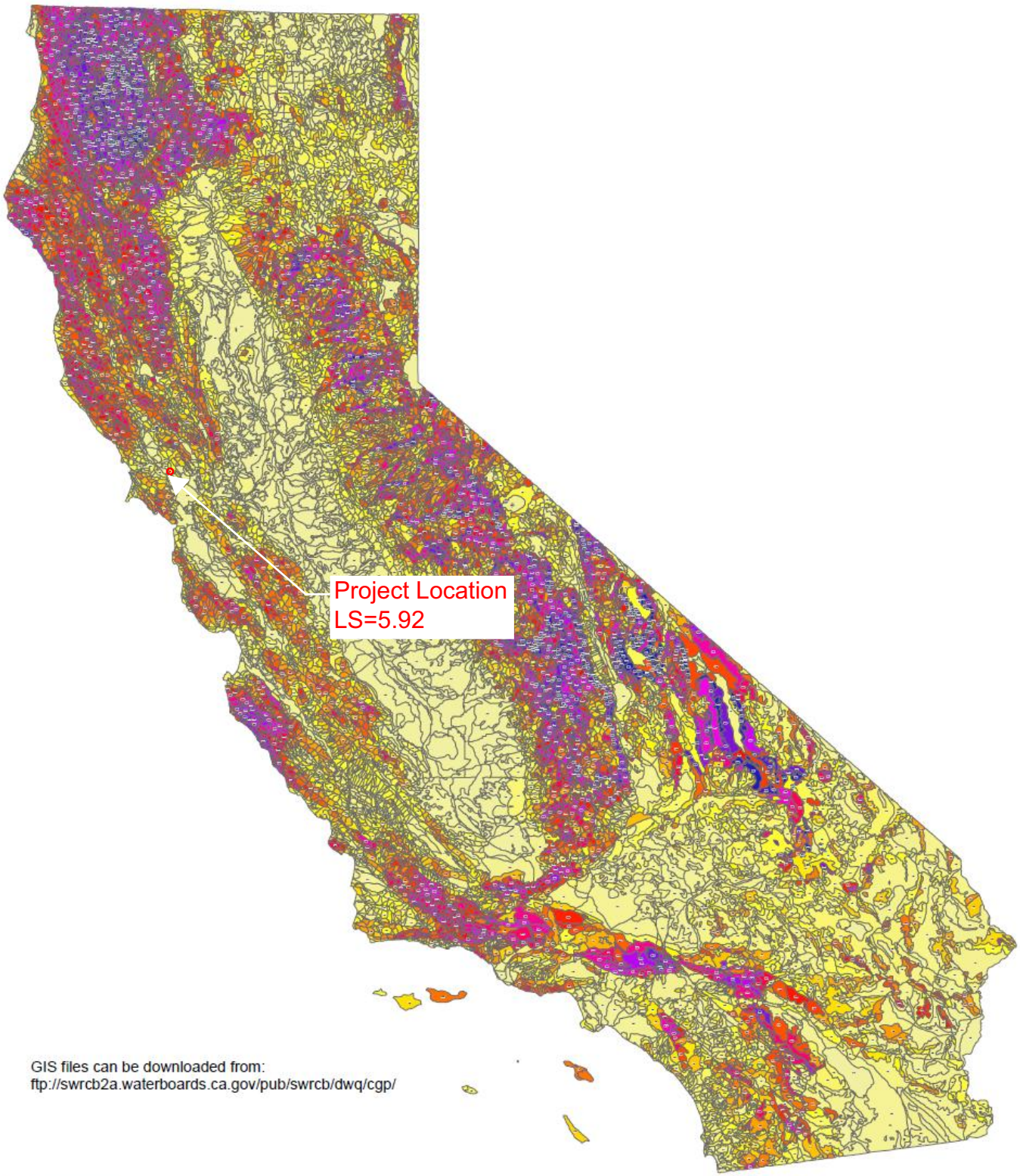
RUSLE K Values



GIS files can be downloaded from:
ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/

Data Source: *Natural Resources Conservation Service, U.S. Dept. of Agriculture and State Water Resources Control Board*

RUSLE LS Values

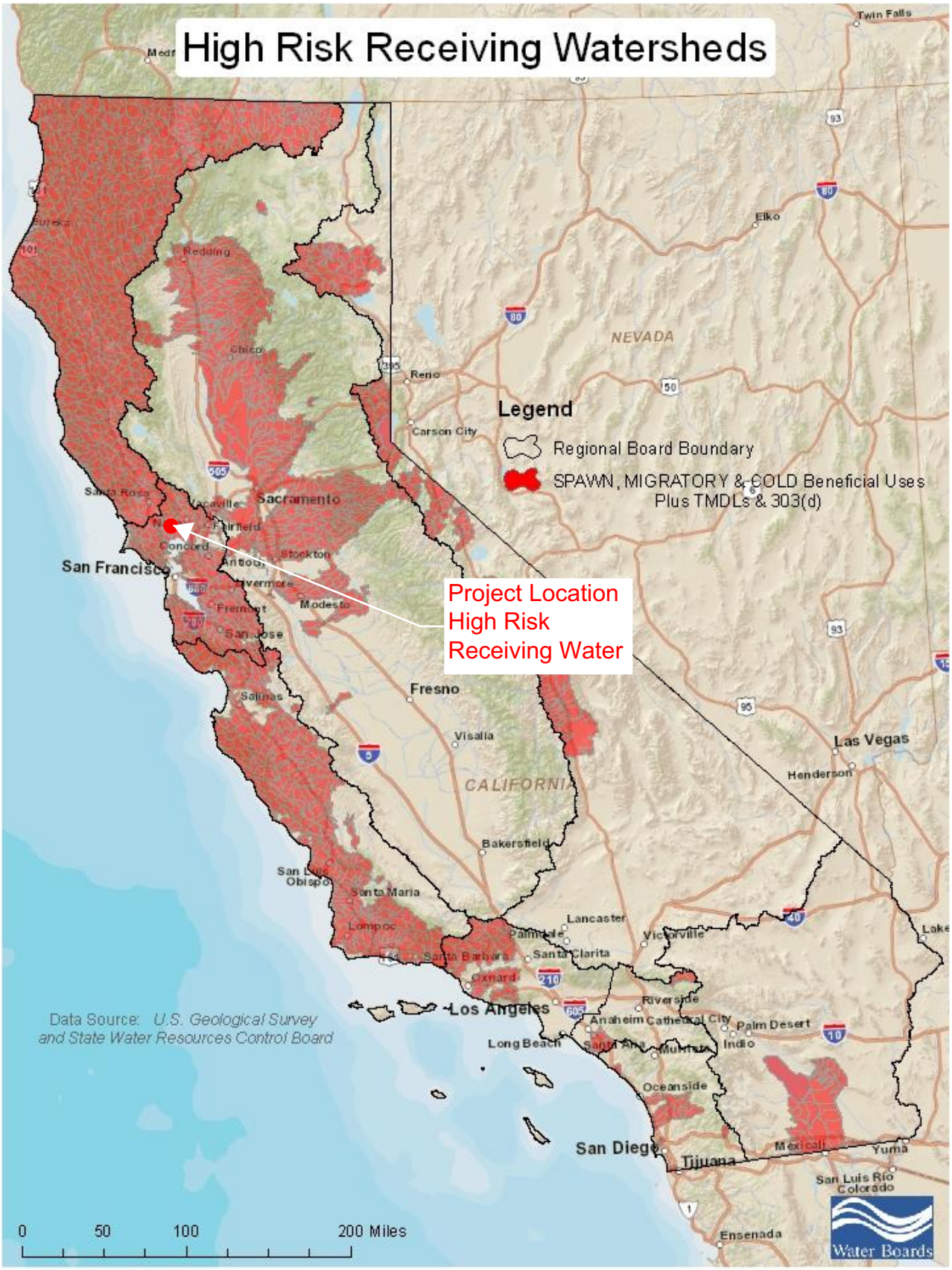


GIS files can be downloaded from:
ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/

Water Boards

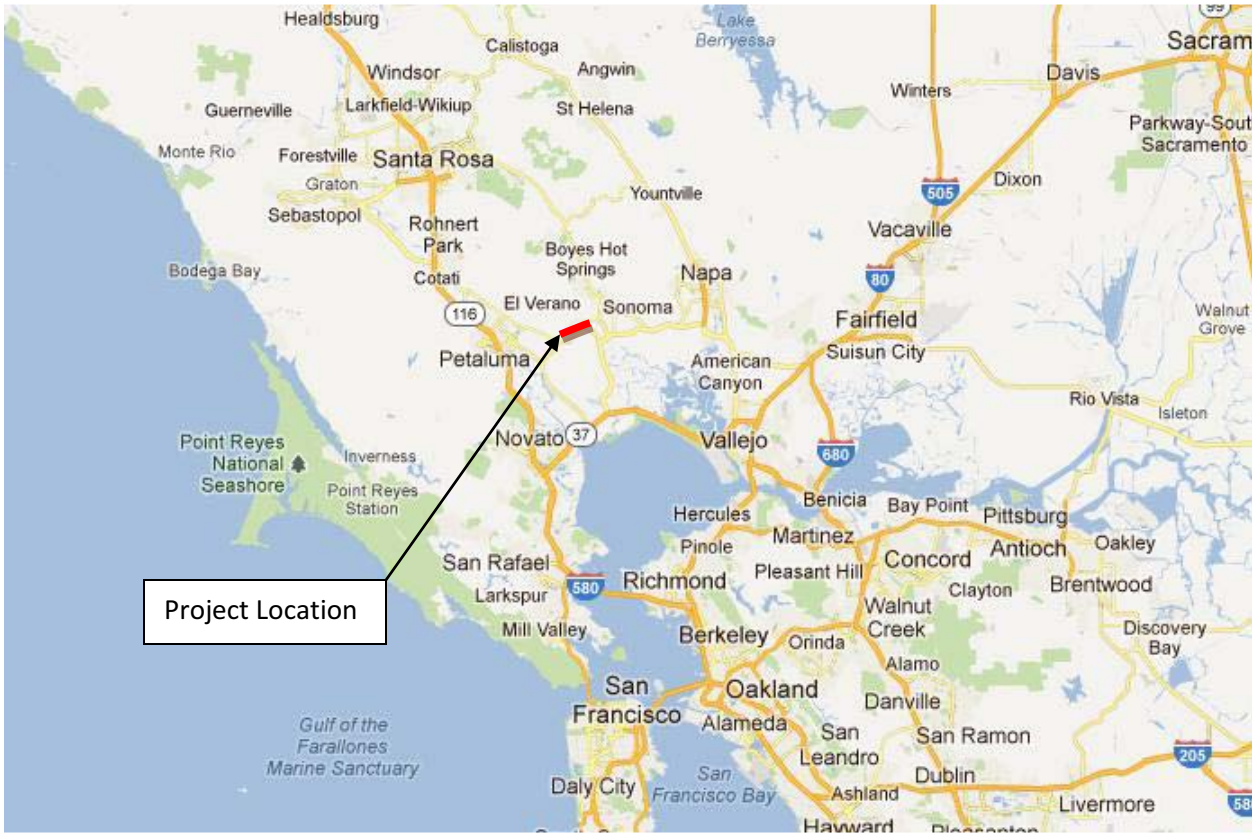
0 25 50 100 Miles

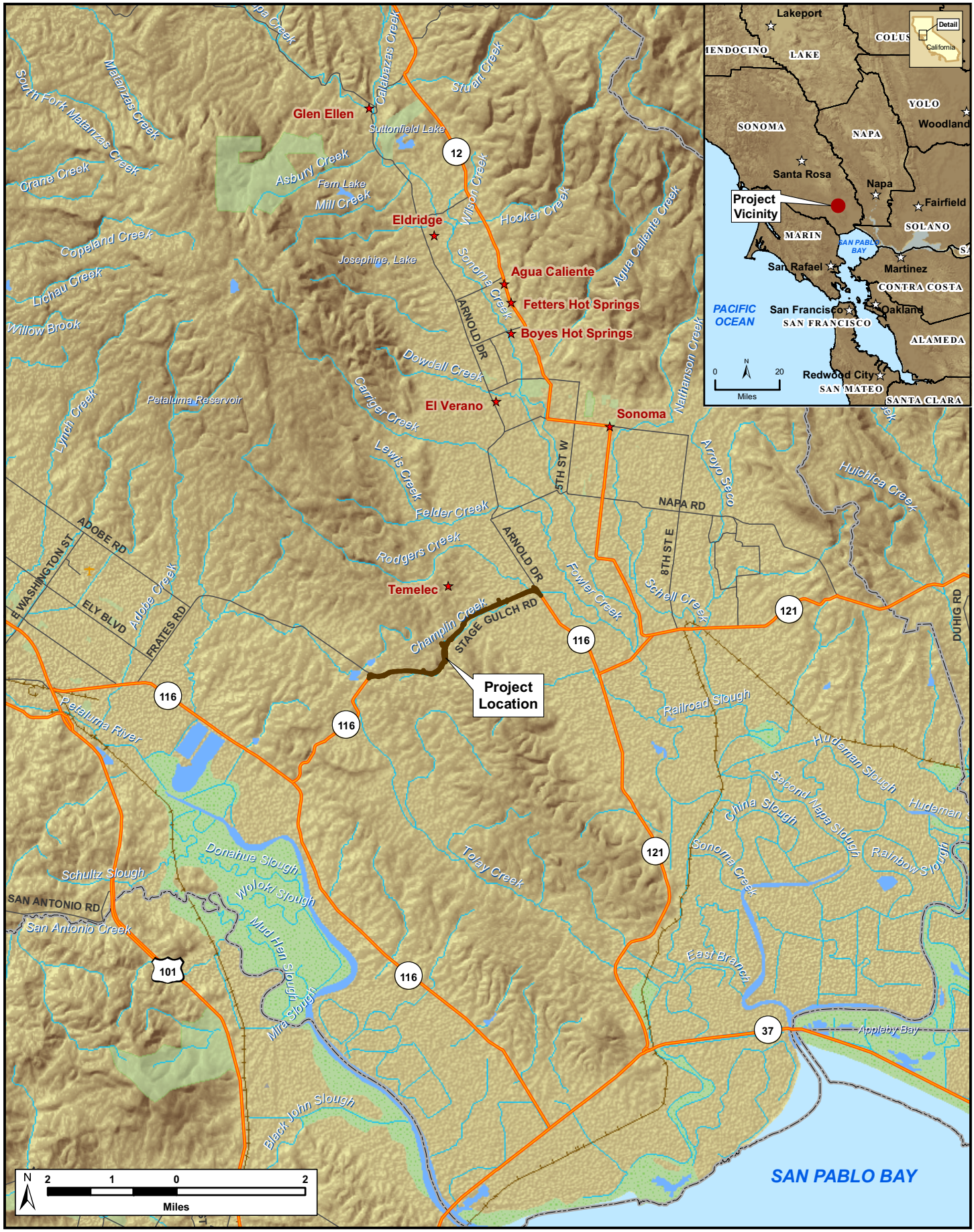
Data Source: *State Water Resources Control Board*


High Risk Receiving Watersheds
Legend
Regional Board Boundary
SPAWN, MIGRATORY & COLD Beneficial Uses
Plus TMDLs & 303(d)
Project Location
High Risk
Receiving Water
Data Source: U.S. Geological Survey
and State Water Resources Control Board
0
50
100
200 Miles
NEVADA
CALIFORNIA
San Francisco
Sacramento
Fresno
Los Angeles
San Diego
Las Vegas
Reno
Carson City
Elko
Twin Falls
Redding
Chico
Santa Rosa
Vacaville
Fairfield
Concord
Antioch
Stockton
Livermore
Modesto
Fremont
San Jose
Salinas
Visalia
Bakersfield
San Luis Obispo
Santa Maria
Lompoc
Santa Barbara
Oxnard
Lancaster
Palmdale
Santa Clarita
Victorville
Riverside
Anaheim
Cathedral City
Palm Desert
Indio
Long Beach
Santa Ana
Murrieta
Oceanside
Tijuana
Mexicali
Yuma
San Luis Rio Colorado
Ensenada
Henderson
Water Boards

Attachment D
Vicinity Map and Site Map

PROJECT VICINITY





N:\Projects\2855-01\Reports\MMP

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

Figure 1: Vicinity Map
Stage Gulch Road Curve Correction and Realignment Project
Mitigation and Monitoring Report (2855-01)
July 2009

N:\Projects\2855-01\Reports\MMP

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

Figure 2: Mitigation Sites Map

Stage Gulch Road Curve Correction and Realignment Project Mitigation and Monitoring Report (2855-01)
July 2009

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7	1	125

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-4	TYPICAL CROSS SECTIONS
5-9	LAYOUTS
10-11	PROFILES
12-21	CONSTRUCTION DETAILS
22-23	TEMPORARY WATER POLLUTION CONTROL PLANS AND DETAILS
24-37	EROSION CONTROL PLANS, DETAILS AND QUANTITIES
38-39	CONTOUR GRADING
40-49	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
50-60	UTILITY PLANS
61	CONSTRUCTION AREA SIGNS
62-63	SUMMARY OF QUANTITIES
64-65	PLANT LIST
66-78	PLANTING PLANS
79-88	IRRIGATION PLANS
89-91	LANDSCAPE DETAILS
92-93	IRRIGATION QUANTITIES
94-125	REVISED AND NEW STANDARD PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

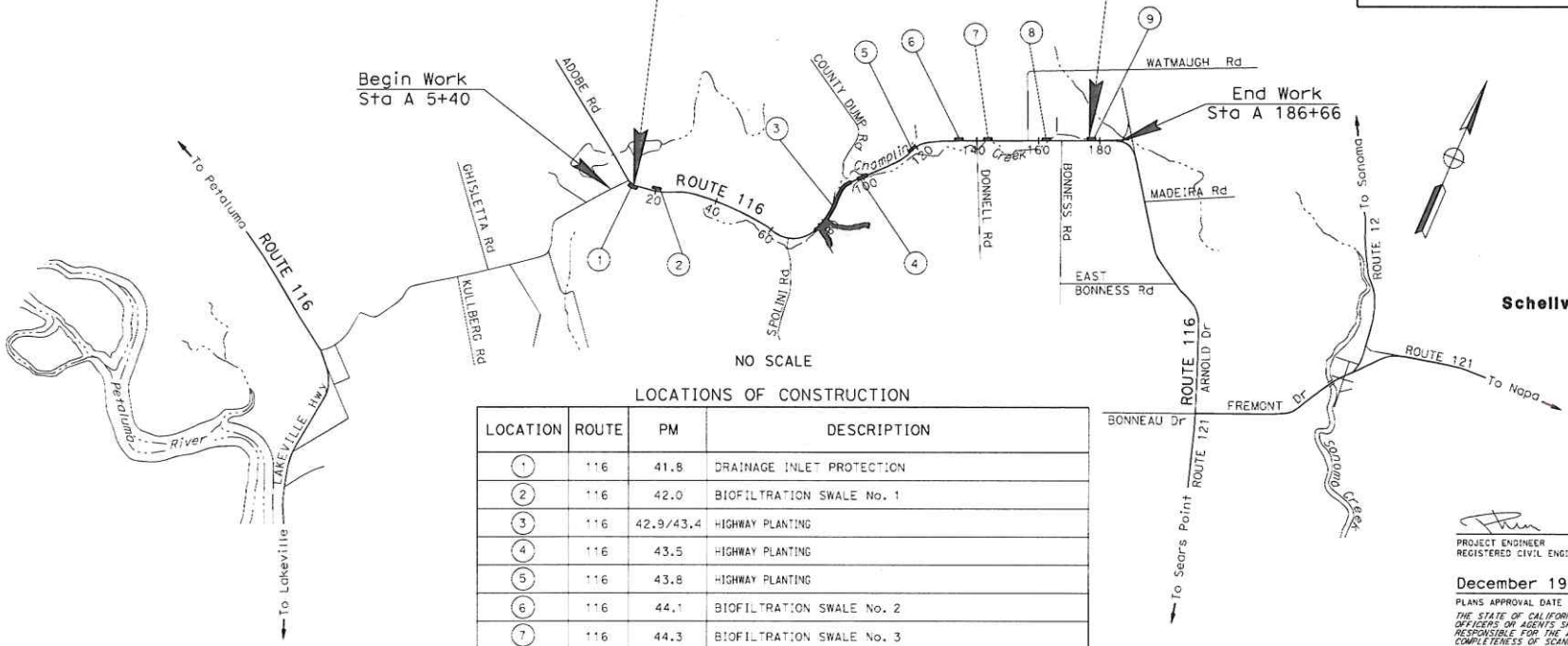
STATE HIGHWAY

IN SONOMA COUNTY NEAR SCHELLVILLE AT VARIOUS LOCATIONS FROM ADOBE ROAD TO 0.4 MILE WEST OF ARNOLD DRIVE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

BEGIN CONSTRUCTION
Sta A 10+00 PM 41.8

END CONSTRUCTION
Sta A 175+00 PM 44.7



LOCATIONS OF CONSTRUCTION

LOCATION	ROUTE	PM	DESCRIPTION
1	116	41.8	DRAINAGE INLET PROTECTION
2	116	42.0	BIOFILTRATION SWALE No. 1
3	116	42.9/43.4	HIGHWAY PLANTING
4	116	43.5	HIGHWAY PLANTING
5	116	43.8	HIGHWAY PLANTING
6	116	44.1	BIOFILTRATION SWALE No. 2
7	116	44.3	BIOFILTRATION SWALE No. 3
8	116	44.7	HIGHWAY PLANTING
9	116	44.9	LOCAL MATERIAL SITE - LOCAL TOPSOIL (RDA)

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE 9/30/11

REGISTERED PROFESSIONAL ENGINEER Jason R. Phoen No. 57553 Exp. 12-31-11 CIVIL STATE OF CALIFORNIA

December 19, 2011
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	04-283824
PROJECT ID	0400000772

PROJECT MANAGER: JASON R. PHOEN
DESIGN ENGINEER: STEWART LEE

LAST REVISION 09-13-11 | DATE PLOTTED => 23 DEC 2011 | TIME PLOTTED => 14:32

Attachment E
Contractor Personnel Stormwater Training

CERTIFICATE OF TRAINING

CALIFORNIA CONSTRUCTION GENERAL PERMIT

QUALIFIED SWPPP DEVELOPER (QSD)
AND
QUALIFIED SWPPP PRACTITIONER (QSP)

Alex McDonald

Sep 23, 2011 - Sep 23, 2013

Certificate # 21080

CASQA
CALIFORNIA STORMWATER

California Stormwater Quality Association and
California Construction General Permit Training Team

Attachment F
Other Plans/Permits/Agreements

State Water Resources Control Board

Caltrans Statewide Permit

(July 15, 1999)

STATE WATER RESOURCES CONTROL BOARD
901 P STREET
SACRAMENTO, CALIFORNIA
JULY 15, 1999

FACT SHEET FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR STORM WATER DISCHARGES FROM THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS) PROPERTIES, FACILITIES, AND ACTIVITIES (ORDER NO. 99 – 06 - DWQ)

BACKGROUND

In 1972, The Federal Water Pollution Control Act [also referred to as the Clean Water Act (CWA)] was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful, unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added section 402(p) which directs that storm water discharges are point source discharges and establishes a framework for regulating municipal and industrial storm water discharges under the NPDES program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) promulgated final regulations that establish the storm water permit requirements.

Pursuant to these regulations, storm water permits are required for discharges from a municipal separate storm sewer system (MS4) serving a population of 100,000 or more. USEPA defined MS4 to include road systems owned by states which are in an area with a population greater than 100,000. The regulations also specified a requirement for storm water permits from 11 categories of industry, including construction activities where the construction activity disturbs five acres or more.

In California, the MS4s were issued individual NPDES permits by the Regional Water Quality Control Boards (RWQCB). Caltrans is currently under permit in all of the areas of California that have been determined to require an MS4 permit with the exception of the Salinas area. Industrial activities are covered by General Permits that have been adopted by the State Water Resources Control Board (SWRCB). Caltrans currently seeks coverage under the NPDES General Permit for Construction Activities (Construction General Permit) for construction activities that are over five acres. The exception to this is in the Lake Tahoe area, where the RWQCB adopted its own Construction General Permit for projects over five acres and Waste Discharge Requirements (WDRs) for projects under five acres.

In 1996, Caltrans requested that the SWRCB, consider adopting a single NPDES permit for storm water discharges from all Caltrans properties, facilities, and activities that would cover both the MS4 requirements and the statewide Construction General Permit requirements. The federal regulations allow for the issuance of system-wide MS4 NPDES permits. Caltrans submitted an application for a permit with a draft Storm Water Management Plan (SWMP) in August 1996. The SWRCB gave Caltrans comments on the SWMP and received a revised SWMP from Caltrans in March 1997. Because the RWQCBs have issued NPDES storm water permits to all of the areas currently requiring a permit, with the exception of the Salinas area, this permit was not considered a new storm water permit, and a Part I and Part II application were not required.

The "Interpretative Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems" issued by USEPA on May 17, 1996 outlines the requirements for permittees seeking a second Municipal NPDES Storm Water Permit. The requirements are: (1) name and address of the applicant; (2) name and title of primary administrative and technical contacts; and (3) proposed changes or improvements to the storm water management program and monitoring activities for the upcoming five-year term of the permit. In addition, USEPA recommends that the applicant provide identification of any previously unidentified water bodies and a summary of any known water quality impacts.

This permit is intended to cover all municipal storm water activities by Caltrans in California, both in areas that require an MS4 permit and areas that do not currently require a permit. It is also intended to cover all Caltrans construction activities that require a permit under the federal regulations. It directs that all existing storm water permits for discharges from Caltrans properties, facilities, and activities should be rescinded. RWQCBs may in the future issue individual storm water permits for Caltrans construction activities, as explained below.

This permit shall be implemented and enforced by the nine RWQCBs.

PROHIBITIONS

This permit authorizes storm water and authorized nonstorm water discharges from Caltrans properties, facilities, and activities. This permit prohibits discharges of material other than storm water (nonstorm water discharges) that are not authorized by this permit.

EFFLUENT LIMITATIONS

NPDES permits for storm water discharges must meet all applicable provisions of sections 301 and 402 of the CWA. These provisions require control of pollutant discharges to the Maximum Extent Practicable (MEP) for the MS4 permit requirements and to the standard of Best Available Technology Economically Achievable/Best Conventional Technology (BAT/BCT) for Construction General Permit requirements. It

also requires dischargers to implement more stringent controls, if necessary, to meet water quality standards.

It is not feasible at this time to establish numeric effluent limitations for storm water. The reasons why establishment of numeric effluent limitations is not feasible are discussed in detail in SWRCB Orders No. WQ 91-03 and WQ 91-04. Therefore, this permit allows Caltrans to implement Best Management Practices (BMPs) to comply with the requirements of this permit.

RECEIVING WATER LIMITATIONS

Storm water discharges shall not cause or contribute to a violation of an applicable water quality standard. This permit requires Caltrans to reduce or prevent pollutants in storm water discharges and authorized nonstorm water discharges through the development and implementation of BMPs which constitutes compliance with either MEP or BAT/BCT, whichever is applicable. Storm water discharges must also be in compliance with water quality standards. If receiving water quality standards are exceeded, Caltrans is required to submit a written report providing additional BMPs or other measures to be taken that will be implemented to achieve water quality standards.

MS4 PERMIT REQUIREMENTS

MS4 permit requirements are to be implemented to MEP. These requirements are addressed in the SWMP that is an integral and enforceable component of this NPDES Permit. However, the SWMP also refers to other documents that Caltrans has prepared which give the detailed discussion of how the program elements are to be implemented. Where the SWMP was determined to be inadequate, further requirements are outlined in the permit. Caltrans will submit changes to the SWMP on an annual basis. Substantive changes to the SWMP will require approval by the SWRCB.

The SWMP which was submitted in August 1996 defined terms in the development of the program in a way that is inconsistent with the definitions in Title 40 of the Code of Federal Regulations Section 122.22 (40 CFR 122.22). Caltrans is required to rewrite the SWMP in a manner that is consistent with the definitions in the regulations. Caltrans also uses terms such as "winter season" and "significant erodible slope" which are not used in the regulations. Caltrans uses terms such as these to determine the scope of the program, with the understanding that Caltrans is responsible for discharges at all times during the year, and that if implementation of the program using these terms leads to discharge of pollutants, the terms will have to be redefined.

Caltrans is required to submit a revised SWMP within 90 days of the adoption of this permit. Because the SWMP is an integral and enforceable part of this permit, this revised SWMP will be presented to the State Board for approval. The incorporation of this revised SWMP into the permit will be made pursuant to the federal regulations for NPDES permit modification found at 40 CFR Section 122.62 and 40 CFR Section 124.

Caltrans has developed a BMP program for control of pollutants from existing facilities and for new and reconstructed facilities as part of the SWMP. This BMP program must be revised to reflect the definition of pollutant in the federal requirements, including a reevaluation of BMPs. The evaluation of the feasibility of structural BMPs in the SWMP does not reflect the current state of knowledge among other transportation agencies. BMPs are rejected that are routinely used by other transportation agencies. Therefore, the BMP selection in the SWMP does not meet MEP. The federal regulations require the consideration of structural BMPs where they are appropriate. MEP cannot be met without the consideration of structural BMPs. The fact that a BMP has not been used before is not an adequate reason to reject its use if other factors make it appropriate

In addition to the annual submittal of the SWMP, this permit also requires Caltrans to submit a workplan that explains how the program will be implemented in each Region. The purpose of the workplan is to bring the theoretical and proposed program of the SWMP to the practical and implementable level at the regional, watershed and water body level. Through the workplan process, Caltrans will be able to discuss the implementation of the program and show how their priorities will address specific local needs.

The MS4 permit requirements include:

Coordination with Local Agencies

This permit requires Caltrans to develop a program for communication with local agencies and coordination with other MS4 programs where the programs overlap geographically with Caltrans facilities.

Legal Authority

In the April 1998 SWMP, Caltrans submitted a certification of adequate legal authority to implement the program. Through implementation of a storm water program, Caltrans may find that the legal authority is, in fact, not adequate. This permit requires Caltrans to reevaluate the legal authority each year and recertify that it is adequate. Caltrans must submit the analysis of the legal authority as part of the Annual Report each year. If it becomes clear that the legal authority is not adequate to fully implement the SWMP and the requirements of the permit, Caltrans must seek the authority necessary for implementation of the program.

Fiscal Analysis

Caltrans must maintain adequate funding to implement an effective storm water program and must submit an analysis of the funding each year. This includes a report on the funding that is dedicated to storm water as well as an estimate of the funding that has been allocated to various program elements that is not included in the storm water

program funding. An example of this would be to estimate the funding that has been made available to the Maintenance Program to implement the development of Maintenance Facility Pollution Prevention Program Plans (FPPP) and to implement the BMPs that are necessary for water quality. In addition, Caltrans is required to seek adequate funding from the legislature for an effective storm water program.

Vegetation Control Program

This permit requires Caltrans to develop a program for vegetation control that minimizes the use of agricultural chemicals and maximizes the use of appropriate native and adapted vegetation for erosion control and filtering of runoff.

Storm Water System Management

This permit requires Caltrans to develop a program to monitor and clean storm drain inlets. For storm water structures that contain excessive material on a regular basis, Caltrans must determine if an Illicit Connection/Illegal Discharge (IC/ID) Detection investigation is warranted or if an enhanced BMP program is required for the drainage area. Vegetation in storm channels may reduce erosion from these channels and provide filtration and may be subject to sections 401 and 404 of the CWA.

Accidental Spills

This permit requires Caltrans to notify the MS4 permittee of any spills that may have an impact on the MS4's ability to comply with its municipal storm water permit. This means any spill that could reach the MS4 permittee's storm drain system in a large enough quantity to impact the system. Caltrans must also notify the RWQCB of any spill that may reach a receiving water and have an adverse effect on the receiving water. Generally, this notification would be limited to spills that are large enough to require cleanup or lane closure, but only if the spill could have an impact on water quality.

Illicit Connection/Illegal Discharge (IC/DC) Detection

This permit requires Caltrans to have a program to detect and investigate IC/IDs. Because Caltrans is different from a typical municipality, it is not intended that Caltrans should do routine inspections of their system for illicit connections. It is unlikely that a discharger would have access to the Caltrans storm drain system to make an illicit connection. It is also not intended that Caltrans would do routine field screening for illegal discharges. The Caltrans system is too large and spread out for this to be effective. However, Caltrans is required to train field maintenance personnel to recognize IC/IDs and to respond to them. Caltrans is also required to have a method for receiving and responding to public complaints.

Characterization of Discharges

In the areas which require an MS4 permit, Caltrans is required to characterize discharges as specified in 40 CFR 122.26(iv)(d)(1) and (2) over the life of the permit. This requirement was to be done as part of the Part II application for the initial permits that Caltrans received in these areas; so for most areas, this data should already be available. The purpose of this requirement is to provide Caltrans with adequate information about the storm drain system to effectively implement the program. This characterization is a one time requirement. If adequate information was submitted under the original Part II application, this requirement is satisfied and the data should be used as the basis for the Regional Workplans.

Maintenance Facilities

This permit requires Caltrans to prepare FPPP for all maintenance facilities, implement BMP programs at each facility as necessary and periodically inspect each facility. Monitoring is only required as part of the overall monitoring program to determine the effectiveness of the BMP program.

Training and Public Education

The Training and Public Education component consists of three parts to address the three major audiences that Caltrans must address. The three audiences are Caltrans employees, Caltrans contractors, and the general public. Caltrans has prioritized these three parts and has developed and implemented programs for the first two audiences. The program for the final part, which addresses the general public, will be developed and implemented during this permit period.

The detailed requirements in the permit outlining what is to be included in a public education component were recommended by the Public Information/Public Participation Subcommittee of the California Storm Water Quality Task Force. The members of this committee are all responsible for public education programs throughout the State and have experience in developing public education programs.

Program Evaluation and Monitoring

This permit requires Caltrans to evaluate the effectiveness and adequacy of the storm water program on an annual basis. This includes both monitoring and a self-audit of the program. Caltrans has submitted a three-year monitoring strategy that will be updated annually. Caltrans will also be required to submit a detailed monitoring program prior to the upcoming rainy season for each year. The monitoring is intended to demonstrate the effectiveness of its storm water and nonstorm water programs and specifically to achieve the following objectives:

1. Characterization of storm water discharges, including pollutant concentrations and mass loadings, from locations representative of Caltrans owned properties, facilities, and activities. Of particular interest is the discharge of high volume systems which discharge to areas subject to or sensitive to beach closures;

2. Evaluation of effectiveness of maintenance activity control measures;

3. Evaluation of effectiveness of maintenance facility pollution prevention plans;

4. Evaluation of effectiveness of construction erosion prevention and control measures;

5. Evaluation of effectiveness of permanent control measures; and

6. Evaluation of effectiveness of highway operation control measures.

Caltrans has also submitted a Guidance Manual for Stormwater Monitoring Protocols which specifies the manner in which monitoring is to be undertaken.

In addition to monitoring, Caltrans must perform a program audit each year to determine how well the program is being implemented and whether the program is actually adequate. Caltrans must submit an outline of this audit six months in advance of the Annual Report so that the SWRCB can evaluate the methods to be used to perform the audit.

Region Specific Concerns

Each of the RWQCBs was given the opportunity to specify specific water quality concerns in their Region that required special conditions. At this time, these requirements are limited to items that Caltrans is currently responsible for either under a current NPDES permit or under a RWQCB Basin Plan. Region-specific concerns have been identified in the Lahontan RWQCB. Some of the requirements are specific to the Lake Tahoe Hydrologic Unit and are based on the unique quality of the resource. Other requirements are applicable to the entire region.

To accommodate the concerns about the Lake Tahoe Hydrologic Unit, the Lahontan RWQCB has placed requirements in the RWQCB Basin Plan that are, therefore, requirements of this permit. They include (1) numeric effluent limits for storm water, (2) nonstorm water discharge prohibitions, (3) a requirement for the capture and treatment of all storm water from the 20-year storm, (4) erosion control guidelines for high mountain areas, (5) construction site and maintenance facility inspection requirements, and (6) a winter ban on soil disturbance throughout the Lake Tahoe Hydrologic Unit and other high mountain portions of the Region. If the Basin Plan requirements that are referenced in this NPDES Permit are changed during the life of this NPDES Permit,

Caltrans can request that the terms of this permit be changed to reflect the changes in the Basin Plan.

In addition, the Lahontan RWQCB requires Caltrans to meet some specific requirements in their construction program. These include involving the RWQCB in the design of the project and early submittal of Storm Water Pollution Prevention Plans (SWPPP).

The Lahontan RWQCB requires that Caltrans submit information to them about the program to control snow and ice throughout the Region. This requirement includes the submittal of information about the use of abrasives and deicing agents throughout the Region, including the location of the use, the source and chemistry of the deicing agents and abrasives, and the volume of abrasive and deicing agents used on individual highway segments. For example, Caltrans must report separately on abrasives and deicing agents use within the Lake Tahoe Hydrologic Unit by volume of material used on State Route 50, State Route 89, State Route 28, and State Route 267, rather than providing only the total volume used in the Lake Tahoe Hydrologic Unit or within a specific Caltrans District. In the Truckee River Hydrologic Unit, the reports would be volume of material used on State Route 89S, State Route 89N, State Route 267, and Interstate 80.

Caltrans is required to develop a monitoring program that evaluates the effectiveness of BMPs used to recover abrasives and deicing materials and that evaluates the impacts of abrasives and deicing materials on surface waters within the Lake Tahoe Hydrologic Unit. A report on the use of deicing agents and abrasives is required each year as part of the Annual Report.

CONSTRUCTION PERMIT REQUIREMENTS

Construction activities which disturb five acres or more outside of the Lake Tahoe Hydrologic Area are currently required to be covered by the Construction General Permit. The current Construction General Permit is SWRCB Order 99- DWQ.

The Lahontan RWQCB has developed an NPDES Storm Water Permit for construction projects that involve more than five acres of soil disturbance and non-NPDES waste discharge requirements for construction projects for projects less than five acres within the Lake Tahoe Hydrologic Unit. The current Lahontan Construction Permit is Lahontan RWQCB Board Order 6-93-63. The WDRs for small projects are contained in Lahontan RWQCB Board Order 6-91-31. All projects within the Lake Tahoe Hydrologic Area are currently subject to one of these two Board Orders depending on the size of the project.

Storm water discharges from all Caltrans construction projects will be covered by this permit except for those projects that the RWQCB determines should be covered by an individual permit. Caltrans will be required to notify the RWQCB that a project is to be covered under this permit at least 30-days prior to the onset of construction. This 30-day

notification under this permit is the equivalent of filing a Notice of Intent (NOI) under the Construction General Permit.

The RWQCB can require submittal of the SWPPP up to 30 days prior to the onset of soil disturbance, require changes to the SWPPP, perform inspections, and take enforcement action. Caltrans can negotiate an alternative process with the appropriate RWQCB if an alternative method of complying with the requirement for early submittal of the SWPPP is appropriate.

The permit requires Caltrans to implement an effective construction storm water program. The program that Caltrans plans to implement is contained in their SWMP. This plan, in turn, refers to BMP manuals and the Standard Specifications that contain the details of the BMP implementation.

Caltrans must implement an effective construction storm water program during the entire year throughout the State. Because the construction storm water program will be implemented year round, regardless of whether or not Caltrans elects to implement baseline or more advanced erosion control measures, any discharges of material not authorized by this permit is a violation.

Caltrans construction projects may involve soils that contain lead in quantities that meet the State definition of hazardous waste but not the federal definition. The Department of Toxic Substances Control (DTSC) has issued waivers allowing Caltrans to use these soils in construction projects under a narrow range of conditions. In addition to the waivers, Caltrans also needs authorization from the RWQCB to allow the use of these soils. Caltrans is required to obtain WDRs from the RWQCB for the use of these soils.

ANNUAL REPORT

This permit requires Caltrans to submit an Annual Report each April. The Annual Report will contain (1) an evaluation of the previous year's program, (2) the results of the program audit, including information about compliance with the construction requirements and maintenance facility requirements, (3) a vegetation management report, (4) an IC/ID report, (5) a nonstorm water discharge report, (6) an analysis of the legal authority, (7) an analysis of the fiscal resources for the coming year, (8) a report on the training and public education program, and (9) reports on the regional requirements. The Annual Report must also contain a monitoring report and a monitoring plan for the upcoming year and workplans for each of the regions. There is a one year lag in the reporting of the monitoring program and the program audit in the Annual Report. This lag is intended to allow Caltrans the time to adequately analyze the data that has been generated.

STATE WATER RESOURCES CONTROL BOARD

ORDER NO. 99 - 06 - DWQ
NPDES NO. CAS000003

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
STATEWIDE STORM WATER PERMIT
AND
WASTE DISCHARGE REQUIREMENTS (WDRs)
FOR THE
STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS)

The State Water Resources Control Board (SWRCB) finds that:

1. **NPDES PERMIT APPLICATION**: On September 5, 1996, Caltrans, located at 1120 N Street, Sacramento, California 95814 submitted an NPDES Permit application for storm water discharges from the Caltrans highways, properties, facilities, and activities throughout the State of California for Caltrans headquarters and for the District offices including: the North Coast region (District 1), Northern Central Valley and Far Northeastern region (District 2), Sacramento area (District 3), San Francisco Bay area (District 4), Central Coast (District 5), Lower Central Valley (District 6), Los Angeles Basin (District 7), San Bernardino area (District 8), Mono/Inyo area (District 9), Middle Central Valley (District 10), San Diego area (District 11), and Orange County (District 12). The application was accepted on October 4, 1996. As part of the application, Caltrans submitted a Storm Water Management Plan (SWMP) and Monitoring Plan. The SWMP and Monitoring Plan were amended in March 1997 and again in April 1998. The application is considered an application for permit reissuance because Caltrans is currently under permit in all of the parts of the State for which a Municipal Separate Storm Sewer System (MS4) permit is currently required. The MS4 permits that Caltrans holds, the permitting agency, the adoption date, and expiration date are shown in Table 1.

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TABLE 1
CURRENT CALTRANS STORM WATER PERMITS

RWQCB	Caltrans District	Board Order	NPDES Permit Number	Adoption Date	Expiration Date
North Coast	4	97-119	CA0025038	10/22/97	10/22/02
San Francisco Bay	4 and 10	94-098	CAS029998	8/17/94	8/27/99
Los Angeles	7	90-079	CA0061654	6/18/90	6/18/95
Central Valley	6	94-244	CA0083500	9/16/94	9/1/99
Central Valley	3, 4, 6 and 10	95-001	CA0083640	1/27/95	1/1/00
Lahontan	3	6-93-62	CAS616002	6/11/93	6/11/98
Colorado River Basin	8 and 11	94-038	CAS617001	11/15/94	11/17/99
Santa Ana River	8 and 12	94-5	CA8000279	7/8/94	7/8/99
San Diego	8,11, and 12	97-08	CAS029998	3/12/97	3/12/02

2. **FEDERAL AUTHORITY**: In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with an NPDES Permit. The 1987 amendments to the CWA added section 402(p) that establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Permit Program.

3. **STATE AUTHORITY:** California Water Code section 13376 provides that any person discharging or proposing to discharge pollutants to waters of the United States must apply for and obtain WDRs. (For this permit, the State term "WDRs" is equivalent to the federal term "NPDES permits" as used in the CWA). Furthermore, municipal and industrial storm water discharges are discharges of waste that could affect the quality of the waters of the State. Applicable State of California regulations are contained in the California Code of Regulations (CCR), Title 23, Division 3, Chapter 9.

4. **CALTRANS DISCHARGES SUBJECT TO MUNICIPAL STORM WATER PERMIT REGULATIONS**: On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) promulgated final regulations that establish application requirements for storm water permits codified at Title 40 of the Code of Federal Regulations (CFR), Section 122.26 (40 CFR 122.26). Federal regulations 40 CFR 122.26(a)(iii) and (iv) require that NPDES storm water permits be issued for discharges from large and medium MS4s. The regulations define "municipal separate storm sewer" to mean "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (i) owned or operated by a State, city, town, borough, county, . . .". Caltrans, as the owner of an MS4, is subject to an NPDES Permit in those areas of the State subject to an MS4 storm water permit. Caltrans performs activities that impact storm water quality. These activities include operation of roads and highways, construction activities, and maintenance activities.

To enable Caltrans to implement a uniform storm water program, this NPDES Permit will cover storm water discharges from all Caltrans highways, properties, activities and facilities throughout the State.

5. **CALTRANS DISCHARGES SUBJECT TO CONSTRUCTION STORM WATER PERMIT REGULATIONS**: Federal regulations (40 CFR 122.26) require discharges of storm water associated with construction activity including clearing, grading, and excavation activities (except operations that result in disturbance of less than five acres of total land area and which are not part of a larger common plan of development or sale) to obtain an NPDES Permit and to implement Best Management Practices (BMPs) that achieve the performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.

6. **STORM WATER DISCHARGE DEFINITION**: Storm water discharges consist only of those discharges that originate from precipitation events. Storm water is defined in 40 CFR 122.26(b)(13) as storm water runoff, snowmelt runoff, and surface runoff and drainage. During precipitation events, storm water picks up and transports pollutants into and through municipal storm water conveyance systems and ultimately to waters of the United States.

7. **NONSTORM WATER DISCHARGE DEFINITION:** Nonstorm water discharges consist of all discharges from a municipal storm water conveyance system which do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water). Nonstorm water discharges include illicit discharges, nonprohibited discharges, and NPDES permitted discharges. An illicit discharge is defined in 40 CFR 122.26(b)(2) as "any discharge to a municipal storm sewer that is not composed entirely of storm water except discharges pursuant to an NPDES Permit (other than the NPDES Permit for discharges from the MS4) and discharges resulting from fire fighting activities." Nonstorm water discharges are addressed in Provision B of this permit.

8. **PERFORMANCE STANDARDS:** CWA section 402(p) establishes two different performance standards for storm water discharges. NPDES permits issued for MS4 storm water discharges require controls to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP). Caltrans can reduce pollutants to MEP through the effective implementation of BMPs. NPDES Permits issued for industrial storm water discharges (including construction activities) must meet BAT for toxic pollutants and BCT for conventional pollutants. In addition, storm water discharges may not cause or contribute to exceedance of water quality standards. The requirements for compliance with water quality standards are described in Provision C., Receiving Water Limitations.

9. **CALTRANS ACTIVITIES**: Caltrans is primarily responsible for the design, construction, management, and maintenance of the State highway system, including freeways, bridges, tunnels, maintenance facilities, and related properties, and facilities.

10. **CALTRANS BUDGET**: Caltrans derives funding from federal, State, and local government sources. The annual operating budget for Caltrans is determined through the

State's financial planning process. The final determination on the budget is made by the Legislature and the Governor.

11. **REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) BASIN PLANS:** Each RWQCB has adopted a Basin Plan containing the policies, prohibitions and requirements that apply to that Region. Caltrans is subject to the policies and prohibitions and requirements contained in these Basin Plans in the Region in which the Basin Plan is applicable.

12. **CALTRANS DISCHARGES**: Caltrans discharges consist of storm water and nonstorm water runoff generated from (a) maintenance and operation of State-owned highways, freeways, and roads; (b) maintenance facilities; (c) other properties, facilities, activities, and construction projects; (d) permanent discharges from subsurface dewatering, and (e) temporary construction related dewatering which discharge directly or through municipal storm water conveyance systems to surface water bodies in the State. These surface water bodies include creeks, rivers, reservoirs, lakes; wetlands, lagoons, estuaries, bays, and the Pacific Ocean and tributaries thereto. These surface waters are waters of the United States as defined in 40 CFR 122.2. This permit regulates storm water discharges on Caltrans highways, properties, and facilities.

13. **POTENTIAL POLLUTANTS IN CALTRANS DISCHARGES**: Discharges of storm water from the Caltrans owned rights-of-way, properties, facilities, and activities, including storm water management activities in construction, maintenance, and operation of State-owned highways within the State of California have been shown to be contributors of pollutants to waters of the United States. As such, the discharge of storm water may be causing or threatening to cause violations of water quality objectives. The quality and quantity of these discharges vary considerably and are affected by hydrology, geology, land use, season, and sequence and duration of hydrologic events. Pollutants occur in both the storm water discharges and nonstorm water discharges. Pollutant sources from Caltrans rights-of-way, properties, facilities, and activities include motor vehicles, highway maintenance, construction site runoff, maintenance facility runoff, illegal dumping, spills, and landscaping care. Pollutant categories include metals (such as copper, lead, and zinc), synthetic organics (petroleum products and pesticides), sediment, nutrients (nitrogen and phosphorus fertilizers), debris, oxygen demanding substances (decaying vegetation, animal waste, and other organic matter), and other pollutants which may cause aquatic toxicity in the receiving waters.

14. **STORM WATER MANAGEMENT PLAN (SWMP)**: The SWMP submitted by Caltrans describes a framework for management of storm water discharges during the term of this permit. The title page and table of contents of the SWMP are attached to this NPDES Permit. The SWMP describes the Caltrans facilities, the institutional arrangements within Caltrans, legal authorities, funding, training and public education and participation, the annual reporting program evaluation process, and monitoring studies to be undertaken. The SWMP includes a discussion of activities to be implemented by each of the Divisions within Caltrans, including programs for design and construction, maintenance, and additional region-specific programs to be undertaken. Revisions to the SWMP for subsequent years will be submitted to the SWRCB as part of the Annual Reporting and Program Evaluation Process. This NPDES Permit directs Caltrans to implement its

SWMP. Where the SWMP was found to be inadequate, this NPDES Permit directs Caltrans to fulfill additional requirements and specifies what these requirements are.

Caltrans SWMP must be revised in accordance with the Provisions of this NPDES Permit to address concerns about the scope, detail of proposed actions, and time frame for implementation.

Caltrans began implementation of this SWMP in March 1997.

15. **ENFORCEABILITY OF THE SWMP**: The SWMP and modifications or revisions to the SWMP that are approved, in accordance with Provision F.1 of this NPDES Permit, and future year workplans to be submitted, in accordance with the SWMP and Provision F.1 of this NPDES Permit, are integral to and an enforceable component of this NPDES Permit.

16. **LOCAL MUNICIPALITIES:** The RWQCBs have issued NPDES Permits for the discharge of storm water from municipal storm water conveyance systems to municipalities in California which require these permits. Caltrans operates highways and highway-related properties, activities, and facilities that cross through all of these permitted areas. Some storm water discharges from Caltrans-owned rights-of-way, properties, facilities, and activities discharge to storm water conveyance systems managed by these municipalities. Some storm water discharges from these municipalities discharge to storm water conveyance systems managed by Caltrans.

17. **LOCAL CONTROL**: This NPDES Permit does not preempt or supersede the authority of local municipal agencies to prohibit, restrict, or control storm water discharges and authorized nonstorm water discharges to storm drain systems or other watercourses within their jurisdictions as allowed by State and federal law.

18. **CALTRANS CONSTRUCTION PROGRAM**: Caltrans performs construction activities that are required to have NPDES Permits for storm water discharges from the construction site. This NPDES Permit will effectively regulate storm water discharges from construction projects within the Caltrans rights-of-way. Caltrans will not be required to obtain coverage under the State NPDES General Permit for Construction Activities (Construction General Permit), SWRCB Board Order 92-08 DWQ.

19. **DREDGE AND FILL MATERIALS:** This NPDES Permit does not authorize discharges of fill or dredged material regulated by the U.S. Army Corps of Engineers under CWA section 404 and does not constitute a waiver of water quality certification under CWA section 401.

20. **RECEIVING WATER LIMITATIONS**: The impact of storm water runoff from highway facilities on the water quality of receiving waters is highly variable. For this reason, this NPDES Permit does not include numeric effluent limitations. Instead, this NPDES Permit will emphasize the use of BMPs to control storm water pollution and the establishment of a monitoring program to determine the impact of storm water runoff from highways on receiving water bodies. The Lahontan RWQCB does have numeric effluent limits for storm water discharges for the Tahoe Basin in the Basin Plan. These numeric effluent limits also appear in their Regional Construction Permits (RWQCB Board Orders

6-91-31 and 6-93-63) and the Caltrans MS4 Permit RWQCB Board Order No. 6-93-62) for the Tahoe Basin, and these limits apply to this NPDES Permit in that area.

It is the SWRCBs intent that this NPDES Permit shall ensure attainment of applicable water quality objectives and protection of the beneficial uses of receiving waters. This NPDES Permit, therefore, includes standard requirements to the effect that discharges shall not cause or contribute to violations of water quality objectives nor shall they cause certain conditions to occur which create a condition of nuisance or water quality impairment in receiving waters. "Standard" language is the standard for storm water permits; it is not the same as the "standard" language for other NPDES permits. Accordingly, the SWRCB is requiring that these standard requirements be addressed through the implementation of control measures to reduce pollutants in storm water discharges.

Receiving water limitations in this NPDES Permit are based on the federal CWA, RWQCB Basin Plans and policies, USEPA Guidance, Best Professional Judgement, and BMPs.

21. **CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**: The action to adopt an NPDES Permit is exempt from Provisions of the CEQA (CEQA: Public Resources Code section 21100, et. seq.), pursuant to section 13389 of the California Water Code.

22. **PUBLIC NOTIFICATION**: The SWRCB has notified Caltrans and all known interested agencies and persons of its intent to prescribe an NPDES Permit and WDRs for said discharge and has provided them with an opportunity for a public meeting and an opportunity to submit comments.

23. **PUBLIC HEARING**: The SWRCB in a public meeting held on June 9, 1998 heard and considered all comments pertaining to this NPDES Permit. The permit was adopted at a public meeting held on July 15, 1999.

24. **RWQCB ENFORCEMENT**: Following adoption of this NPDES Permit, the RWQCBs shall enforce the Provisions.

25. **IMPLEMENTATION:** This NPDES permit is in compliance with section 402 of the CWA and shall take effect upon adoption by the SWRCB.

26. **ANTI-DEGRADATION:** This NPDES Permit is consistent with the anti-degradation Provision, section 40 CFR 131.12 and SWRCB Resolution 68-16.

IT IS HEREBY ORDERED that all MS4 storm water permits issued to Caltrans by RWQCBs shall be rescinded insofar as they apply to Caltrans.

IT IS HEREBY ORDERED that in order to meet the Provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the Provisions of the Federal CWA and the regulations and guidelines adopted thereunder, Caltrans shall comply with the following: (***REPORTING REQUIREMENTS ARE SHOWN IN ITALICS WITH ALL CAPITAL LETTERS***):

A. GENERAL DISCHARGE PROHIBITIONS

1. Any discharge from Caltrans rights-of-way or Caltrans properties, facilities, and activities within those rights-of-way that is not composed entirely of "storm water" to waters of the United States is prohibited unless authorized pursuant to Section B of this NPDES Permit. For some discharges, Caltrans may also need to obtain Water Quality Certification under CWA S2. The discharge of runoff from Caltrans owned rights-of-way or Caltrans properties, facilities, and activities to waters of the United States which have not been reduced to the MEP is prohibited. The discharge of runoff from construction sites containing pollutants which have not been reduced using BAT for toxic pollutants and BCT for conventional pollutants to waters of the United States is prohibited.

2. The discharge of pollutants or dredged or fill material to waters of the United States, except as authorized by an NPDES Permit or a dredged or fill material permit (subject to the exemption described in California Water Code (CWC) section 13376), is prohibited.

3. The discharge of waste to waters of the State in a manner causing or threatening to cause a condition of pollution or nuisance defined in CWC section 13050, is prohibited.

4. The dumping, deposition, or discharge of waste by Caltrans directly into waters of the State or adjacent to such waters in any manner that may allow its being transported into the waters is prohibited unless authorized by the RWQCB.

5. The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited. The discharge shall not contain toxic substances in concentrations that are toxic to or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

6. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity, or discoloration in waters of the State or which unreasonably affect or threaten to affect beneficial uses of such waters, is prohibited.

7. Wastes or wastewater from road sweeping vehicles or from other maintenance or construction activities shall not be discharged to any surface waters or to any storm drain leading to surface water bodies.

Caltrans shall achieve the pollutant reductions described in General Discharge Prohibitions A.2. above through implementation of the SWMP described in General Requirements, Provision E., below.

B. NONSTORM WATER DISCHARGE PROHIBITIONS

1. Caltrans shall effectively prohibit nonstorm water discharges into its storm water conveyance system unless such discharges are either:

   a. authorized by a separate NPDES permit; or

   b. authorized in accordance with Nonstorm Water Discharge Prohibition B.2. of this NPDES Permit.

2. Exempted Discharges.

   In carrying out nonstrom Water Discharge Prohibition B.1. of this NPDES Permit, the following nonstorm water discharges need not be prohibited unless they are identified as sources of pollutants to receiving waters:

   a. flows from riparian habitats or wetlands;
   b. diverted stream flows;
   c. springs;
   d. rising ground waters; and
   e. uncontaminated ground water infiltration.

   If any of the above categories of discharges or sources of such discharges are identified as sources of pollutants to receiving waters, then such categories or sources shall be addressed as conditionally exempted discharges in accordance with Prohibition B.3.

3. Conditionally Exempted Discharges

   The following nonstorm water discharges need not be prohibited if identified by either Caltrans or the Executive Director as not being sources of pollutants to receiving waters or if appropriate control measures to minimize the adverse impacts of such sources are developed and implemented under the SWMP in accordance with Prohibition B.4.:

   a. uncontaminated pumped ground water;
   b. foundation drains;
   c. water from crawl space pumps;
   d. footing drains;
   e. air conditioning condensate;
   f. irrigation water;
   g. landscape irrigation;
   h. lawn or garden watering;
   i. planned and unplanned discharges from potable water sources;
   j. water line and hydrant flushing;
   k. individual residential car washing; and
   l. discharges or flows from emergency fire fighting activities.

4. Caltrans shall identify and describe the categories of discharges 3.a through 3.l that are to be exempt from Prohibition B.1 in the Annual Report. For each such category, Caltrans shall identify and describe as necessary and appropriate to the category either documentation that the discharges are not sources of pollutants to receiving waters or circumstances in which they are not found to be sources of pollutants to receiving waters. Otherwise, Caltrans shall describe (a) control measures to reduce pollutants to the maximum extent practicable and minimize the adverse impacts of such sources, (b) procedures and Performance Standards for their implementation, (c) procedures for notifying the SWRCB of these discharges, and (d) procedures for monitoring and record management. Such submissions shall be deemed to be incorporated into the SWMP unless disapproved by the Executive Director. If necessary, on a case-by-case basis, Caltrans shall prohibit any individual or class of nonstorm water discharge(s) listed above that is determined by Caltrans to be a significant source of pollutants to waters of the United States.

5. Permit Authorization for Exempted Discharges

   a. Discharges of nonstorm water from sources owned or operated by Caltrans are authorized and permitted by this Order, if they are in accordance with the conditions of this Provision and the SWMP.

   b. Any RWQCB may require dischargers of nonstorm water other than Caltrans to apply for and obtain coverage under an NPDES permit and comply with the control measures developed by Caltrans pursuant to Provision B. Nonstorm water discharges that are in compliance with such control measures may be accepted by Caltrans and are not subject to Prohibition B.1. Caltrans may refer nonstorm water dischargers to the Caltrans system to the RWQCB for permitting or enforcement.

   c. Caltrans may propose additional categories of nonstorm water discharges to be included in the exemption to Discharge Prohibition B.1. Such proposals are subject to approval in accordance with the NPDES permit regulations.

6. If a RWQCB Executive Officer determines that any individual or class of nonstorm water discharge(s) listed in Nonstorm Water Discharge Prohibition B.2 or B.3. above may be a significant source of pollutants to waters of the United States in that region, the RWQCB Executive Officer may require Caltrans to monitor and submit a report on the discharge and to follow the procedures outlined in Nonstorm Water Prohibition B.4. The RWQCB may require that discharge cease in the event that nonstorm water discharges are a significant source of pollutants to waters of the United States.

7. Caltrans shall examine all illicit connection/illegal discharge (IC/ID) investigation results for the presence of elevated levels of pollutants (e.g., chlorine, sediments, or surfactants) which may be the result of one or more classes of nonprohibited nonstorm water discharge(s) identified in Nonstorm Water Discharge Prohibition B.2. or B.3. above. If such elevated levels of pollutants are commonly present, Caltrans

shall conduct a follow-up investigation to identify the source of the elevated pollutants.

8. Discharges or flows from health and safety emergencies, such as fire fighting activities and accident response, shall be addressed only when such flows are identified by Caltrans to be significant sources of pollutants to waters of the United States. *(It is not the intention of the SWRCB for Caltrans to prohibit, under any circumstances, the discharge of water or other fire retardants that flow into storm water conveyance systems as a result of their use for protection of life and public or private property. However, there may be instances when specified BMPs are appropriate for fire fighting flows).* Although this NPDES Permit does not prohibit these discharges, they may still be subject to regulation under the federal and/or State law.

9. Caltrans shall submit a ***COMPREHENSIVE NONSTORM WATER REPORT*** each year as part of the Annual Report. This report shall include the analysis of each category of discharge, and the BMPs to be implemented for each category. Caltrans must also periodically evaluate the effectiveness of the modified BMPs by examining illicit discharge/illegal dumping investigation results and take any further action necessary to reduce such pollutant concentrations.

C. RECEIVING WATER LIMITATIONS

C-1- RECEIVING WATER LIMITATIONS FOR MUNICIPAL ACTIVITIES:

1. The discharge of storm water from a facility or activity that causes or contributes to the violation of water quality standards or water quality objectives (collectively WQSs) is prohibited.

2. The discharges shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the State:

   a. Floating, suspended solids, or deposited macroscopic particulate matter, or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin, and /or;

   e. Toxic or deleterious substances present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption

either at levels created in the receiving waters or as a result of biological concentration.

3. Caltrans shall comply with Parts C-1.1. and 2. of this permit through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this permit including any modifications; the SWMP shall be designed to achieve compliance with Parts C-1.1. and 2. of this permit; if exceedance(s) of WQSs persist notwithstanding implementation of the SWMP and other requirements of this permit, the permittee shall assure compliance with Parts C-1.1. and 2. of this permit by complying with the following procedure:

   a. Upon a determination by either Caltrans or the RWQCB that discharges are causing or contributing to an exceedance of an applicable WQS, Caltrans shall promptly notify and thereafter submit a report to the appropriate RWQCB. The report shall describe BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the annual update to the SWMP unless the RWQCB directs an earlier submittal. The report shall include an implementation schedule. The RWQCB may require modifications to the report;

   b. Submit any modifications to the report required by the RWQCB within 30 days of notification;

   c. Within 30 days following approval of the report described above by the RWQCB, Caltrans shall revise the SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required; and

   d. Implement the revised SWMP and monitoring program in accordance with the approved schedule.

4. So long as Caltrans has complied with the procedures set forth in Receiving Water Limitations C-1-3. above and are implementing the revised SWMP, Caltrans does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the RWQCB to develop additional BMPs.

C-2-RECEIVING WATER LIMITATIONS FOR CONSTRUCTION ACTIVITIES:

1. Storm water discharges and authorized nonstorm water discharges to any surface or ground water shall not adversely impact human health or the environment.

2. The SWPPP developed for the construction activity covered by this NPDES Permit

shall be designed and implemented such that storm water discharges and authorized nonstorm water discharges shall not cause or contribute to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan and/or the applicable RWQCB's Basin Plan.

3. Should it be determined by Caltrans, SWRCB or RWQCB staff that storm water discharges and/or authorized nonstorm water discharges are causing or contributing to an exceedance of an applicable water quality standard, Caltrans shall:

   a. Implement corrective measures immediately following discovery that water quality standards were exceeded, followed by notification of the RWQCB by telephone as soon as possible but no later than 48 hours after the discharge has been discovered. This notification shall be followed by a report within 14 days to the appropriate RWQCB, unless otherwise directed by the RWQCB, describing (1) the nature and case of the water quality standard exceedance; (2) the BMPs currently being implemented; (3) any additional BMPs which will be implemented to prevent or reduce pollutants that are causing or contributing to the exceedance of water quality standards; and (4) any maintenance or repair of BMPs. This report shall include an implementation schedule for corrective actions and shall describe the actions taken to reduce the pollutants causing or contributing to the exceedance.

   b. Caltrans shall revise its SWPPP and monitoring program immediately after the report to the RWQCB to incorporate the additional BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring needed.

   c. Nothing in this section shall prevent the appropriate RWQCB from enforcing any provisions of this permit while Caltrans prepares and implements the above report.

D. RWQCB AUTHORITIES

1. Following adoption of this permit, RWQCBs shall implement the Provisions of this permit. Implementation of this permit may include, but is not limited to, reviewing SWPPPs, reviewing Maintenance Facility Pollution Prevention Plans (FPPPs), reviewing monitoring reports, conducting compliance inspections, conducting monitoring, reviewing the Annual Reports and taking enforcement actions.

2. RWQCBs may require submittal of, require changes to, specify a format for, and enforce Provisions of SWPPPs and FPPPs. RWQCBs may also designate projects which do not meet the acreage requirements based upon water quality concerns and require SWPPPs. RWQCBs may require that Caltrans submit all SWPPPs automatically up to 30 days in advance of the onset of construction.

3. RWQCBs may require retention of records for more than three years.

4. RWQCBs may require additional monitoring and reporting program requirements and may provide guidance on monitoring plan implementation.

5. RWQCBs may require Caltrans to conduct additional site inspections, submit reports and certifications, to perform water quality sampling and analysis of discharges from construction sites, roadways and maintenance facilities.

6. RWQCB staff may inspect Caltrans facilities and construction sites.

7. The RWQCB Executive Officer may require Caltrans to monitor and submit a report on nonstorm water discharges that have been determined to be a source of pollutants in the region.

8. RWQCB may issue Caltrans other individual storm water NPDES permits, particularly for large construction projects or other discharges beyond the scope of this permit.

E. GENERAL REQUIREMENTS

In order to meet the federal requirements contained in the CWA and the corresponding regulations contained in the 40 CFR 122.26, Caltrans shall:

1. Maintain and implement an effective SWMP. The SWMP shall identify and describe the BMPs used to control or reduce pollutants to waters of the United States to MEP for the Municipal Storm Water Management activities (all activities except construction). For the Construction Management Program, the SWMP shall identify and describe BMPs used to control or reduce pollutants to waters of the United States that meet BAT/BCT. BMP development is a fluid and dynamic process, and the menu of BMPs contained in the SWMP may require changes over time as experience is gained and/or the state of the art progresses. The SWMP shall be reviewed annually and modified as necessary to maintain an effective program. The SWMP shall reflect the principles that storm water management is to be a year-round proactive program to eliminate or control pollutants at their source or to reduce them from the discharge by either structural or nonstructural means when elimination at the source is not possible. The ***REVISED SWMP*** shall be submitted to the SWRCB's Executive Director by April 1 as part of the Annual Report (40 CFR 122.26 (d)(vi)) each year. In accordance with NPDES Permit regulations, significant changes to the program will be taken to the SWRCB for approval. Caltrans shall change all other appropriate manuals to reflect modifications to the SWMP.

2. In addition to the revised SWMP, Caltrans shall submit ***REGIONAL WORKPLANS*** (workplans) each year for each region by April 1 as part of the Annual Report each year. The workplans will be forwarded to the appropriate RWQCB's Executive Officer for approval. The workplan shall cover all activities to be undertaken by the Districts in the region and shall address the water bodies in the region, the impact of the Caltrans discharge on the water body and the BMPs and monitoring program to be implemented in the region, and changes that are to be made to the previous year's

program. The workplan shall also include identification of high risk areas, such as locations where spills from Caltrans owned rights-of-way, activities or facilities can discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities, and consideration of appropriate spill containment and spill prevention control measures for these new areas. Because the BMP programs and monitoring program are described in other documents, this workplan shall describe how the various programs will be implemented in the Region.

3. The SWMP shall define terms in a manner that is consistent with the definitions in 40 CFR 122.2. This includes, but is not limited to, the definitions for pollutant, waters of the United States, and point source. Where there is a conflict between the SWMP and the permit language, the permit language shall govern.

4. The SWMP shall include or describe procedures for implementing the following:

CHAPTER 1.	PROGRAM OVERVIEW (Provision F)
CHAPTER 2.	PROGRAM MANAGEMENT (Provision G)
CHAPTER 3.	CONSTRUCTION PROGRAM MANAGEMENT (Provision H)
CHAPTER 4.	MAINTENANCE PROGRAM MANAGEMENT (Provision I)
CHAPTER 5.	TRAINING AND PUBLIC EDUCATION (Provision J)
CHAPTER 6.	PROGRAM EVALUATION/REPORTING (Provision K)
CHAPTER 7.	LOCATION SPECIFIC REQUIREMENTS (Provision L)

F. PROGRAM OVERVIEW

Caltrans shall implement the program specified in the SWMP. Caltrans shall also implement any additional requirements contained in this Provision F.

1. Caltrans must reevaluate and revise the BMP program in the SWMP to reflect the definition of pollutant in the federal regulations. The selection of BMPs must reflect the need to meet MEP, or where appropriate, BAT/BCT and water quality standards. It is appropriate to address pollutants known to be in a waste stream, even if there is not yet any documented evidence of adverse effect. Decisions regarding storm water management should be made in response to site-specific circumstances, depending on the location and nature of the activity in question and the local receiving water conditions. In geographic areas in which the requirements in effect prior to adoption of this permit are more stringent than the requirements of this permit, Caltrans will specify in the SWMP and regional workplans, a program which is at least as stringent as the prior requirements for that area. In no event shall the BMP program in any part of the State be less stringent than it was under the prior requirements.

2. The revised SWMP shall be submitted within 90 days of the adoption of the permit. Until such time as Caltrans has an approved SWMP, Caltrans will continue to meet the requirements that were in effect under the permits adopted by RWQCBs.

3. Caltrans shall include an analysis of the feasibility of structural controls in the BMP selection process. At a minimum, a consideration of structural controls for water

quality improvement shall be included in the design of any new construction or major reconstruction or repair projects.

The SWMP shall be updated each year as part of the Annual Report and shall contain the following elements:

a. A listing of appropriate control measures, including design, operation, and maintenance specifications, referenced by facility type, location, and other suitable factors. (Suitable factors may include prevention and control of erosion and sedimentation, source control of potential pollutants, control of pathogens, control and treatment of runoff, spill containment, and protection of wetlands and water quality resources);

b. An effective operation and maintenance program for BMPs;

c. Consideration of pollution prevention and pollutant removal factors, including spill containment and corresponding operation and maintenance requirements in the design of facility drainage structures and other features;

d. Development and implementation of policies, programs, procedures, and standards to improve pollutant removal and water quality benefits of landscape design after construction is completed;

e. A description of how these BMPs will be developed, constructed and maintained by the Environmental Engineering, Project Development, Construction, and Maintenance Branches and other affected functional offices and branches;

f. A ***BMP SELECTION REPORT*** which presents the revisions to the BMP programs (including both structural and nonstructural BMP candidates) to be implemented in the coming year along with the process used for evaluating the revised BMPs. The process shall include a mechanism for public input and review during the BMP selection process; and

g. A mechanism for evaluating new treatment and control technologies and for considering these technologies as part of the BMP programs. A ***NEW TECHNOLOGY REPORT*** is required as part of the Annual Report each year.

4. Storm Water Drainage System Retrofitting: In urban areas subject to a MS4 permit, Caltrans shall seek opportunities to retrofit the Storm Water Drainage System for water quality improvement whenever a section of the rights-of-way undergoes significant construction or reconstruction. Permanent control measures shall be implemented, both to control erosion and to control runoff of pollutants resulting from normal use of Caltrans facilities such as highways.

   a. Controls that shall be considered: Techniques that capture and or reduce the amount of pollutants, especially sediment from entering the storm drain system

or receiving water. Cost effectiveness is a factor in the consideration of controls.

b. Treatment controls that have proven to be cost prohibitive to date and therefore need not be considered for most situations include reverse osmosis, ion exchange, and granular activated carbon.

G. PROGRAM MANAGEMENT

Caltrans shall implement the program specified in their SWMP. Caltrans shall also implement any additional requirements contained in this Provision G.

1. Coordination with MS4 Permittees

a. Caltrans is expected to comply with lawful requirements of municipalities, counties, drainage districts, and other local and or regional agencies regarding discharges of storm water to separate storm sewer systems or other watercourses under the jurisdiction of the local and or regional agencies. These include, but are not limited to applicable requirements in MS4 storm water programs developed to comply with NPDES Permits issued by the RWQCBs to local agencies.

b. Caltrans shall submit a ***MUNICIPAL COORDINATION PLAN*** to the SWRCB Executive Director within 90 days of the adoption of the Permit for approval. The plan shall describe the approach that Caltrans will take in establishing communication, coordination, cooperation, and collaboration of Caltrans storm water management activities and other pertinent activities with MS4 storm water management programs including establishing agreements with municipalities, flood control departments, or districts as necessary or appropriate. Caltrans shall report on the progress of this interagency cooperation in each Annual Report.

2. Legal Authority

a. Caltrans shall establish and maintain adequate legal authority through ordinance, statute, permit, contract or other means to control discharges to and from Caltrans properties, facilities and activities pursuant to 40 CFR 122.26(d)(2)(i)(A-F).

b. Caltrans has provided a statement certified by its chief legal counsel that Caltrans has adequate legal authority to implement and enforce each of the key regulatory requirements contained in 40 CFR 122.26(d)(2)(i)(A-F). Caltrans shall submit annually, as part of the Annual Report, an ***ANALYSIS OF THE ADEQUACY OF LEGAL AUTHORITY*** based on Caltrans experiences during the previous year and explain and justify whatever conclusions are reached in the annual certification of legal authority.

3. Fiscal Resources

   a. Caltrans shall maintain adequate fiscal resources to maintain compliance with this NPDES Permit. This includes but is not limited to:

      (1) implementing and maintaining all BMPs identified in the SWMP,

      (2) maintaining an effective storm water monitoring program, and

      (3) retaining adequate trained personnel to manage the storm water program.

   b. Caltrans shall submit a ***FISCAL ANALYSIS*** of the storm water program expenditures within 90 days of the adoption of this permit and shall include one for the 3rd year and 5th year of the Permit period in the Annual Report submitted April 1. At a minimum, the fiscal analysis shall show the allocation of funds to the Districts for compliance with this permit; the funding of the program elements; and a comparison of actual past year expenditures with the current year's expenditures and next year's proposed expenditures. The 3rd year report shall show how Caltrans funding met the goals set out for the program in the first two years. The 5th year report shall contain the budget analysis for the next permit period.

4. Policies: Caltrans shall identify policies needed to resolve conflicts between implementation of the storm water program and current standard practices and policies.

5. Inspection Program: Caltrans shall have an inspection program to insure actions are implemented and facilities are constructed, operated, and maintained in accordance with this NPDES Permit and the SWMP. The program shall include training for inspection personnel, documentation of field activities, a reporting system that can be used to track effectiveness of control measures, enforcement procedures (or referral for enforcement) for noncompliance, and responsibilities and responsible personnel of all affected functional offices and branches.

H. CONSTRUCTION PROGRAM MANAGEMENT

Caltrans shall implement the program specified in the SWMP. Caltrans shall also implement any additional requirements contained in this Provision H.

1. Caltrans shall have a program to control all construction in the rights-of-way. This includes both construction by Caltrans, construction done under contract for Caltrans, and construction done by local government agencies or other third parties on Caltrans or nonCaltrans projects. The program must include:

   a. review of construction site plans;

   b. requirement of structural and nonstructural BMPs;

c. site inspections and enforcement; and

d. education of construction site operators.

The program must be implemented year round on all construction projects in all parts of the State. The SWMP must be revised to address these requirements and have a program and a schedule for inspections.

2. The Construction Management Program shall be in compliance with requirements of the NPDES General Permit for Construction Activities (Construction General Permit) not including NOI filing. The current Construction General Permit is SWRCB Board Order 92-08--DWQ.

Terms that are defined in the Construction General Permit will have the same definition for the construction portion of this NPDES Permit.

3. The Lahontan RWQCB has adopted an NPDES Storm Water Permit for construction projects that involve more than five acres of soil disturbance and nonNPDES WDRs for construction projects for projects less than five acres within the Lake Tahoe Hydrologic Unit. The current nonNPDES Lahontan Construction Permit is Board Order 6-93-63. The WDRs for small projects are contained in Lahontan RWQCB Board Order 6-91-31. Projects in the Lake Tahoe Hydrologic Unit must be in compliance with the Provisions of the Lahontan RWQCB Order that is applicable to the project. The Lahontan RWQCB has also developed erosion control guidelines for high mountain areas throughout the region. Caltrans shall follow these guidelines in the appropriate parts of the region.

4. Caltrans shall plan, site, and develop roads and highways in a manner that protects water quality, beneficial uses of water and minimizes erosion and sedimentation .

5. Caltrans shall site, design, and maintain bridge structures so that sensitive and valuable aquatic ecosystems and areas providing water quality benefits are protected from adverse effects.

6. Caltrans shall limit the application, generation, and migration of toxic substances from construction sites.

7. Caltrans shall implement adequate erosion and sediment control BMPs during the interim period between completion of construction and final landscaping activities.

8. The following items apply to construction activities:

a. A report of ***NOTIFICATION OF CONSTRUCTION*** for all construction projects shall be submitted to the appropriate RWQCB at least 30 days prior to the start of construction. The tentative start date, tentative duration, location of construction, description of project, an estimate of the number of affected acres, resident engineer in charge of the project, and telephone number of the resident

engineer shall be reported. If a resident engineer has not been assigned at the time of notification, information about the construction field office should be provided and the resident engineer information provided when the assignment is made.

b. A site specific SWPPP shall be developed and implemented for each construction project as required by the State Construction General Permit (or the appropriate Lahontan RWQCB Permit). The RWQCBs can designate projects under five acres which pose a threat to water quality as being subject to the conditions of this permit and can require the development and implementation of an SWPPP from these projects. For projects that may have a significant potential water quality impact, Caltrans is encouraged to involve the RWQCB staff in the planning stages. The SWPPP shall contain a BMP program that meets the performance standards of BAT/BCT. The resident engineer shall approve the SWPPP prior to construction and ensure that the SWPPP is effectively implemented. The SWPPP shall contain all of the elements required by the Construction General Permit. Caltrans is responsible for having an effective SWPPP at all times and for implementing the SWPPP at an appropriate level through the entire year. RWQCB staff has the authority to require the submittal of an ***SWPPP*** at any time, including up to 30 days prior to commencement of significant soil disturbance activities; to require changes to the SWPPP; and to enforce the provisions of the SWPPP.

The SWPPP shall contain a BMP program for any mobile operations that are used in the construction project. This includes operations such as asphalt recycling, concrete mixing, crushing, and storage of materials that are established by the contractor within the construction site or on other property specifically arranged for and provided by Caltrans for execution of the project.

The SWPPP shall apply to all areas that are directly related to the construction activity, including but not limited to staging areas, storage yards, material borrow areas and storage areas, access roads, etc., whether or not they reside within the Caltrans rights-of-way.

c. Monitoring and inspection of construction sites shall be done in accordance with the Provisions of the Construction General Permit. Noncompliance shall be reported in accordance with the plan to be submitted under Program Evaluation and Reporting Provision K.2.a.

d. A ***NOTICE OF COMPLETION*** shall be submitted to the RWQCB upon completion of the construction and stabilization of the site. A project will be considered complete when the criteria for final stabilization in the Construction General Permit are met.

9. Caltrans has applied for and received variances from the California Department of Toxic Substances Control (DTSC) for the reuse of some soils that contain lead. Notification that projects involve soils that are subject to this variance shall be provided to the appropriate RWQCB(s) in writing 30 days prior to advertisement for

bids to allow a determination by the RWQCB(s) of the need for development of WDRs.

I. MAINTENANCE PROGRAM MANAGEMENT

Caltrans shall implement the program specified in the SWMP. Caltrans shall also implement any additional requirements contained in this Provision I.

1. Highway Maintenance Activities

   a. Caltrans shall develop and implement runoff management programs and systems for existing roads, highways, and bridges to reduce runoff pollutant concentrations and volumes entering surface waters.

      (1) Identify priority and watershed pollutant reduction opportunities (e.g., improvements to existing urban runoff control structures).

      (2) Establish schedules for implementing appropriate controls.

      (3) Identify road segments with slopes that are prone to erosion and discharge of sediment and stabilize these slopes to the extent possible.

   b. Vegetation Control: Caltrans shall revise the Vegetative Control Program to reflect the following elements:

      (1) Enhancement of the use of appropriate native and adapted vegetation throughout all Caltrans rights-of way for the purpose of preventing erosion and removing pollutants in storm water and nonstorm water runoff.

      (2) Application of herbicides in a manner that minimizes or eliminates the discharge of herbicides to receiving waters. Factors to be considered include timing in relation to expected precipitation events, proximity to water bodies, and the effects of using combinations of chemicals.

      (3) Caltrans shall apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface water.

      (4) In places where Caltrans has already developed vegetation control management plans, Caltrans shall continue to implement these plans and integrate them into their overall statewide plan. In instances where elements of these plans are to be changed or dropped, Caltrans shall discuss the changes in the workplan portion of the Annual Report.

   c. Storm Water Drainage System Facilities Maintenance

      (1) Caltrans shall remove all waste from those inlets that pose a significant threat to water quality on an annual basis prior to the winter season each

year. All waste removed from drain inlets shall be managed in accordance with all applicable laws and regulations, including CCR Title 27, Division 2, Subdivision 1.

(2) Drain inlets which contain significant materials must be considered for an IC/ID investigation and considered for an enhanced BMP program focused on reducing the sources of the material found in the inlet.

2. Highway Surveillance Activities

a. Accidental Spills

(1) Caltrans will follow Office of Emergency Services (OES) procedures for reporting highway spills.

(2) A report of ***DISCHARGE OR THREAT OF DISCHARGE NOTIFICATION*** will be made under the following conditions: Caltrans will notify the owner/operator of the MS4 or the principal permittee as soon as practicable, but no later than 24 hours after onset of or threat of discharge of any discharge or threat of discharge which can cause adverse conditions to the storm sewer system or the receiving water that is not covered by OES procedures from a highway to a storm sewer system subject to an MS4 permit.

(3) A report of ***DISCHARGE OR THREAT OF DISCHARGE NOTIFICATION*** will be made immediately to the RWQCB of any discharge which can cause adverse conditions to the storm sewer system or the receiving water, with a follow up in writing within 24 hours. Adverse conditions include but are not limited to serious violations or serious threatened violations of WDRs, significant spills of petroleum products or toxic chemicals, or serious damage to control facilities that could affect compliance. Caltrans shall perform follow-up monitoring of major spills and/or perform confirmation sampling to ensure that threats to waters of the United States have been eliminated as determined by the local RWQCB. (This Provision applies to highway operation, not construction projects. Provisions for reporting discharges are contained in the Construction General Permit).

b. IC/ID Detection Program: Caltrans shall implement the IC/ID Detection Element described in the SWMP in conjunction with the legal authority with the following changes:

(1) Detection of IC/IDs: Caltrans shall develop procedures for receiving and investigating public complaints including establishing telephone numbers which the public can use to report IC/IDs and shall post these numbers in places where illegal dumping is found to be a problem.

(2) Investigation of each IC/ID: Caltrans shall develop procedures to conduct investigations of every IC/ID to identify the source. These procedures may include further field screening (observations and field analyses), collection and laboratory analysis of samples (upstream and downstream), smoke or dye tests, video taping with a remote control camera, or other appropriate means.

(3) Elimination of IC/IDs: Caltrans shall eliminate all identified IC/IDs as expeditiously as possible. In addition to reporting IC/IDs to the municipal authorities and to the RWQCBs, Caltrans shall use its own legal authority to eliminate IC/IDs.

(4) Caltrans shall develop a procedure to track all reports of IC/IDs and the action taken on them. A ***REPORT ON THE IC/ID PROGRAM*** will be required each year as part of the Annual Report.

(5) Caltrans shall report on the program developed under this Provision as part of the April 2000 Annual Report. (***DEVELOPMENT OF IC/ID PROGRAM***).

3. Program for Highway Maintenance Facilities

a. Caltrans shall prepare Maintenance FPPPs for all maintenance facilities. Because these facilities are considered municipal activities rather than industrial activities, these FPPPs must have BMP programs that reduce pollutants to MEP.

b. Generic FPPP elements can be used for activities that are performed at more than one maintenance facility; however, each site must be evaluated separately and provided with appropriate site specific BMPs.

c. RWQCB staff has the authority to require the submittal of a FPPP at any time, to require changes to a FPPP, and to require the implementation of the Provisions of a FPPP.

J. TRAINING AND PUBLIC EDUCATION

Caltrans shall implement the program specified in the SWMP. Caltrans shall also implement any additional requirements contained in this Provision J.

In areas where Caltrans is already participating in an areawide Public Education Program, Caltrans will continue participation. The Public Education Program shall address the three main audiences that impact Caltrans storm water discharges. The three audiences are: Caltrans Employees; Caltrans Construction Contractors, and the General Public. The program shall contain the following elements for each of these groups:

1. Caltrans Employees

a. Caltrans shall implement the program specified in the SWMP.

b. Caltrans shall provide frequent educational reminders to employees to reinforce the training.

2. Caltrans Construction Contractors

a. Caltrans shall implement the program specified in the SWMP.

b. Caltrans shall provide outreach to contractors to raise their awareness of the problems and causes of storm water pollution and to reinforce their training.

3. General Public

a. ***PLAN FOR DEVELOPMENT AND IMPLEMENTATION OF A PUBLIC EDUCATION PROGRAM***: Caltrans shall submit a plan for approval by the SWRCB Executive Director within 180 days of adoption of this NPDES permit for development and implementation of a Public Education Program that includes education of the general public and commercial and industrial entities whose actions may impair storm water quality discharged from Caltrans properties, facilities and activities. In areas where a Caltrans is already part of a Public Education Program with other MS4 permittees, Caltrans must continue with their participation in the program. (***PLAN FOR DEVELOPMENT AND IMPLEMENTATION OF A PUBLIC EDUCATION PROGRAM***)

b. The plan shall include the following elements:

(1) Research--A plan for conducting research on public behavior that affects the quality of Caltrans runoff. The information gathered will form the foundation for all the public education conducted.

(2) Public Education Strategy--Develop a three-year public education strategy. The strategy should be based on the research conducted and must include goals and objectives to be achieved regarding changing behaviors.

(3) Mass Media Advertising--Develop and conduct an advertising campaign as a focal point of the public education strategy. The campaign should focus on the behaviors of concern and should be designed to motivate the public to change those behaviors. The public education campaigns may be done as a cooperative effort with other MS4 permittees.

c. Upon approval of the submitted plan, Caltrans shall implement the plan to develop a Public Education Program. The ***PUBIC EDUCATION PROGRAM PROGRESS REPORT*** on the progress made on the public education program development will be made as part of the Annual Report each year. A proposed ***PUBLIC EDUCATION PROGRAM*** will be submitted with the Annual Report in 2001. The ***PUBLIC EDUCATION PROGRAM*** shall be submitted with the

Annual Report in 2002. Caltrans will begin implementation of the plan in April 2002.

K. PROGRAM EVALUATION AND REPORTING

Caltrans shall implement the program specified in the SWMP. Caltrans shall also implement any additional requirements contained in this Provision K.

1. Characterization of Discharges: Caltrans shall develop a plan to identify and describe existing major discharges and points of discharge, as defined in 40 CFR 122.26(iv)(d)(1 and 2), to surface water bodies in areas subject to the MS4 permit requirements and to identify and describe other discharge points as funding allows. Caltrans shall also provide information concerning major existing structural controls (such as the location of detention basins, infiltration basins, etc.). Characterization should be done in phases with the highest priority given to discharge points that are part of BMP studies and in areas where these discharges fit into ongoing watershed characterization studies. For discharges that contain pollutants, Caltrans shall investigate the source of the pollutants and, where appropriate, eliminate the IC/ID or implement BMP programs. The plan shall also identify procedures for notifying the RWQCB and affected municipal storm water management agencies of these discharges and future planned discharges and procedures for monitoring and record management. Discharges which Caltrans cannot control, such as discharges from other parties over which Caltrans has no authority, shall be referred to the appropriate regulatory agency for appropriate action. The ***PLAN FOR CHARACTERIZATION STUDIES***, describing how the studies shall be carried out, shall be submitted with the 1999 Annual Report. Characterization studies shall be completed by April 1, 2003.

2. Receiving Water Monitoring: Caltrans has submitted a three-year monitoring strategy that outlines the research monitoring that it intends to undertake in the next three years. The ***MONITORING STRATEGY REPORT UPDATE*** will be updated annually based on the results of previous years' monitoring and in response to the needs of the program and the funding available. The updated Monitoring Strategy Report will be submitted as part of each Annual Report.

    a. Caltrans shall submit to the SWRCB by April 1, 2000 and each April 1 thereafter a ***MONITORING AND REPORTING PROGRAM*** acceptable to the Executive Director that shall identify and justify sampling locations, frequencies, and methods, suite of pollutants to be analyzed, analytical methods, and quality assurance procedures. Alternative monitoring methods (special projects, literature review, visual observations, use of indicator parameters, etc.) may be proposed with justification. Current MS4 Permits for Caltrans have monitoring requirements. Results of the monitoring efforts undertaken under RWQCB MS4 Permits may be submitted to fulfill these monitoring requirements.

    The RWQCB Executive Officers are authorized to require additional monitoring and reporting by Caltrans when additional information is needed to assess

existing or potential adverse impacts by storm water discharges, to evaluate effectiveness of storm water pollution prevention or control measures, or to demonstrate compliance with permit requirements.

3. Compliance Monitoring and Evaluation

a. Caltrans shall prepare a plan to be submitted as part of the Annual Report due April 1, 2000 explaining how the RWQCBs will be notified about noncompliance. The plan shall include the identification in each Office and Region, the parties to notify and receive the notification. The notification shall identify the type(s) of noncompliance, describe the actions necessary to achieve compliance, and include a time schedule, subject to the modifications by the RWQCB indicating when compliance will be achieved. Noncompliance notifications must be submitted verbally within 5 working days, with written followup within 30 days of identification of noncompliance. (***REPORTING OF NONCOMPLIANCE***)

b. Construction site monitoring and inspections shall be carried out as required by the Construction General Permit or the applicable Lahontan RWQCB Permit.

c. Maintenance Facility Compliance Monitoring

(1) Caltrans is required to conduct periodic inspections. The purpose of the inspections is to identify areas contributing to a discharge of storm water associated with the maintenance facility activities and to evaluate whether control practices to reduce pollutant loadings identified in the FPPP are adequate and properly implemented or whether additional control practices are needed. A record of the inspections must include the date of the inspection, the individual(s) who performed the inspection, and the observations.

(2) Any noncompliance shall be reported to the RWQCB in accordance with the plan to be submitted under Program Evaluation and Reporting Provision K.3.a.

(3) The RWQCB may require Caltrans to conduct additional site inspections, to submit reports and certifications, or to perform sampling and analysis.

(4) Records of all inspections, compliance certifications, and noncompliance reporting must be retained for a period of at least three years. With the exception of noncompliance reporting, Caltrans is not required to submit these records unless otherwise requested.

(5) Monitoring at all maintenance facilities is not required.

d. Overall Management Program Effectiveness:

Caltrans shall perform a self-audit of the storm water program each year to determine (1) if the program is being implemented as required by this NPDES Permit, the SWMP, and the guidance documents prepared by Caltrans; and (2) if the program specified by the SWMP and the guidance documents is adequate. The results of this ***SELF-AUDIT*** shall be submitted by April 1, 2000 and as a part of the Annual Report thereafter to the SWRCB Executive Director. Caltrans may use any method to evaluate program effectiveness and shall identify the direct and indirect measurements that will be used to track the long-term effectiveness. An outline of the proposed audit is to be submitted by February 1 of each year so that the SWRCB and RWQCBs can evaluate the measures to be used.

4. Reporting

Caltrans shall submit 13 copies of an ***ANNUAL REPORT*** to the SWRCB Executive Director by April 1 each year starting on April 1, 2000. The Annual Report shall contain the data and a summary and analysis of the data collected in the previous year. The report due on April 1, 2000 will cover data collected during the winter of 1998-1999. Reports that are required from Caltrans include the items listed in Table 2.

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TABLE 2
COMPILATION OF REPORTING REQUIREMENTS

Provision	Requirement	Date Required
B.9	Comprehensive Nonstorm Water Report	Every Annual Report
E.1, F.1	Revised SWMP, including Revisions to the BMP Programs with Justification and Public Input	Every Annual Report
E.2	Regional Workplans	Every Annual Report
F.2.f	BMP Selection Report	Every Annual Report
F.2.g	New Technology Report	Every Annual Report
G.1.b	Municipal Coordination Plan	April 1, 2000
G.1.b	Municipal Coordination Program Report	Every Annual Report
G.2.b	Analysis of the Adequacy of Legal Authority	Every Annual Report
G.3.b	Fiscal Analysis	90 days from adoption
G.3.b	Fiscal Analysis	3rd and 5th year Annual Report
H.8.a	Notification of Construction	At least 30 days prior to construction
H.8.b	SWPPP	Request by RWQCB
H.8.d	Notice of Completion	Upon final stabilization
I.2.a.(2)	Discharge or Threat of Discharge Notification to MS4 Permittee	Upon discharge or threat of discharge
I.2.a.(3)	Discharge or Threat of Discharge Notification to RWQCB	Upon discharge or threat of discharge
I.2.b.(4)	Report on the IC/ID Program	Every Annual Report
I.2.b.(5)	Development of IC/ID Program	April 1, 2000
I.3.c	FPPP	Request by RWQCB
J.3.a	Plan for Development and Implementation of a Public Education Program	April 1, 2000
J.3.c	Public Education Program Progress Report	Every Annual Report
J.3.c	Public Education Program	April 1, 2003
K.1	Plan for Characterization Studies	April 1, 2000
K.2	Monitoring Strategy Report Update	Every Annual Report
K.2.a	Monitoring and Reporting Program	Every Annual Report
K.3.a	Reporting of Noncompliance	April 1, 2000
K.3.d	Self Audit	Every Annual Report
L.10.a	De-icer Monitoring Proposal	Every Annual Report
L.10.b	De-icer Report	June 1, 2000
M.7	Report of Waste Discharge	180 days prior to expiration of permit

These reporting requirements are contained in the text of the NPDES Permit. If there is a discrepancy between the text of the NPDES Permit and this table, the text of the NPDES Permit contains the requirement.

L. LOCATION SPECIFIC REQUIREMENTS

Caltrans shall implement the program specified in the SWMP. Caltrans shall also implement any additional requirements contained in this Provision L.

Lahontan Region: The Water Quality Control Plan for the Lahontan Region (Basin Plan) has additional requirements which have been historically applied to Caltrans permits and which apply to this NPDES Permit in the Lahontan Region. These requirements include:

1. Numerical effluent limitations for storm water discharges within the Lake Tahoe Hydrologic Unit, as specified in Table 5.6-1 on page 5.6-4 of the Basin Plan.

2. Caltrans shall comply with all Waste Discharge Prohibitions specified in sections 4.1 and 5.2 of the Basin Plan.

3. The following nonstorm water discharges which are permitted under Nonstorm Water Provision B.2. of this NPDES permit are prohibited within the Lahontan Region:

   a. Water line-flushing discharges.

   b. Ground or surface water pumping discharges associated with construction activities that would violate numerical effluent limitations within the Lake Tahoe Hydrologic Unit or receiving water objectives throughout the Lahontan Region, as specified on pages 3-3 through 3-56 of the Basin Plan.

   c. Potable water resource discharges.

   d. Uncontaminated pumped ground water discharges that would violate numerical effluent limitations within the Lake Tahoe Hydrologic Unit or receiving water objectives throughout the Lahontan Region, as specified on pages 3-3 through 3-56 of the Basin Plan.

   e. Air conditioning condensate discharges (not applicable to vehicles).

4. Storm water/urban runoff collection, treatment, and/or infiltration disposal facilities shall be designed, installed, and maintained for the discharge of storm water runoff from all impervious surfaces generated by the 20-year, one-hour design storm (1) within the Lake Tahoe Hydrologic Unit (one inch of rain), (2) within the Truckee River Hydrologic Unit (3/4-inch of rain), (3) within the East Fork Carson River and West Fork Carson River Hydrologic Units (one inch of rain), and (4) within the Mammoth Creek Hydrologic Unit above the 7,000-foot elevation (one inch of rain). All Caltrans facilities within the Lake Tahoe Hydrologic Unit must be retrofitted to comply with this requirement by the Year 2008. If site conditions do not allow for adequate on site disposal, all site runoff must be treated to meet applicable Effluent Limits and/or Receiving Water Limitations specified in the Basin Plan. Runoff in excess of the design storm and generated by the facility or within the project site shall only be discharged to a storm drain or stabilized drainage adequate to convey the 100-year 24-hour flow. The RWQCB Executive Officer may approve alternative mitigation measures.

   All Caltrans facilities within the Lake Tahoe Hydrologic Unit must be retrofitted to comply with this provision by the Year 2008. Caltrans shall continue to participate in the Capital Improvement Program (CIP), as described in volume IV of the CWA Section 208 Water Quality Management Plan (208 Plan). The purpose of the CIP is to identify projects, develop an implementation program, and develop a funding mechanism for storm water runoff and erosion control projects in the Lake Tahoe Hydrologic Unit.

5. All construction/maintenance projects shall comply with Erosion Control Guidelines for the Lake Tahoe Hydrologic Unit, Erosion Control Guidelines for the Truckee River Hydrologic Unit, and Erosion Control Guidelines for the North Lahontan Region where applicable.

6. Caltrans shall inspect active project sites and maintenance facilities prior to, during, and after storms to ensure that BMPs are functioning adequately and preventing the discharge of pollutants to surface waters or storm water conveyance systems that discharge to surface waters.

7. Unless granted a variance by the RWQCB Executive Officer, there shall be neither removal of vegetation nor disturbance of existing ground surface conditions between October 15 of any year and May 1 of the following year, except when there is an emergency situation that threatens the public health or welfare. This prohibition period applies to the Lake Tahoe, Truckee River, East Fork Carson River, and West Fork Carson River Hydrologic Units and above the 5,000-foot elevation in the portions of Mono and Inyo Counties within the Lahontan Region.

8. Project Review Requirements

   a. Caltrans shall participate in early project design consultation for all projects within the Lake Tahoe, Truckee River, and Mammoth Creek Hydrologic Units. This requirement also applies to projects involving more than five acres of soil disturbance or that require a CWA section 404 permit throughout the Lahontan Region. Caltrans shall solicit RWQCB staff review when project development/design is at the 50 percent design level. Consultation with RWQCB staff shall continue throughout the remainder of the design development and environmental review process.

   b. Caltrans shall submit an SWPPP or a Water Pollution Control Plan for RWQCB staff review and approval no later than 30 days prior to beginning construction activities. RWQCB staff's proposed modifications shall be included within the plans prior to beginning construction activities.

9. Snow and Ice Control

   Where abrasives and/or de-icing agents are used on highways within the Lahontan Region, the following shall be recorded:

   a. Location of the source of abrasives materials.

   b. Types and chemistry of de-icing agents.

      (1) Deicing salt shall be analyzed for: total phosphorus, total nitrogen, iron, and percent NaCl.

(2) Alternative deicers shall be analyzed for: total nitrogen, and total phosphorus.

c. Type and chemistry of abrasives with the gradation and percent organic matter. Gradation and percent organic matter shall be determined from composite samples. The composite samples shall be taken from one stockpile that represents all deliveries from the originating source. Composite samples shall be taken from every new delivery from a new originating source.

(1) Abrasives shall be analyzed for: volatile solids, iron, total nitrogen, total phosphorus, and total reactive phosphorus.

d. Volume of abrasives and deicing agents used on individual highway's segments.

10. Reporting/Notification Issues

a. Caltrans shall submit a monitoring program proposal that evaluates the effectiveness of BMPs used to recover abrasives and deicing materials and that evaluates the impacts of abrasives and deicing materials on surface waters within the Lake Tahoe Hydrologic Unit. The proposal shall include monitoring locations and sampling and analysis methodologies. The proposal shall be submitted within 180 days of adoption of this NPDES Permit for review and approval by the Lahontan RWQCB Executive Officer. ***(DEICER MONITORING PROPOSAL)***

b. A report shall be submitted, as part of the Annual Report each year describing the results of the abrasives and deicing materials analysis and the annual results of the above-referenced monitoring program involving BMP effectiveness and surface water impacts. The report shall also include a summary of Caltrans CIP activities, including progress on implementing the CIP, and project effectiveness. Project effectiveness has historically been documented with photographs including preproject photographs, photographs taken during the spring following project completion, and photographs taken two years following project completion. If photographs or project site inspections indicate that the project is not fully meeting project objectives, Caltrans shall include within the report a corrective action plan and a schedule that will meet the project objectives. ***(DEICER REPORT)***

11. Caltrans shall immediately notify the RWQCB by telephone, not later than 24 hours, whenever an adverse condition occurs as a result of a discharge with written confirmation following within two weeks. An adverse condition includes, but is not limited to, a serious violation or a serious threatened violation of conditions specified in this NPDES Permit, significant discharges of spills of petroleum products or toxic chemicals, or serious damage to control facilities that could affect compliance.

M. OTHER PROVISIONS

1. Caltrans shall ensure that all personnel whose decisions or activities could affect storm water quality are familiar with the contents of this NPDES Permit.

2. Caltrans shall comply with all conditions and limitations of this NPDES Permit upon adoption of this NPDES Permit. Any NPDES Permit noncompliance constitutes a violation of the CWA and the CWC and is grounds for enforcement action pursuant to the CWA and CWC, NPDES Permit termination, or denial of a renewal application.

3. This NPDES Permit does not authorize violation of any federal, State, or local law or regulation.

4. Caltrans shall properly operate and maintain at all times any facilities and systems of treatment and control (and related appurtenances) which are installed or used by Caltrans to achieve compliance with the conditions of this NPDES Permit and with the requirements of SWPPPs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

5. This NPDES Permit does not convey any property rights of any sort or any exclusive privileges, authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations.

6. Caltrans shall comply with the Standard Provisions for NPDES Permit found at 40 CFR 122.41 and 40 CFR 122.42(c).

7. This NPDES Permit expires five years from date of adoption, 2004, and Caltrans shall file a complete Report of Waste Discharge in accordance with Title 23, CCR, at least 180 days in advance of such date as an application for issuance of a new Board Order. (***REPORT OF WASTE DISCHARGE***)

8. This Board Order shall serve as an NPDES Permit pursuant to section 402 of the Federal CWA, as amended, and shall become effective at the end of ten (10) days from the date of the Board Meeting which this NPDES Permit was adopted by the SWRCB, provided that the Regional Administrator, USEPA, has no objections.

9. This NPDES Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by Caltrans for an NPDES Permit modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any NPDES Permit condition. Causes for modification include the promulgation of new regulations or adoption of new regulations by the SWRCB or the RWQCBs, including revisions to the RWQCB Basin Plans.

10. Signatory Requirements

a. All permit applications, reports, or information submitted to the RWQCB, SWRCB, and/or USEPA shall be signed by either a principal Executive Officer, Executive Director, or ranking elected official. [40 CFR 122.22(a)]

b. All reports required by this NPDES Permit and other information requested by the RWQCB, SWRCB, or US EPA shall be signed by a person described in Other Provisions 10.a. of this Provision or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in Other Provisions 10.a. of this Provision;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) The written authorization is submitted to the RWQCB. [40 CFR 122.22(b)]

c. Changes to authorization: If an authorization under Other Provisions 10.b. of this Provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Other Provisions 10.b. of this Provision must be submitted to the RWQCB prior to or together with any reports, information, or applications to be signed by an authorized representative. [40 CFR 122.22(c)].

d. Certification: Any person signing a document under Other Provisions 10.a. or b. of this Provision shall make the following certification:

"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, the information submitted is true, accurate, and complete to the best of my knowledge and belief. I

am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations. [40 CFR 122.22(d)]

e. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this NPDES Permit, including monitoring reports or reports of compliance or noncompliance, upon conviction, shall be punished by a fine of not more than $10,000 per violation, imprisonment for not more than two years per violation, or by both.

CERTIFICATION

The undersigned, Administrative Assistant to the SWRCB, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on July 15, 1999.

AYE: James M. Stubchaer
Mary Jane Forster
John W. Brown
Arthur G. Baggett, Jr.

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Administrative Assistant to the Board

State Water Resources Control Board

2009-0009-DWQ Construction General Permit
(effective July 1, 2010)

The Construction General Permit (CGP) can be found at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

New Construction General Permit Attachment D

Risk Level 2 Requirements

ATTACHMENT D
RISK LEVEL 2 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 2 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric – Risk level 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

B. Good Site Management "Housekeeping"

1. Risk Level 2 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 2 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 2 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

   a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

   b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

   c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

   d. Cover waste disposal containers at the end of every business day and during a rain event.

   e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

   f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

   g. Implement procedures that effectively address hazardous and non-hazardous spills.

   h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require:

      i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly.

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 2 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 2 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain all fertilizers and other landscape materials when they are not actively being used.

   c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 2 dischargers shall conduct an 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. At a minimum, when developing BMPs, Risk Level 2 dischargers shall do the following:

a. 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.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. 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.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 2 dischargers shall implement good housekeeping measures on the construction site to 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.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

C. Non-Storm Water Management

1. Risk Level 2 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 2 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 2 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 2 dischargers shall implement effective wind erosion control.

2. Risk Level 2 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Risk Level 2 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 2 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 2 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

3. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active[2] construction.

4. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[3] in accordance with Table 1.

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[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
[2] Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.
[3] Sheet flow length is the length that shallow, low velocity flow travels across a site.

Table 1 - Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet flow length not to exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

5. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.

6. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

F. Run-on and Run-off Controls

Risk Level 2 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 2 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 2 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 2 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 2 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 2 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

   a. Inspection date and date the inspection report was written.

   b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

   c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

   d. A description of any BMPs evaluated and any deficiencies noted.

   e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

   f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

   g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

   h. Photographs taken during the inspection, if any.

   i. Inspector's name, title, and signature.

H. Rain Event Action Plan

1. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any

likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

2. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).

3. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number
   d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
   e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number

4. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP include in the REAP, at a minimum, the following project phase information:

   a. Activities associated with each construction phase
   b. Trades active on the construction site during each construction phase
   c. Trade contractor information
   d. Suggested actions for each project phase

5. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number

d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number
f. Trades active on site during Inactive Construction
g. Trade contractor information
h. Suggested actions for inactive construction sites

6. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.

7. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

I. Risk Level 2 Monitoring and Reporting Requirements

Table 2- Summary of Monitoring Requirements

Risk Level	Visual Inspections					Sample Collection	
	Quarterly Non-storm Water Discharge	Pre-storm Event		Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
2	X	X	X	X	X	X	

1. Construction Site Monitoring Program Requirements

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs)/Numeric Effluent Limitations (NELs) of this General Permit.

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.

d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 2 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 2 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 2 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 2 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 2 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 2 dischargers shall visually observe (inspect):

i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in c.i and c.iii above, Risk Level 2 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 2 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 2 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 2 – Water Quality Sampling and Analysis**

a. Risk Level 2 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.

b. At minimum, Risk Level 2 dischargers shall collect 3 samples per day of the qualifying event.

c. Risk Level 2 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

<u>Storm Water Effluent Monitoring Requirements</u>

d. Risk Level 2 dischargers shall analyze their effluent samples for:

i. pH and turbidity.

ii. Any additional parameters for which monitoring is required by the Regional Water Board.

5. **Risk Level 2 – Storm Water Discharge Water Quality Sampling Locations**

Effluent Sampling Locations

a. Risk Level 2 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.

b. Risk Level 2 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

c. Risk Level 2 dischargers shall ensure that storm water discharge collected and observed represent[4] the effluent in each drainage area based on visual observation of the water and upstream conditions.

d. Risk Level 2 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs or NELs.

e. Risk Level 2 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

f. Risk Level 2 dischargers shall select analytical test methods from the list provided in Table 3 below.

g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 “Storm Water Sample Collection and Handling Instructions” below.

6. **Risk Level 2 – Visual Observation and Sample Collection Exemptions**

a. Risk Level 2 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk

[4] For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment-laden water even if most water flowing through the fence is clear.

Level 2 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

i. During dangerous weather conditions such as flooding and electrical storms.

ii. Outside of scheduled site business hours.

b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 2 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. **Risk Level 2 – Storm Water Sample Collection and Handling Instructions**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. Risk Level 2 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.

c. Risk Level 2 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).[5]

8. **Risk Level 2 – Monitoring Methods**

a. Risk Level 2 dischargers shall include a description of the following items in the CSMP:

i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample

[5] Additional information regarding SWAMP's QAPrP and QAMP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/.
QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf.
QAMP: http://www.waterboards.ca.gov/water_issues/programs/swamp/qamp.shtml.

collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program an example Chain of Custody form used when handling and shipping samples.

iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.

b. Risk Level 2 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 2 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services. Risk Level 2 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. **Risk Level 2 – Analytical Methods**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. **pH**: Risk Level 2 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 2 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.

c. **Turbidity**: Risk Level 2 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

10. **Risk Level 2 - Non-Storm Water Discharge Monitoring Requirements**

    a. Visual Monitoring Requirements:

        i. Risk Level 2 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

        ii. Risk Level 2 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

        iii. Risk Level 2 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 2 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

    b. Effluent Sampling Locations:

        i. Risk Level 2 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.

        ii. Risk Level 2 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.

        iii. Risk Level 2 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. **Risk Level 2 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 2 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 2 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 2 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 2 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 2 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 2 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 2 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 2 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[6]

h. Risk Level 2 dischargers shall keep all field /or analytical data in the SWPPP document.

12. **Risk Level 2 – Watershed Monitoring Option**

Risk Level 2 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program

[6] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

13. **Risk Level 2 – Particle Size Analysis for Project Risk Justification**

    Risk Level 2 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. **Risk Level 2 – Records**

    Risk Level 2 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 2 dischargers shall retain all records on-site while construction is ongoing. These records include:

    a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

    b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

    c. The date and approximate time of analyses.

    d. The individual(s) who performed the analyses.

    e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.

    f. Rain gauge readings from site inspections;

    g. Quality assurance/quality control records and results.

    h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).

    i. Visual observation and sample collection exception records (see Section I.6 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. **Risk Level 2 – NAL Exceedance Report**

a. In the event that any effluent sample exceeds an applicable NAL, Risk Level 2 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.

b. Risk Level 2 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

c. Risk Level 2 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.

d. Risk Level 2 dischargers shall include in the NAL Exceedance Report:

i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.

iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

Table 3 – Risk Level 2 Test Methods, Detection Limits, Reporting Units and Applicable NALs/NELs

Parameter	Test Method / Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level
pH	Field test with calibrated portable instrument	Risk Level 2 Discharges	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2 Discharges other than ATS	1	NTU	250 NTU
		For ATS discharges	1	NTU	N/A

United States Department of the Interior
Fish and Wildlife Service

Biological Opinion and Conference Opinion

Number 1-1-05-F-0025

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:
1-1-05-F-0025

July 12, 2005

Mr. Gene K. Fong
Federal Highway Administration
U.S. Department of Transportation
650 Capitol Mall, Suite 4-100
Sacramento, California 95814

Subject: Formal Consultation and Conference on the Stage Gulch Road (State Route 116) Curve Correction and Realignment Project, Sonoma County, California (HAD-CA File # 04-Son-116, PM 41.8-44.7, Document # P51361)

Dear Mr. Fong:

This is in response to your December 16, 2004, request for initiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Stage Gulch Road (State Route 116) Curve Correction and Realignment Project in Sonoma County, California. Your letter was received on December 17, 2004. This document represents the Service's biological opinion and conference opinion on the effects of the action on the threatened California red-legged frog (*Rana aurora draytonii*) and its proposed critical habitat. This response is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The following sources of information were used to develop this biological opinion: (1) the August 18, 2003, *Fact Sheet for the SON 116 Shoulder Widening From Adobe Road to Arnold Drive*, prepared by the California Department of Transportation (Caltrans); (2) the March 2004, *California Red-Legged Frog (Rana aurora draytonii) Initial Site Assessment*, prepared by Caltrans; (3) a site visit on May 19, 2004, with the Service, Caltrans, and National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NMFS); (4) the November 2004, *Route 116 Stage Gulch Road Curve Improvement and Realignment Project Initial Study with Proposed Mitigated Negative Declaration*, prepared by Caltrans; (5) the October 2004, *Stage Gulch Road Curve Correction and Re-alignment Project Natural Environment Study Report*, prepared by Caltrans; (6) the September 2004, *Stage Gulch Road Curve Correction and Re-alignment Project Biological Assessment for the California Red-Legged Frog (Rana aurora draytonii)*, prepared by Caltrans; (7) various meetings, emails, and

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phone conversations involving the Service and Caltrans; and (8) other information available to the Service.

Consultation History

September 18, 2003:	Service staff met with Caltrans, Army Corps of Engineers (Corps), and California Department of Fish and Game (DFG) for a site visit.
March 29, 2004:	The Service received a request for a "not likely to adversely affect" determination and the *California Red-Legged Frog (Rana aurora draytonii) Initial Site Assessment.*
May 19, 2004:	Service staff met with Caltrans and NMFS for a site visit.
August 30, 2004:	Telephone conversation between Caltrans and the Service regarding a California red-legged frog sighting within the project area.
November 5, 2004:	The Service received the *Route 116 Stage Gulch Road Curve Improvement and Realignment Project Initial Study with Proposed Mitigated Negative Declaration.*
December 14, 2004:	The Service met with Caltrans and received the *Stage Gulch Road Curve Correction and Re-alignment Project Natural Environment Study Report, Stage Gulch Road Curve Correction and Re-alignment Project Biological Assessment for the California Red-Legged Frog (Rana aurora draytonii),* and the *Stage Gulch Road Curve Correction and Re-alignment Project Biological Assessment for the Central California Coastal Steelhead (Oncorhynchus mykiss).*
December 17, 2004:	The Service received a request for initiation of formal consultation from the Federal Highway Administration and copies of the *Stage Gulch Road Curve Correction and Re-alignment Project Natural Environment Study Report* and *Stage Gulch Road Curve Correction and Re-alignment Project Biological Assessment for the California Red-Legged Frog (Rana aurora draytonii).*
June 29, 2005:	Service staff met with the Caltrans biologist to discuss project temporary and permanent effects.
July 5, 2005:	The Service received updated maps from Caltrans that indicated the temporary and permanent effects on the California red-legged frog that would result from the proposed project.
July 12, 2005:	The Federal Highway Administration submitted a letter dated July 11, 2005, to the Service that stated that Caltrans will compensate for permanent effects to 4.41 acres of California red-legged frog habitat and temporary effects to 5.87 acres of the habitat of this species. The permanent effects will be compensated for at a 3:1 ratio (13.23 acres)

and the temporary effects will be compensated at a 0.1:1 ratio (0.587 acres) and the temporarily disturbed areas will be restored to their pre-project condition for a total of 13.817 acres of compensation. Caltrans also will restore and enhance 4.77 acres of riparian and upland habitat along Champlin Creek. This restoration will provide aquatic and upland habitat for the California red-legged frog and will reduce the off-site compensation to 9.04 acres. The 9.04 acres will be purchased at an offsite location, subject to Service approval.

BIOLOGICAL OPINION

Project Description

From Adobe Road to Arnold Drive, approximately 2.9 miles, State Route 116 is an undivided, two lane rural highway on a typical curving horizontal alignment through rolling terrain. The road has two 10-12-foot lanes and 0-2-foot shoulders. The Sonoma County Regional Transportation Plan identified the highway as a major east-west transportation corridor between Petaluma and Sonoma.

Caltrans, in cooperation with the Federal Highway Administration, proposes to widen and realign State Route 116 between mile posts 41.8 and 44.7. The roadway will be widened to the standard 11.8 feet lanes and 7.9 feet shoulder width. All nonstandard curves horizontal curves will be modified to a minimum of 853 feet radius, the mandatory design standard for the speed of 50 miles per hour. The vertical curve on the Sonoma County Transfer Station Road will also be corrected to improve the transition to State Route 116. Approximately 1312 feet of roadway near the Sonoma County Transfer Station Road will be realigned from the westside to the eastside of Champlin Creek, avoiding the need for cut and fill areas within the creek and minimizing the number of trees that will removed from the riparian area. The realignment of this section will also include a left turn pocket to facilitate access and egress to the Sonoma County Transfer Station Road. Caltrans proposes to install retaining walls at two locations along the roadway to stabilize slopes, reduce tree impacts, and minimize right-of-way acquisition.

Caltrans will modify multiple culvert locations to accommodate the highway improvements and design new culverts crossings to enhance fish passage, dispersal behavior of aquatic species, and hydrologic efficiency. The larger concrete box culverts will be replaced with natural bottom culverts. The existing pavement and two box culverts will be removed along the abandoned section of roadbed to restore Champlin Creek to a more natural configuration. The existing culverts under the Sonoma County Transfer Station Road will be removed and replaced with two oversized culverts with modified headwalls that will act as retaining walls to minimize the footprint within Champlin Creek. Caltrans will also create a stilling basin immediately downstream of culvert replacement at the Sonoma County Transfer Station Road to offset the temporary impact to the plunge pool occupied by the frog.

General highway improvements include the repair of failing road base and pavement. Caltrans will plane existing pavement down below the longitudinal cracks or eroded pavement and install new base material with a new pavement overlay. All metal beam guardrails will be upgraded to current standards.

Minimization of Adverse Effects

Caltrans has proposed to offset the adverse effects by the replacement of culverts with natural substrate bottoms that will provide migrating aquatic species more camouflage and cover from predators. Caltrans will create retention ponds at several locations, the primary site being the area of the Champlin Creek restoration, just west of the Sonoma County Transfer Station Road. Other retention ponds sites include upstream of the culverts at mile post 42.66 and mile post 42.70. Caltrans will also create a stilling immediately downstream of culvert replacement at the Sonoma County Transfer Station Road to offset the temporary impact to the plunge pool occupied by the California red-legged frog.

Caltrans will implement standard Best Management Practices to ensure protection of the aquatic environment, water quality, and riparian corridor. Caltrans will delineate environmentally sensitive areas (ESA) on the final plans and will install temporary fence outlining the ESA prior to work beginning that will remain in place until completion of the job. To prevent impacts to frog habitat, no work activities, equipment storage, or construction material storage will occur inside these ESA limits. Caltrans will maintain erosion control measures during the construction period. Construction work within the riparian and Corps jurisdictional areas will occur during the dry period of the year from May 1 to October 30 of any given year. If work is conducted where there is perennial flow through the culverts, the water will be diverted through the project area during the construction period to prevent impeding the creek flow. Caltrans will use a cofferdam designed to dewater the creek through the construction area. Once construction is complete, Caltrans will remove all project-introduced material and restore the pre-construction creek flow.

Additionally, Caltrans will compensate for permanent effects to 4.41 acres of California red-legged frog habitat and temporary effects to 5.87 acres of California red-legged frog habitat. The permanent effects to the habitat of this animal will be compensated for at a 3:1 ratio (13.23 acres) and the temporary effects to its habitat will be compensated at a 0.1:1 ratio (0.587 acres) and the temporarily disturbed areas will be restored to their pre-project condition for a total of 13.817 acres of compensation. Caltrans also will restore and enhance 4.77 acres of riparian and upland habitat along Champlin Creek. This restoration will provide aquatic and upland habitat for the California red-legged frog and will reduce the compensation to 9.04 acres. The 9.04 acres will be purchased at a Service-approved conservation bank or other location approved by the Service.

Caltrans is proposing to ensure the protection and conservation of the red-legged frog during all phases of the proposed project through implementation of the following conservation measures:

1. Caltrans shall submit the name(s) and credentials, at least 15 days prior to the onset of activities, of biologists who would conduct activities specified in the following measures. No project activities shall begin until Caltrans has received written approval from the Service that the biologists are qualified to conduct the work.

2. A Service-approved biologist shall survey the work site two weeks before the onset of activities. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist shall contact the Service to determine if moving any of these life-stages is appropriate. In making this determination the Service shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall be allowed sufficient time to move red-legged frogs from the work site before work activities begin. Only Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of red-legged frogs.

3. Before any construction activities begin on a project, a Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the red-legged frog and its habitat, the importance of the red-legged frog and its habitat, the general measures that are being implemented to conserve the red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

4. A Service-approved biologist shall be present at the work site until such time as all removal of red-legged frogs, instruction of workers, and habitat disturbance have been completed. After this time, the contractor or permittee shall designate a person to monitor on-site compliance with all minimization measures. The Service-approved biologist shall ensure that this individual receives training outlined above in measure 3 and in the identification of red-legged frogs. The monitor and the Service-approved biologist shall have the authority to halt any action that might result in impacts that exceed the levels anticipated by the Service during review of the proposed action. If work is stopped, the Service shall be notified immediately by the Service-approved biologist or on-site biological monitor.

5. During project activities, Caltrans will ensure that all trash that may attract predators shall be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

6. All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 20 meters from any riparian habitat or water body. Caltrans shall ensure that fueling, maintenance, and staging do not contaminate the site. Prior to the onset

of work, Caltrans will implement a plan that ensures a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

7. A Service-approved biologist shall ensure that the spread or introduction of invasive exotic plant species shall be avoided to the maximum extent possible. When practicable, invasive exotic plants in the project areas shall be removed.

8. Project sites shall be revegetated with an appropriate assemblage of native riparian wetland and upland vegetation suitable for the area and provide the Service with a species list and restoration and monitoring plan shall be included with the project proposal for their review and approval. Such a plan must include, but not be limited to, location of the restoration, species to be used, restoration techniques, time of year the work will be done, identifiable success criteria for completion, and remedial actions if the success criteria are not achieved.

9. Caltrans shall ensure that stream contours shall be returned to their original condition at the end of project activities, unless consultation with the Service has determined that it is not beneficial to the species or feasible.

10. The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated, and these areas shall be outside of riparian and wetland areas. Where impacts occur in these staging areas and access routes, restoration shall occur as identified in measures 8 and 9 above.

11. Work activities shall be completed between April 1 and November 1 or as directed by the DFG Streambed Alteration Agreement. Should the proponent or applicant demonstrate a need to conduct activities outside this period, the Service may authorize such activities after obtaining the agencies' approval.

12. To control erosion during and after project implementation, the applicant shall implement best management practices, as identified by the appropriate Regional Water Quality Control Board.

13. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than five millimeters (mm) to prevent red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

14. A Service-approved biologist shall permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to

the maximum extent possible. The permittee shall have the responsibility to ensure that their activities are in compliance with the California Fish and Game Code.

15. Caltrans will compensate for permanent effects to 4.41 acres of California red-legged frog habitat and temporary effects to 5.87 acres of the habitat of this species. The permanent effects will be compensated for at a 3:1 ratio (13.23 acres) and the temporary effects will be compensated at a 0.1:1 ratio (0.587 acres) and the temporarily disturbed areas will be restored to their pre-project condition for a total of 13.817 acres of compensation. Caltrans also will restore and enhance 4.77 acres of riparian and upland habitat along Champlin Creek. This restoration will provide aquatic and upland habitat for the California red-legged frog and will reduce the off-site compensation to 9.04 acres. The 9.04 acres will be purchased at an offsite location, subject to Service approval.

Action Area

The action area for the proposed project includes Stage Gulch Road (Highway 116) from Adobe Road to Arnold Drive, the Sonoma County Transfer Road, and Champlin Creek.

Status of the Species/Environmental Baseline

The red-legged frog was listed as a threatened species on May 23, 1996, (U.S. Fish and Wildlife Service 1996). Please refer to the final rule and the *Recovery Plan for the California Red-Legged Frog (Rana aurora draytonii)* (U.S. Fish and Wildlife Service 2002) for additional information on this species.

This species is the largest native frog in the western United States (Wright and Wright 1949), ranging from 1.5 to 5.1 inches in length (Stebbins 2003). The abdomen and hind legs of adults are largely red; the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color. Dorsal spots usually have light centers (Stebbins 2003), and dorsolateral folds are prominent on the back. Larvae (tadpoles) range from 0.6 to 3.1 inches in length, and the background color of the body is dark brown and yellow with darker spots (Storer 1925).

Red-legged frogs have paired vocal sacs and vocalize in air (Hayes and Krempels 1986). Female frogs deposit egg masses on emergent vegetation so that the egg mass floats on the surface of the water (Hayes and Miyamoto 1984). Red-legged frogs breed from November through March with earlier breeding records occurring in southern localities (Storer 1925). Individuals occurring in coastal drainages are active year-round (Jennings *et al.* 1992), whereas those found in interior sites are normally less active during the cold season.

The historic range of the red-legged frog extended coastally from the vicinity of Elk Creek in Mendocino County, California, and inland from the vicinity of Redding, Shasta County,

California, southward to northwestern Baja California, Mexico (Fellers 2005; Jennings and Hayes 1985; Hayes and Krempels 1986). The red-legged frog was historically documented with 46 counties but the taxa now remains in 238 streams or drainages within 23 counties, representing a loss of 70 percent of its former range (U.S. Fish and Wildlife Service 2002). Red-legged frogs are still locally abundant within portions of the San Francisco Bay area and the central coast. Within the remaining distribution of the species, only isolated populations have been documented in the Sierra Nevada, northern Coast, and northern Transverse Ranges. The species is believed to be extirpated from the southern Transverse and Peninsular ranges, but is still present in Baja California, Mexico (California Department of Fish and Game 2004).

Adult red-legged frogs prefer dense, shrubby or emergent riparian vegetation closely associated with deep (>2.3 feet), still, or slow-moving water (Hayes and Jennings 1988). However, frogs also have been found in ephemeral creeks and drainages and in ponds that may or may not have riparian vegetation. The largest densities of red-legged frogs currently are associated with deep pools with dense stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*) (Jennings 1988). Red-legged frogs disperse upstream and downstream of their breeding habitat to forage and seek sheltering habitat.

During other parts of the year habitat includes nearly any area within 1-2 miles of a breeding site that stays moist and cool through the summer (Fellers 2005). According to Fellers (2005), this includes coyote bush (*Baccharis pilularis*) California blackberry thickets (*Rubus ursinus*), and root masses associated with willow (*Salix* species) and California bay trees (*Umbellularis californica*). Sometimes the non-breeding habitat used by red-legged frogs is extremely limited in size, for example, a 6-foot wide Coyote bush thicket growing along a tiny intermittent creek surrounded by heavily grazed grassland (Fellers 2005). Sheltering habitat for red-legged frogs is potentially all aquatic, riparian, and upland areas within the range of the species and includes any landscape features that provide cover, such as existing animal burrows, boulders or rocks, organic debris such as downed trees or logs, and industrial debris. Agricultural features such as drains, watering troughs, spring boxes, abandoned sheds, or hay ricks may also be used. Incised stream channels with portions narrower and depths greater than than 18 inches also may provide important summer sheltering habitat. Accessibility to sheltering habitat is essential for the survival of red-legged frogs within a watershed, and can be a factor limiting frog population numbers and survival.

Red-legged frogs do not have a distinct breeding migration (Fellers 2005). Adult frogs are often associated with permanent bodies of water. Some frogs remain at breeding sites all year while others disperse. Dispersal distances are typically less than 0.5 mile, with a few individuals moving up to 1-2 miles (Fellers 2005). Movements are typically along riparian corridors, but some individuals, especially on rainy nights, move directly from one site to another through normally inhospitable habitats, such as heavily grazed pastures or oak-grassland savannas (Fellers 2005). Dispersing frogs in northern Santa Cruz County traveled

distances from 0.25 mile to more than 2 miles without apparent regard to topography, vegetation type, or riparian corridors (Bulger *et al.* 2003).

Egg masses contain about 2,000 to 5,000 moderate sized (0.08 to 0.11 inches in diameter), dark reddish brown eggs and are typically attached to vertical emergent vegetation, such as bulrushes (*Scirpus* spp.) or cattails (Jennings *et al.* 1992). Red-legged frogs are often prolific breeders, laying their eggs during or shortly after large rainfall events in late winter and early spring (Hayes and Miyamoto 1984). Eggs hatch in 6 to 14 days (Jennings 1988). In coastal lagoons, the most significant mortality factor in the pre-hatching stage is water salinity (Jennings *et al.* 1992); eggs exposed to salinity levels greater than 4.5 parts per thousand results in 100 percent mortality (Jennings and Hayes 1990). Increased siltation during the breeding season can cause asphyxiation of eggs and small larvae. Larvae undergo metamorphosis 3.5 to 7 months after hatching (Storer 1925; Wright and Wright 1949; Jennings and Hayes 1990). Of the various life stages, larvae probably experience the highest mortality rates, with less than 1 percent of eggs laid reaching metamorphosis (Jennings *et al.* 1992). Sexual maturity normally is reached at 3 to 4 years of age (Storer 1925; Jennings and Hayes 1985). Red-legged frogs may live 8 to 10 years (Jennings *et al.* 1992). Populations of red-legged frogs fluctuate from year to year. When conditions are favorable red-legged frogs can experience extremely high rates of reproduction and thus produce large numbers of dispersing young and a concomitant increase in the number of occupied sites. In contrast, red-legged frogs may temporarily disappear from an area when conditions are stressful (*e.g.*, drought).

The diet of red-legged frogs is highly variable. Hayes and Tennant (1985) found invertebrates to be the most common food items. Vertebrates, such as Pacific tree frogs (*Hyla regilla*) and California mice (*Peromyscus californicus*), represented over half the prey mass eaten by larger frogs (Hayes and Tennant 1985). Hayes and Tennant (1985) found juvenile frogs to be active diurnally and nocturnally, whereas adult frogs were largely nocturnal. Feeding activity probably occurs along the shoreline and on the surface of the water (Hayes and Tennant 1985). The diet of red-legged frogs apparently has not been studied, but their diet probably is similar to other ranid frogs that feed on algae, diatoms, and detritus by grazing on the surface of rocks and vegetation (Fellers 2005; Kupferberg 1996a, 1996b).

Several researchers in central California have noted the decline and eventual local disappearance of California and northern red-legged frogs in systems supporting bullfrogs (*Rana catesbeiana*) (Jennings and Hayes 1990; Twedt 1993), red swamp crayfish (*Procambarus clarkii*), signal crayfish (*Pacifastacus leniusculus*), and several species of warm water fish including sunfish (*Lepomis* spp.), goldfish (*Carassius auratus*), common carp (*Cyprinus carpio*), and mosquitofish (*Gambusia affinis*) (L. Hunt, in litt. 1993; S. Barry, in litt. 1992; S. Sweet, in litt. 1993). Habitat loss, non-native species introduction, and urban encroachment are the primary factors that have adversely affected the red-legged frog throughout its range.

Several researchers in central California have noted the decline and eventual disappearance of red-legged frog populations once bullfrogs became established at the same site (L. Hunt, in litt. 1993; S. Barry, in litt. 1992; S. Sweet, in litt. 1993). This has been attributed to both predation and competition. Twedt (1993) documented bullfrog predation of juvenile northern red-legged frogs (*Rana aurora aurora*), and suggested that bullfrogs could prey on subadult northern red-legged frogs as well. In addition to predation, bullfrogs may have a competitive advantage over red-legged frogs; bullfrogs are larger, possess more generalized food habits (Bury and Whelan 1984), have an extended breeding season (Storer 1933) during which an individual female can produce as many as 20,000 eggs (Emlen 1977), and larvae are unpalatable to predatory fish (Kruse and Francis 1977). In addition to competition, bullfrogs also interfere with red-legged frog reproduction. Both California and northern red-legged frogs have been observed in amplexus with (mounted on) both male and female bullfrogs (Jennings and Hayes 1990; Twedt 1993; M. Jennings, in litt.1993; R. Stebbins in litt. 1993). Thus bullfrogs are able to prey upon and out-compete red-legged frogs, especially in sub-optimal habitat. The urbanization of land within and adjacent to red-legged frog habitat has also impacted red-legged frogs. These declines are attributed to channelization of riparian areas, enclosure of the channels by urban development that blocks red-legged frog dispersal, and the introduction of predatory fishes and bullfrogs. This report further identifies the conversion and isolation of perennial pool habitats resulting from urbanization as an ongoing impact to red-legged frogs.

Mao *et al.* (1999 cited in Fellers 2005) reported northern red-legged frog (*Rana aurora aurora*) infected with an iridovirus, which also was presented in sympatric three-spined sticklebacks (*Gastrucleatus aculeatus*) in northwestern California. Ingles (1932a, 1932b, and 1933 cited in Fellers 2005) reported four species of trematodes from red-legged frogs, but he later synonomized two of them.

The recovery plan for red-legged frogs identifies eight Recovery Units (Service 2002). The establishment of these recovery units is based on the Recovery Team's determination that various regional areas of the species' range are essential to its survival and recovery. The status of the red-legged frog will be considered within the smaller scale of Recovery Units as opposed to the overall range. These Recovery Units are delineated by major watershed boundaries as defined by U.S. Geological Survey hydrologic units and the limits of the range of the red-legged frog. The goal of the draft recovery plan is to protect the long-term viability of all extant populations within each recovery unit. Within each recovery unit, core areas have been delineated and represent contiguous areas of moderate to high red-legged frog densities that are relatively free of exotic species such as bullfrogs. The goal of designating core areas is to protect metapopulations that, combined with suitable dispersal habitat, will allow for the long term viability within existing populations. This management strategy will allow for the recolonization of habitat within and adjacent to core areas that are naturally subjected to periodic localized extinctions, thus assuring the long-term survival and recovery of red-legged frogs.

The project area falls within Core Area # 12 (Petaluma Creek-Sonoma Creek). The conservation needs for this core area are: (1) protect existing populations; (2) reduce impacts of urban development; and (3) protect, restore, and/or create breeding and dispersal habitat.

The County of Sonoma is within the current range of the California red-legged frog, and there are 13 records in the California Natural Diversity Data Base. This species was observed in an abandoned man-made pond on Sonoma County Transfer Station property about 0.1 miles northwest of the project area. On August 27, 2004, a Caltrans biologist observed a California red-legged frog on August 27, 2004, in a plunge pool below directly below the double barrel culvert on Champlin Creek under the Sonoma County Transfer Station Road. There are no other reported sightings of the frog within the Champlin Creek watershed; however, there have been several historical sightings within a 10-mile radius of the project area. California red-legged frogs have been recorded moving 1-2 miles. Suitable habitat is located within and adjacent to the action area. Therefore, the Service has determined it is reasonable to conclude the red-legged frog inhabits the action area, based on the observations of animals in the vicinity, the biology and ecology of the animal, the presence of suitable habitat, as well as the recent observation of the animal in the action area.

California Red-Legged Frog Proposed Critical Habitat

On March 13, 2001, the final rule determining critical habitat for red-legged frogs was published in the Federal Register (U.S. Fish and Wildlife Service 2001). This rule established 31 critical habitat units based on three primary constituent elements: (a) essential aquatic habitat; (b) associated uplands; and (c) dispersal habitat connecting essential aquatic habitat. In November 2002, the U.S. District Court for the District of Columbia vacated most of the 2001 designation and ordered the Service to publish a new critical habitat proposal. On April 13, 2004, the Service re-proposed 4.1 million acres in 28 California counties as critical habitat for the frog (U.S. Fish and Wildlife Service 2004). This proposed rule basically re-proposes the same areas designated critical habitat in the 2001 final rule.

The Service is required to list the known primary constituent elements together with the critical habitat description. Such physical and biological features include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species (U. S. Fish and Wildlife Service 2004).

Due to the complex life history and dispersal capabilities of the California red-legged frog, and the dynamic nature of the environments in which they are found, the primary constituent elements described below are found throughout the watersheds that are proposed as critical habitat. Special management, such as habitat rehabilitation efforts (e.g., removal of nonnative predators), may be necessary in the area designated. The proposed critical habitat for the

California red-legged frog provides for breeding and non-breeding habitats and for dispersal between these habitats, as well as allowing for expansion of frog populations vital to the recovery of the subspecies. The proposed critical habitat includes: (a) essential aquatic habitat; (b) associated uplands; and (c) dispersal habitat connecting essential aquatic habitat.

Aquatic habitat is essential for providing space, food, and cover, necessary to sustain all life stages of red-legged frogs. It consists of virtually all low-gradient fresh water bodies, including natural and man-made (e.g., stock) ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds, except deep lacustrine water habitat (e.g., deep lakes and reservoirs 50 acres or larger in size) inhabited by nonnative predators. The subspecies requires a permanent water source to ensure that aquatic habitat is available year-round. Permanent water sources can include, but are not limited to, ponds, perennial creeks, permanent plunge pools within intermittent creeks, seeps, and springs. Aquatic habitat used for breeding usually has a minimum deep water depth of 20 inches, and maintains water during the entire tadpole rearing season (at least March through July). During periods of drought, or less-than-average rainfall, these breeding sites may not hold water long enough for individuals to complete metamorphosis, but because they support breeding in wetter years these sites would still be considered essential breeding habitat. Ponds that support a small population of red-legged frogs, but are not surrounded by suitable upland habitat, or are cut off from other breeding ponds or permanent water sources by impassable dispersal barriers, do not have the primary constituent elements for proposed California red-legged frog critical habitat.

To be a primary constituent element for California red-legged frog proposed critical habitat, the aquatic components within the designated boundaries must include two or more breeding sites (as defined above) located within 1.25 miles of each other; at least one of the breeding sites must also be a permanent water source; or, the aquatic component can consist of two or more seasonal breeding sites with a permanent non-breeding water source located within 1.25 miles of each breeding site. California red-legged frogs have been documented to travel 2.25 miles in a virtual straight line migration from non-breeding to breeding habitats (U.S. Fish and Wildlife Service 2001a). In addition, breeding sites must be connected by dispersal habitat connecting essential aquatic habitat, described below.

Associated upland and riparian habitat is essential to maintain California red-legged frog populations associated with essential aquatic habitat. The associated uplands and riparian habitat provide food and shelter sites for California red-legged frogs, and assist in maintaining the integrity of aquatic sites by protecting them from disturbance and supporting the normal functions of the aquatic habitat. Key conditions include the timing, duration, and extent of water moving within the system, filtering capacity, and maintaining the habitat to favor red-legged frogs and discourage the colonization of nonnative species such as bullfrogs. Essential upland habitat consists of all upland areas within 300 feet, or no further than the watershed boundary, of the edge of the ordinary high-water mark of essential aquatic habitat (U.S. Fish and Wildlife Service 2001a).

Essential dispersal habitat provides connectivity among California red-legged frog breeding habitat (and associated upland) patches. While frogs can pass many obstacles, and do not require a particular type of habitat for dispersal, the habitat connecting essential breeding locations and other aquatic habitat must be free of barriers (e.g., a physical or biological feature that prevents frogs from dispersing beyond the feature) and at least 300 feet wide. Essential dispersal habitat consists of all upland and wetland habitat free of barriers that connects two or more patches of essential breeding habitat within 1.25 miles of one another. Dispersal barriers include heavily traveled roads (an average of 30 cars per hour from 10:00 p.m. to 4:00 a.m.) that possess no bridges or culverts; moderate to high density urban or industrial developments; and large reservoirs more than 50 acres in size. Agricultural lands such as row crops, orchards, vineyards, and pastures do not constitute barriers to California red-legged frog dispersal.

Dispersal habitat connecting essential aquatic habitat. Essential dispersal habitat provides connectivity among red-legged frog breeding habitat (and associated upland) patches. While frogs can pass many obstacles, and do not require a particular type of habitat for dispersal, the habitat connecting essential breeding locations and other aquatic habitat must be free of barriers (*e.g.*, a physical or biological feature that prevents frogs from dispersing beyond the feature) and at least 300 feet wide. Essential dispersal habitat consists of all upland and wetland habitat free of barriers that connects two or more patches of essential breeding habitat within 1.25 miles of one another. Dispersal barriers include heavily traveled roads (an average of 30 cars per hour from 10:00 p.m. to 4:00 a.m.) that possess no bridges or culverts; moderate to high density urban or industrial developments; and large reservoirs more than 50 acres in size. Agricultural lands such as row crops, orchards, vineyards, and pastures do not constitute barriers to red-legged frog dispersal.

The Stage Gulch Road project occurs within the American Canyon unit (Unit 11), which consists of watersheds within and adjacent to American Canyon Creek and Sulphur Springs Creek in Napa and Solano counties. Watersheds within this unit include Fagan Creek, a tributary to the Napa River, the Jameson Canyon watershed, and the Sky Valley and Pine Lake watersheds that flow into Lake Herman. The unit encompasses 27,779 acres of which 99 percent is privately owned. Unit 11 is owned by several subpopulations of the California red-legged frog.

Unit 15 has been affected by activities that destroy essential aquatic and upland habitats, and dispersal habitats providing connectivity between subpopulations. Degradation and loss of these habitats have occurred through urbanization, mining, inappropriate management of grazing, recreation, invasion of non-native plants, impoundments, water diversions, degraded water quality, and introduced predators.

The action area is relatively undeveloped, and it contains State Route 116, and several ranches. The surrounding habitat includes several vegetation communities, including valley

oak woodland, annual non-native grassland, seasonally wetted areas with associated vegetation, and ponds. As described in the *Stage Gulch Road Curve Correction and Re-alignment Project Biological Assessment for the California Red-Legged Frog (Rana aurora draytonii)*, and other sources of information, essentially all undeveloped lands on and adjacent to the project site contain the constituent elements of proposed California red-legged frog critical habitat, including essential aquatic habitat, associated uplands, and essential dispersal habitat.

Effects of the Proposed Action

California Red-legged Frog

The proposed Stage Gulch Road project may be directly injure, kill, harm, and harass individual California red-legged frogs by activities that disturb breeding, dispersal, and upland habitat of the animal. The proposed project would (1) result in the permanent loss of 4.41 acres of California red-legged frog habitat and 5.87 acres of temporary effects to 3 acres of California red-legged frog habitat; (2) result in the injury and death of an unknown number of red-legged frogs; (3) result in construction-related harassment, to the California red-legged frogs in the action area; (4) impede the dispersal of California red-legged frogs through the site while the action is in progress; (5) increase the likelihood of predation of the California red-legged ; (6) fragment and reduce the amount of red-legged frog habitat in Napa County.

Culvert extensions, replacements and road realignment will affect the ponding and flow of Champlin Creek. These impacts will be minimized by the restoration of the creek and by creating retention ponds along the realignment. A stilling pond will also be created to offset the effects to a plunge pool where a red-legged frog was sighted. Effects to riparian and upland habitat would affect approximately 2 acres including culvert extensions and replacements, and the inclusion of some fill slopes into the creek area. The location of the road realignment will avoid the need for cut and fill areas with in Champlin Creek and minimize the number of trees that will be removed from the riparian area. Widening of the highway will require the loss of trees which would reduce the shading of the water and increase the water temperature. The restoration and revegetation of the abandoned section of roadway and the restoration of Champlin Creek will offset the effects to the riparian and upland habitat.

Temporary effects are project activities that temporarily remove one or more essential components of the habitat of a listed species, but can be restored to pre-project conditions of equal or greater habitat value. In order for the effects to be considered temporary, the affected habitat of the listed species must be totally restored within two seasons. Ground disturbance resulting from the proposed project includes grading, excavating, and fill. Ground disturbance has potential to cause injury and mortality to individual California red-legged frogs occupying the action area. As part of the proposed project, the California Department of Transportation

has stated upon completion of the project, they will actively restore riparian habitat at the project site.

Changes in light level, such as bright lights used if there is nighttime road construction, may disrupt orientation in nocturnal animals. The range of anatomical adaptations to allow night vision is broad (Park 1940), and rapid increases in light can blind animals. For frogs, a quick increase in illumination causes a reduction in visual capability from which the recovery time may be minutes to hours (Buchanan 1993). After becoming adjusted to a light, frogs may be attracted to it as well (Jaeger and Hailman 1973). Laboratory experiments have demonstrated that dark-adapted frog species exposed to rapid increases in illumination may be temporarily "blinded" and unable to gather visual information on prey, predators, or conspecifics until their eyes adapt to the new illumination. Foraging may be facilitated in frog species that hunt around lights because the ambient illumination is increased to a level that allows the frogs to see prey or because lights attract abnormally large numbers of insects and other invertebrate prey. Experiments and anecdotal evidence indicates that both temporary and permanent changes to the night time illumination of an area may affect the reproduction, foraging, predator avoidance, and social interactions of frog species (Buchanan 2002). Reproductive behaviors may be altered by artificial lighting; it may be inhibited in frog species that normally reproduce only at very low illuminations. Female frogs of the species *Physalaemus pustulosus* are less selective about mate choice when light levels are increased, evidently preferring to mate quickly and avoid the increased predation risk of mating activity (Rand *et al.* 1997). Longcore and Rich (2002) reported that frogs in an experimental enclosure stopped mating activity during night football games, when lights from a nearby stadium increased sky glow. Mating choruses only resumes when the enclosure was covered to shield the frogs from light. Increased illumination may allow
predators to see frogs that may not normally be visible to them. Circadian rhythms, activity patterns, and intraspecific visual communication also may be affected by increased illuminations.

The presence of roads in an area could result in the introduction of chemical contaminants to the site. Contaminants could be introduced in several ways. Substances used in road building materials or to recondition roads can leach out or wash off roads into the adjacent habitat. Vehicle exhaust emissions can include hazardous substances which may concentrate in soils along roads. Heavy metals such as lead, aluminum, iron, cadmium, copper, manganese, titanium, nickel, zinc, and boron are all emitted in vehicle exhaust (Trombulak and Frissell 2000). Concentrations of organic pollutants (*e.g.*, Dioxins and polychlorinated biphenyls) are higher in soils along roads (Benfenati *et al.* 1992). Ozone levels are higher in the air near roads (Trombulak and Frissell 2000). Vehicles may leak hazardous substances such as motor oil and antifreeze. Although the quantity leaked by a given vehicle may be minute, these substances can accumulate on roads and then get washed into the adjacent environment by runoff during rain storms. An immense variety of substances could be introduced during accidental spills of materials. Such spills can result from small containers falling off passing

vehicles, or from accidents resulting in whole loads being spilled. Large spills may be partially or completely mitigated by clean-up efforts, depending on the substance.

Listed species using areas adjacent to roads could be exposed to any contaminants that are present at the site. Exposure pathways could include inhalation, dermal contact, direct ingestion, ingestion of contaminated soil or plants, or consumption of contaminated prey. Exposure to contaminants could cause short- or long-term morbidity, possibly resulting in reduced productivity or mortality. Carcinogenic substances could cause genetic damage resulting in sterility, reduced productivity, or reduced fitness among progeny. Contaminants also may have the same effect on prey species. This could result in reduced prey abundance and diminished local carrying capacity. The effects of contaminants may be difficult to detect. Morbidity or mortality likely would occur after the animals had left the contaminated site, and more subtle effects such as genetic damage could only be detected through intensive study and monitoring.

Preconstruction surveys for California red-legged frogs and relocating individuals may reduce injury or mortality. However, the capture and handling of red-legged frogs to remove them from a work area may result in the harassment, mortality or injury of individuals. Stress, injury and mortality may occur as a result of improper handling, containment and transport of individuals. Death and injury of individuals could occur at the time of trapping due to trapping accidents, or later in time subsequent to their release. Although survivorship for translocated red-legged frogs has not been estimated, survivorship of translocated wildlife, in general, are lower because of intraspecific competition, lack of familiarity with the availability of potential breeding, feeding, and sheltering habitats, and increased risk of predation. Caltrans proposes to reduce or prevent injury associated with the transport of individuals by use of a qualified biologist.

Construction equipment that has been used in different areas and with different species of amphibians including the California red-legged frog may transmit diseases by introducing contaminated soil and other material on the equipment. The chance of a disease being introduced into a new area is greater today than in the past due to the increasing occurrences of disease throughout amphibian populations in California and the United States. It is possible that chytrid fungus may exacerbate the effects of other diseases on amphibians or increase the sensitivity of the amphibian to environmental changes (e.g., water pH) that reduce normal immune response capabilities (Bosch *et al.* 2000).

Roads have been documented as barriers to movements by a diversity of species, and this effect varies with road size and traffic volume. The inhibition of animal movements caused by roads produces a significant effect by fragmenting habitats and populations (Joly and Morand 1997). Roads were found to be significant barriers to gene flow among common frogs (*Rana temporaria*) in Germany and this has resulted in genetic differentiation among populations separated by roads (Reh and Seitz 1990). Similarly, significant genetic subdivision was detected in bank voles (*Clethrionomys glarelous*) populations separated by a

164 foot wide highway in Germany (Gerlach and Musolf 2000). California red-legged frog mortality and injury occurs when the animals attempt to cross roads and are hit by cars, trucks, or motorcycles. The majority of strikes occur on rainy nights when the animals are moving to their breeding ponds. Thus, vehicle strikes are a direct source of mortality for the California tiger salamander. If vehicle strikes are sufficiently frequent in a given locality, this could result in reduced abundance of this animal. Especially problematic is the death of females prior to the laying of their eggs because this could result in the loss of an entire cohort, and therefore, reduced recruitment of new individuals into the population.

California red-legged frogs may be killed by predators. If water that is impounded during or after work activities creates favorable habitat for non-native predators, such as bullfrogs, crayfish, and centrarchid fishes, California red-legged frogs may incur abnormally high rates of predation. Additionally, when California red-legged frogs are concentrated in a small area at unusually high densities, native predators such as great blue herons (*Ardea herodias*), great egrets (*A. alba*), opossums (*Didelphis virginiana*), and raccoons (*Procyon lotor*) may feed on them opportunistically. This effect will be minimized by avoiding creation of ponded water as a result of project actions such as dewatering the work area. Trash left during or after project activities could attract predators to work sites, which could, in turn, prey on California red-legged frogs. For example, raccoons are attracted to trash and also prey opportunistically on both species. This potential effect can be reduced or avoided by careful control of waste products at all work sites.

California red-legged frogs moving away from disturbed areas may be driven into the open where they are more susceptible to injury or mortality due to foot traffic, vehicles, or other project and maintenance activities. In addition, displaced frogs may be forced into competition for food and living space with animals in adjacent areas.

California Red-Legged Frog Proposed Critical Habitat

This conference opinion on the proposed critical habitat for the California red-legged frog does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR § 402.02. Instead, we have relied upon the statute and the August 6, 2004, Ninth Circuit Court of Appeals decision in *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service* (No. 03-35279) to complete the following analysis with respect to the proposed critical habitat.

The proposed action is not expected to appreciably diminish the value of the proposed critical habitat for the California red-legged frog, or prevent proposed critical habitat from sustaining its role in the conservation and recovery of the species. The California Department of Transportation is proposing to restore riparian habitat on-site that will be suitable for the California red-legged frog. There is currently an existing highway within the action area, and, due to the proposed restoration activities, the proposed road work will not significantly interfere with the current capability of the proposed critical habitat to

satisfy essential requirements of the species. Constituent elements for the California red-legged frog will remain intact during and after project completion, or will be restored, and will continue to provide suitable habitat.

Cumulative Effects

Cumulative effects include the effects of State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered for this biological opinion. Future actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

From 1995 to 2020, the human population is projected to increase by 18 percent for the San Francisco Bay hydrologic region, while at the same time agricultural crop land use in the region is projected to remain around 65,000 acres (California Department of Water Resources 998). According the California Department of Forestry, from 2000 to 2020, the human population within counties in the Bay Area region is expected to grow by 29 percent (5.3 million people to 6.8 million people), and by 60 percent from 2000 to 2040 (5.3 million people to 8.4 million people) (California Department of Forestry 1998). There will likely be many other development projects that occur during this timeframe due to increases in human population growth that will continue to imperil the California red-legged frog.

Numerous non-Federal activities continue to negatively impact the frog in the action area. Habitats are lost or degraded as a result of urbanization, road and utility construction and maintenance, overgrazing, agricultural expansion, and water irrigation and storage projects that may not be funded, permitted, or constructed by a Federal agency. Other threats include contamination, poisoning, increased predation, and competition from non-native species associated with human development. Small private actions that may impact listed species, such as conversion of land, ground squirrel reduction efforts, mosquito control, and residential development, may occur without consultation with or authorization by the Service. Caltrans has identified two projects that may adversely affect the red-legged frog.

Conclusion

After reviewing the current status of the red-legged frog, the environmental baseline for the action area, the effects of the proposed project, and the cumulative effects, it is the Service's biological opinion that the Stage Gulch Road (State Route 116) Curve Correction and Realignment Project, as proposed, is not likely to jeopardize the continued existence of the red-legged frog. We base our determination on the following: effects to red-legged frogs will be minimized, any red-legged frogs found on-site would be relocated to suitable habitat, and additional habitat for the red-legged frog will be provided by the creation of retention ponds and a stilling basin, the removal of the existing roadway at the realignment, and creek restoration. Critical habitat has been proposed for the red-legged frog in the action area, but none will be adversely modified or destroyed.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be implemented by the Federal Highway Administration so that they become binding conditions of project authorization for the exemption in section 7(o)(2) to apply. The Federal Highway Administration has a continuing duty to regulate the activity covered by this Incidental Take Statement. If the Federal Highway Administration (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount of Incidental Take

The Service expects that incidental take of red-legged frogs may occur during the proposed action. The extent of take will be difficult to detect or quantify because of the elusive nature of this species. Additionally, their relatively small size and cryptic coloration make the finding of a dead specimen unlikely. Seasonal population fluctuations also may mask the ability to determine the exact extent of take. Therefore, the Service is estimating that all California red-legged frogs inhabiting 10.28 acres (4.41 acres permanent effects and 5.87 acres of temporary effects) of red-legged frog habitat will be subject to incidental take. Upon implementation of the Reasonable and Prudent Measures, incidental take associated with the Stage Gulch Road (State Route 116) Curve Correction and Realignment project in the form of harm, harassment, capture, injury, and death of the red-legged frog caused by habitat loss and construction activities will become exempt from the prohibitions described under section 9 of the Act.

Effect of the Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the red-legged frog. No critical habitat for the red-legged frog has been designated in the project area; therefore, none will be adversely modified or destroyed.

Reasonable and Prudent Measure

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize the effects to the California red-legged frog:

1. The California Department of Transportation shall implement conservation measures for the California red-legged frog to minimize (1) the effects of the loss of habitat that will occur as a result of the project; (2) the potential for harassment, harm, injury, and mortality to this listed species; and (3) the potential for inadvertent capture or entrapment of federally listed wildlife species during construction activities.

2. The California Department of Transportation shall ensure their compliance with this biological opinion.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Federal Highway Administration must comply with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are non-discretionary.

A. The following Term and Conditions will implement Reasonable and Prudent Measure number one (1):

   1. The California Department of Transportation shall minimize the potential for harm, harassment, injury, or killing of the California red-legged frog resulting from project related activities by implementation of the avoidance and minimization measures as described in the and appearing in the *Route 116 Stage Gulch Road Curve Improvement and Realignment Project Initial Study with Proposed Mitigated Negative Declaration*; *Stage Gulch Road Curve Correction and Re-alignment Project Natural Environment Study Report*; *Stage Gulch Road Curve Correction and Re-alignment Project BiologicalAssessment for the California Red-Legged Frog (Rana aurora draytonii)*; and the *Project Description* of this biological opinion.

   2. The California Department of Transportation shall include Special Provisions that include the avoidance and minimization measures of this biological opinion in the solicitation for bid information. In addition, the California Department of

Transportation will educate and inform contractors involved in the project as to the requirements of the biological opinion.

3. The California Department of Transportation biologist shall have oversight over implementation of all the Terms and Conditions in this biological opinion, and shall have the authority to stop project activities, through communication with the California Department of Transportation Resident Engineer, if any of the requirements associated with these Terms and Conditions are not being fulfilled. If biologist/construction liaison has requested a stop work due to take of any of the listed species the Service and the California Department of Fish and Game will be notified within one (1) working day via electronic mail or telephone.

4. All construction activity shall be confined within the boundaries of the Stage Gulch Road project, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site without authorization from the Service.

5. Tightly woven fiber netting or similar material shall be used for erosion control or other purposes at the Stage Gulch Road project site to ensure that the red-legged frog does not get trapped. This limitation will be communicated to the contractor through use of Special Provisions included in the bid solicitation package.

6. Use of pesticides at the proposed project site shall be utilized in such a manner to prevent primary or secondary poisoning of listed species, and the depletion of prey populations on which they depend. All uses of such compounds hall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Pesticide Regulation, and other appropriate State and Federal regulations, as well as additional project-related restrictions deemed necessary by the Service or the California Department of Fish and Game.

7. Project employees shall be directed to exercise caution when commuting within the habitats of the red-legged frog. A 20-mile per hour speed limit will be strongly encouraged on unpaved roads within listed species habitats.

8. Cross-country travel by vehicles shall be prohibited, unless authorized by the Service.

9. Project employees shall be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

10. The Resident Engineer or their designee shall be responsible for implementing these conservation measures and shall be the point of contact for the proposed project.

11. All grindings and asphaltic-concrete waste shall be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any culvert, wash, pond, vernal pool, or stream crossing.

12. The Stage Gulch Road Project construction area shall be delineated with high visibility temporary fencing at least four (4) feet in height, flagging, or other barrier to prevent encroachment of construction personnel and equipment onto any sensitive areas during project work activities. Such fencing shall be inspected and maintained daily until completion of the project. The fencing will be removed only when all construction equipment is removed from the site. Actions within the project area shall be limited to vehicle and equipment operation on existing roads. No project activities will occur outside the delineated project construction area.

13. Maintenance and construction excavations greater than two (2) feet deep either shall be covered or filled in at the end of each working day. The trench or pit shall be surveyed in the morning and late afternoon hours to ascertain whether the California red-legged frog has fallen into the trench or pit. If a California red-legged frog is discovered trapped in a trench or pit, the animal shall be carefully captured by the Caltrans biologist and released at a secure location, such as the entrance to a ground squirrel burrow, within walking distance and is outside of the construction area. The Service shall be notified by telephone and electronic mail within one (1) working day of the incident.

14. As described in the *Project Description* and other documents provided by Caltrans the permanent effects to red-legged frog habitat will be compensated for at a 3:1 ratio (13.23 acres) and the temporary effects to red-legged frog habitat will be compensated for at a 0.1:1 ratio (0.587) for a total of 13.817 acres. A successful restoration of Champlin Creek will reduce the needed compensation by 4.77 acres, for a total of 9.04 acres of offsite compensation. At least sixty (60) calendar days prior to ground breaking, the California Department of Transportation shall permanently protect 9.04 acres for the California red-legged frog from a Service-approved conservation bank or other location approved by the Service.

15. As described at *Project Description* of this biological opinion and other documents provided by Caltrans, Caltrans shall complete a Service-approved restoration plan for the 4.77 acres of temporarily affected habitat at least six (6) calendar months prior to the date that ground breaking is initiated at the proposed project. The plan shall include restoration and revegetation work associated with temporary effects using native California plant species from on-site or local sources (i.e., local ecotype). Plant materials from non-local sources shall be allowed only with written authorization from the Service. To the maximum extent practicable (i.e., presence of natural lands), topsoil shall be removed, cached, and returned to the site according to successful restoration protocols. Loss of soil from run-off or erosion shall be prevented with

straw bales, straw wattles, or similar means provided they do not entangle, block escape or dispersal routes of listed animal species. The restoration plan shall contain specific quantifiable criteria to evaluate the success of the restoration and include annual reports for a period of at least three growing seasons after the restoration plan is implemented.

16. Only a California Department of Transportation biologist who is familiar with the biology and ecology of the California red-legged frog, or a Service-approved biologist will be allowed to trap or capture listed species.

B. The following Term and Conditions will implement Reasonable and Prudent Measure number two (2):

1. If requested, during or upon completion of construction activities, the on-site biologist, and/or a representative from California Department of Transportation shall accompany Service or California Department of Fish and Game personnel on an on-site inspection of the site to review project effects to the California red-legged frog and its habitat.

2. The Federal Highway Administration shall ensure California Department of Transportation complies with the *Reporting Requirements* of this biological opinion.

Reporting Requirements

The Service and the California Department of Fish and Game must be notified within one (1) working day of the discovery of death or injury to a California red-legged frog that occurs due to project related activities or is observed at the project site. Injured California red-legged frogs must be cared for by a licensed veterinarian or other qualified person, such as a qualified Caltrans biologist; dead individuals of this listed species should be preserved according to standard museum techniques and held in a secure location. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal clearly indicated on a USGS 7.5 minute quadrangle and other maps at a finer scale, as requested by the Service, and any other pertinent information. The Service contacts are Chris Nagano, Deputy Assistant Field Supervisor at the Sacramento Fish and Wildlife Office (916/414-6600), and Scott Heard, Resident Agent-in-Charge of the Service's Law Enforcement Division at 916/414-6660.

The California Department of Transportation shall submit a post-construction compliance report prepared by the on-site biologist to the Sacramento Fish and Wildlife Office within sixty (60) calendar days of the date of the completion of construction activity. This report shall detail (i) dates that construction occurred; (ii) pertinent information concerning the success of the project in meeting compensation and other conservation measures; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on the

California red-legged frog, if any; (v) occurrences of incidental take of any of this listed species, if any; and (vi) other pertinent information.

CONSERVATION RECOMMENDATIONS

Sections 2(c) and 7(a)(1) of the Act direct Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species and the ecosystems upon which they depend. Conservation recommendations are discretionary agency activities to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. The California Department of Transportation should assist the Service in implementing recovery actions identified in the *Recovery Plan for the California red-legged Frog* (U.S. Fish and Wildlife Service 2002b) .

2. The California Department of Transportation should incorporate culverts, tunnels, or bridges on highways and other roadways that allow safe passage by the California red-legged frog, other listed animals, and wildlife. The California Department of Transportation should include photographs, plans, and other information in their biological assessments if they incorporate "wildlife friendly" crossings into their projects.

3. The Federal Highway Administration and the California Department of Transportation should consider participating in the planning for a regional habitat conservation plan for the California red-legged frog, other listed species, and sensitive species.

4. The California Department of Transportation should consider establishing functioning preservation and creation conservation banking systems to further the conservation of the California red-legged frog, and other appropriate species. Such banking systems also could possibly be utilized for other required compensation (i.e., seasonal wetlands, riparian habitats, *etc.*) where appropriate.

5. Sightings of any listed or sensitive animal species should be reported to the California Natural Diversity Database of the California Department of Fish and Game. A copy of the reporting form and a topographic map clearly marked with the location where the animals were observed also should be provided to the Service.

6. The California Department of Transportation should provide habitat for bats, including surfaces for bat roosts on the underside of bridges and other structures whenever possible.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION--CLOSING STATEMENT

This concludes formal consultation on the Stage Gulch Road (State Route 116) Curve Correction and Realignment Project in Sonoma County, California. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Please contact the Deputy Assistant Field Supervisor for Endangered Species or the Chief of our Coast-Bay-Delta Branch at the letterhead address or at 916/414-6600. If you have any questions regarding this biological opinion on the effects of the Stage Gulch Road (State Route 116) project on the threatened California red-legged frog

Sincerely,

Cay C. Goude
Acting Field Supervisor

cc:
ARD-ES, Portland, Oregon
Carl Wilcox, California Department of Fish and Game, Yountville, California
Chuck Morton, California Department of Transportation, Oakland, California

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CA Department of Fish and Game

1602 Streambed Alteration Agreement

STATE OF CALIFORNIA THE RESOURCES AGENCY
ARNOLD SCHWARZENEGGER, GOVERNOR
DEPARTMENT OF FISH AND GAME
BAY DELTA REGION
(707) 944-5520
Mailing address:
POST OFFICE BOX 47
YOUNTVILLE CALIFORNIA 94599
Street address:
7329 SILVERADO TRAIL
NAPA CALIFORNIA 94558

May 6, 2009

Jeffrey Jensen
California Department of Transportation
111 Grand Avenue
Oakland, CA 94623

Notification Number: 1600-2008-0451-3

1602 LAKE AND STREAMBED ALTERATION AGREEMENT

This agreement is issued by the Department of Fish and Game pursuant to Division 2, Chapter 6 of the California Fish and Game Code:

WHEREAS, the Applicant, Jeffrey Jensen/California Department of Transportation, submitted a signed NOTIFICATION proposing to substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed or lake of the following water: Champlin Creek, located in the County of Sonoma, State of California; and

WHEREAS, the Department has determined that such operations may substantially adversely affect existing fish and wildlife resources including water quality, hydrology, aquatic or terrestrial plant or animal species; and

WHEREAS, the project has undergone the appropriate review under the California Environmental Quality Act; and

WHEREAS, the Applicant shall undertake the project as proposed in the signed PROJECT DESCRIPTION and PROJECT CONDITIONS (attached). If the Applicant changes the project from that described in the PROJECT DESCRIPTION and does not include the PROJECT CONDITIONS, this agreement is no longer valid; and

WHEREAS, the agreement shall expire on December 31, 2013; with the work to occur between June 15 and October 15; and

WHEREAS, nothing in this agreement authorizes the Applicant to trespass on any land or property, nor does it relieve the Applicant of the responsibility for compliance with applicable Federal, State, or local laws or ordinances. Placement, or removal, of any material below the level of ordinary high water may come under the jurisdiction of the U. S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act;

THEREFORE, the Applicant may proceed with the project as described in the PROJECT DESCRIPTION and PROJECT CONDITIONS. A copy of this agreement, with attached PROJECT DESCRIPTION and PROJECT CONDITIONS, shall be provided to contractors and subcontractors and shall be in their possession at the work site.

Failure to comply with all conditions of this agreement may result in legal action.

This agreement is approved by:

Charles Armor
Regional Manager
Bay Delta Region

cc: Melissa Escaron
Warden Georges
Lieutenant Riske

FOR DEPARTMENT USE ONLY				
Date Received	Amount Received	Notification Date	Date Complete	Notification No.
9/22/08	$29,300.00			1600-2008-0451-3

CK#082-265089
CA Dept of Transportation

Escaron George 8/15/08

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Complete EACH field, unless otherwise indicated, following the enclosed instructions and submit ALL required enclosures. Attach additional pages, if necessary.

FISH & GAME
SEP 22 2008
YOUNTVILLE

1. APPLICANT PROPOSING PROJECT

Name	Jeffrey G. Jensen, Office Chief of Biological Sciences and Permits		
Business/Agency	California Department of Transportation (Caltrans) District 4		
Street Address	111 Grand Ave.		
City, State, Zip	Oakland CA 94623		
Telephone	(510) 622-8729	Fax	(510) 286-6374
Email	jeffrey jensen@dot.ca.gov		

2. CONTACT PERSON (*Complete only if different from applicant*)

Name	Christopher States, Senior Biologist, Office of Biological Sciences and Permits		
Street Address	111 Grand Ave.		
City, State, Zip	Oakland CA 94623		
Telephone	(510) 286-7185	Fax	
Email			

3. PROPERTY OWNER (*Complete only if different from applicant*)

Name			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

4. PROJECT NAME AND AGREEMENT TERM

A. Project Name	Stage Gulch Road Curve Correction and Re-alignment Project			
B. Agreement Term Requested	☑ Regular (*5 years or less*) ☐ Long-term (*greater than 5 years*)			
C. Project Term		D. Seasonal Work Period		E. Number of Work Days
Beginning (*year*)	Ending (*year*)	Start Date (*month/day*)	End Date (*month/day*)	
2009	2011	06/15	10/15	440.00

5. AGREEMENT TYPE

Check the applicable box. If box B, C, D, or E is checked, complete the specified attachment.

A.	☑ Standard *(Most construction projects, excluding the categories listed below)*	
B.	☐ Gravel/Sand/Rock Extraction (*Attachment A*)	*Mine I.D. Number:* _____
C.	☐ Timber Harvesting (*Attachment B*)	THP *Number:* _____
D.	☑ Water Diversion/Extraction/Impoundment (*Attachment C*)	*SWRCB Number:* _____
E.	☐ Routine Maintenance (*Attachment D*)	
F.	☐ DFG Fisheries Restoration Grant Program (FRGP)	*FRGP Contract Number:* _____
G.	☐ Master	
H.	☐ Master Timber Harvesting	

6. FEES

Please see the current fee schedule to determine the appropriate notification fee. Itemize each project's estimated cost and corresponding fee. *NOTE: The Department may not process this notification until the correct fee has been received.*

	A. Project	B. Project Cost	C. Project Fee
1	Stage Gulch Road Curve Correction and Re-alignment Project		
2	See Attachment A: Steam Crossing Itemization Table		
3			
4			
5			
		D. Base Fee *(if applicable)*	
		E. TOTAL FEE ENCLOSED	$29,300.00

7. PRIOR NOTIFICATION OR ORDER

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, the Department for the project described in this notification?

☐ Yes (*Provide the information below*) ☑ No

Applicant: _____ Notification Number: _____ Date: _____

B. Is this notification being submitted in response to an order, notice, or other directive ("order") by a court or administrative agency (including the Department)?

☑ No ☐ Yes (*Enclose a copy of the order, notice, or other directive. If the directive is not in writing, identify the person who directed the applicant to submit this notification and the agency he or she represents, and describe the circumstances relating to the order.*)

☐ *Continued on additional page(s)*

8. PROJECT LOCATION

A. Address or description of project location.

(Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway)

Caltrans is proposing a roadway improvement project in Sonoma County consisting of roadway widening, curve correction, and partial re-alignment of State Route 116 between post miles 41.8 and 44.7. The project extends from west from Arnold Drive to Adobe Road between the cities of Sonoma and Petaluma.

Driving directions: SR 101 north from San Francisco, take SR 116 east to the project site starting at post mile 41.8

See Attachment B: Project Location Map

☑ *Continued on additional page(s)*

B. River, stream, or lake affected by the project.	Champlin Creek
C. What water body is the river, stream, or lake tributary to?	San Pablo Bay
D. Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts?	☐ Yes ☑ No ☐ Unknown
E. County	Sonoma County

F. USGS 7.5 Minute Quad Map Name	G. Township	H. Range	I. Section	J. ¼ Section
Petaluma River, Glen Ellen, Sears Point, Sonoma	5N	4W-5W		

☐ *Continued on additional page(s)*

K. Meridian (*check one*)	☐ Humboldt ☑ Mt. Diablo ☐ San Bernardino
L. Assessor's Parcel Number(s)	

See Attachment C

☑ *Continued on additional page(s)*

M. Coordinates (*If available, provide at least latitude/longitude or UTM coordinates and check appropriate boxes*)

Latitude/Longitude	*Latitude:* 38.25598	*Longitude:* 122.36371	
	☐ Degrees/Minutes/Seconds	☑ Decimal Degrees	☐ Decimal Minutes
UTM	*Easting:*	*Northing:*	☐ Zone 10 ☐ Zone 11
Datum used for Latitude/Longitude or UTM	☑ NAD 27	☐ NAD 83 or WGS 84	

9. PROJECT CATEGORY AND WORK TYPE *(Check each box that applies)*

PROJECT CATEGORY	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR/MAINTAIN EXISTING STRUCTURE
Bank stabilization – bioengineering/recontouring	☑	☐	☐
Bank stabilization – rip-rap/retaining wall/gabion	☑	☐	☐
Boat dock/pier	☐	☐	☐
Boat ramp	☐	☐	☐
Bridge	☐	☐	☐
Channel clearing/vegetation management	☐	☐	☐
Culvert	☐	☑	☐
Debris basin	☐	☐	☐
Dam	☐	☐	☐
Diversion structure – weir or pump intake	☐	☐	☐
Filling of wetland, river, stream, or lake	☑	☐	☐
Geotechnical survey	☐	☐	☐
Habitat enhancement – revegetation/mitigation	☑	☐	☐
Levee	☐	☐	☐
Low water crossing	☐	☐	☐
Road/trail	☐	☐	☐
Sediment removal – pond, stream, or marina	☐	☐	☐
Storm drain outfall structure	☐	☐	☐
Temporary stream crossing	☑	☐	☐
Utility crossing : Horizontal Directional Drilling	☐	☐	☐
Jack/bore	☐	☐	☐
Open trench	☐	☐	☐
Other *(specify)*:	☐	☐	☐

10. PROJECT DESCRIPTION

A. Describe the project in detail. Photographs of the project location and immediate surrounding area should be included.

- Include any structures (e.g., rip-rap, culverts, or channel clearing) that will be placed, built, or completed in or near the stream, river, or lake.
- Specify the type and volume of materials that will be used.
- If water will be diverted or drafted, specify the purpose or use.

Enclose diagrams, drawings, plans, and/or maps that provide all of the following: site specific construction details; the dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; an overview of the entire project area (i.e., "bird's-eye view") showing the location of each structure and/or activity, significant area features, and where the equipment/machinery will enter and exit the project area.

See Attachment D: Project Description

☐ *Continued on additional page(s)*

B. Specify the equipment and machinery that will be used to complete the project.

Typical equipment that will be used to complete the proposed construction would include the Following: excavator, loader, backhoe, dump truck, concrete mix truck, grader, gradall (articulating 4WD extendable forklift), semi truck with bottom dump trailer, pickup truck (standard, flatbed, stake side), vibrating roller, hand operated soil compactor, various hand tools (shovel, hammer, etc)

☐ *Continued on additional page(s)*

C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B).	☑ Yes ☐ No (*Skip to box 11*)
D. Will the proposed project require work in the wetted portion of the channel?	☑ Yes (*Enclose a plan to divert water around work site*) ☐ No

11. PROJECT IMPACTS

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat. Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

See Attachment E: Project Impacts

☑ *Continued on additional page(s)*

B. Will the project affect any vegetation? ☑ Yes (*Complete the tables below*) ☐ No

Vegetation Type	Temporary Impact	Permanent Impact
Oak-Bay Riparian Woodland	Linear feet: 1029ft Total area: 0.16 ac	Linear feet: 1354ft Total area: 0.18ac
	Linear feet: Total area:	Linear feet: Total area:

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)
Oak	218	4"-38"
other California native trees	37	4"-12"
other non-native species	6	4"-36"

☐ *Continued on additional page(s)*

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

☑ Yes (*List each species and/or describe the habitat below*) ☐ No ☐ Unknown

California red-legged frog (see attachment F: Biological Assessment for California red-legged frog)

☑ *Continued on additional page(s)*

D. Identify the source(s) of information that supports a "yes" or "no" answer above in Box 11.C.

see attachment F: Biological Assessment for California red-legged frog

☑ *Continued on additional page(s)*

E. Has a biological study been completed for the project site?

☑ Yes (*Enclose the biological study*) ☐ No

Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.

F. Has a hydrological study been completed for the project or project site?

☐ Yes (*Enclose the hydrological study*) ☑ No

Note: A hydrological study or other information on site hydraulics (e.g., flows, channel characteristics, and/or flood recurrence intervals) may be required to evaluate potential project impacts on hydrology.

12. MEASURES TO PROTECT FISH, WILDIFE, AND PLANT RESOURCES

A. Describe the techniques that will be used to prevent sediment from entering watercourses during and after construction.

Use of standard BMP's and implementation of a SWPPP. Use of ESA's to limit work area. Construction of temporary stream crossing, culverts and, in stream restoration work limited to summer dry season (June 15 to Oct.15). See Attachment G: Project Impact Minimization Measures

☑ *Continued on additional page(s)*

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

The project has avoided and reduced impacts to Champlin Creek and surrounding habitat through scoping changes that realigned the proposed roadway. Other minimization elements included working in the creeks only in the dry season, minimum access routes, proscribed equipment staging areas away from creeks, no open pits greater than 2ft without inspections and ramping for small animal egress, designated fueling area away from all waters and riparian areas, invasive plant removal, no project material left on site (trash pickup, construction spoils, etc.), replanting of temporary construction areas, use of ESA's (high visibility orange fencing) gravity flow open channel dewatering, standard Caltrans BMP's &SWPPP measures.

☐ *Continued on additional page(s)*

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

Replanting of trees on site, stream enhancements along Champlin Creek to the north and south of the transfer station culvert replacement. Creek modifications to include a stilling basin, ponding area, and an additional high flow channel parallel to the creek. See Attachment I: Stream Restoration Plan

☑ *Continued on additional page(s)*

13. PERMITS

List any local, state, and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

A. USFWS Biological Opinion & NMFS Letter of Concurrence ☐ Applied ☑ Issued

B. USACE 404, RWQCB 401 ☑ Applied ☐ Issued

C. _____ ☐ Applied ☐ Issued

D. Unknown whether ☐ local, ☐ state, or ☐ federal permit is needed for the project. (*Check each box that applies*)

☐ *Continued on additional page(s)*

14. ENVIRONMENTAL REVIEW

A. Has a draft or final document been prepared for the project pursuant to the California Environmental Quality Act (CEQA), National Environmental Protection Act (NEPA), California Endangered Species Act (CESA) and/or federal Endangered Species Act (ESA)?

☑ Yes (*Check the box for each CEQA, NEPA, CESA, and ESA document that has been prepared and enclose a copy of each*)

☐ No (*Check the box for each CEQA, NEPA, CESA, and ESA document listed below that will be or is being prepared*)

☐ Notice of Exemption	☑ Mitigated Negative Declaration	☑ NEPA document (*type*): CE
☑ Initial Study	☐ Environmental Impact Report	☐ CESA document (*type*):
☐ Negative Declaration	☐ Notice of Determination (*Enclose*)	☐ ESA document (*type*): BA
☐ THP/ NTMP	☑ Mitigation, Monitoring, Reporting Plan	

B. State Clearinghouse Number (*if applicable*)	2004112023		
C. Has a CEQA lead agency been determined?	☑ Yes (*Complete boxes D, E, and F*)	☐ No (*Skip to box 14.G*)	
D. CEQA Lead Agency	California Department of Transportation		
E. Contact Person	Jeffery G. Jensen	F. Telephone Number	(510) 286-6374

G. If the project described in this notification is part of a larger project or plan, briefly describe that larger project or plan.

The creek crossings, stream restoration, and culvert modifications are part of a larger curve correction and re-alignment project on State Route 116. See Attachments J & K: Natural Environment Study and Initial Study

☑ *Continued on additional page(s)*

H. Has an environmental filing fee (Fish and Game Code section 711.4) been paid?

☑ Yes (*Enclose proof of payment*) ☐ No (*Briefly explain below the reason a filing fee has not been paid*)

Note: If a filing fee is required, the Department may not finalize a Lake or Streambed Alteration Agreement until the filing fee is paid.

15. SITE INSPECTION

Check one box only.

☐ In the event the Department determines that a site inspection is necessary, I hereby authorize a Department representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant the Department such entry.

☐ I request the Department to first contact (*insert name*) Caltrans Associate Biologist Robert Young at (*insert telephone number*) (510) 622-1771 to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay the Department's determination as to whether a Lake or Streambed Alteration Agreement is required and/or the Department's issuance of a draft agreement pursuant to this notification.

16. DIGITAL FORMAT

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?

☐ Yes (Please enclose the information via digital media with the completed notification form)

☑ No

17. SIGNATURE

I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, the Department may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration Agreement issued pursuant to this notification. I understand also that if any information in this notification is found to be untrue or incorrect and the project described in this notification has already begun, I and/or the applicant may be subject to civil or criminal prosecution. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless the Department has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.

SIGNED FOR

Signature of Applicant or Applicant's Authorized Representative

9/19/08

Date

Jeffrey G. Jensen

Print Name

STATE OF CALIFORNIA THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME
BAY DELTA REGION
(707) 944-5520
Mailing address:
POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
Street address:
7329 SILVERADO TRAIL
NAPA, CALIFORNIA 94558

ARNOLD SCHWARZENEGGER, GOVERNOR

Notification Number: 1600-2008-0451-3, Caltrans EA 283800
Champlin Creek and various unnamed tributaries, Sonoma County

California Department of Transportation
Attn: Mr. Jeffrey Jensen
111 Grand Ave.
Oakland, CA 94623

PROJECT DESCRIPTION and PROJECT CONDITIONS

Description

The California Department of Transportation (Caltrans) proposes a safety improvement project (Project) on state route (SR) 116 in Sonoma County from west of Arnold Drive to Adobe Road, between post miles 41.8 and 44.7. The Project includes roadway widening, curve correction, partial roadway re-alignment, and a partial realignment and restoration of Champlin Creek. The California Department of Fish and Game (Department) is issuing this Streambed Alteration Agreement (Agreement) for the project described herein.

Champlin Creek and its tributaries flow through the Project area. Caltrans has included several retaining walls in the Project design to minimize impacts to Champlin Creek. Fourteen stream crossings will be impacted by the proposed Project as described in documentation provided in support of this Agreement. Construction work in the stream crossings will include culvert extensions, head wall construction, culvert replacements, installation of rock slope protection (RSP), and associated earthwork. Additionally, at PM 43.13, SR 116 intersects with the Sonoma County Transfer Station road. The existing transfer station road and culverts will be removed and replaced with an improved road and a new box culvert. The culverted section of this crossing will be decreased by incorporating retaining walls. In order to facilitate this upgrade, all traffic must be diverted to a temporary culverted land bridge structure that will be built on the upstream side of the existing transfer station roadway.

Construction of the Project is scheduled to begin January 2010 and will last for approximately 36 months. Work will not be allowed in the riparian zone before June 15th or after October 15th, of any year.

Conceptual Mitigation

Champlin Creek is an intermittent creek that meanders through the project site. Caltrans shall provide onsite riparian mitigation by removing two sections of existing SR 116 roadway along Champlin Creek totaling approximately 1,450 feet. Riparian habitat within the project site is dominated by oak-bay uplands and an oak-bay riparian zone. A comprehensive Mitigation and Monitoring Plan for Champlin Creek (Plan) detailing the replacement of lost habitat through mitigation plantings and geomorphic improvements to Champlin Creek, will be submitted to the Department for approval. The Plan shall include success criteria and a 10 year monitoring period to ensure success of the riparian plantings and the geomorphic stabilization efforts.

Additionally, a stilling basin will be built to create California red-legged frog (CRLF) habitat at the downstream end of the Sonoma County Transfer roadway. The basin will be composed of RSP placed over a waterproof membrane.

Conditions

1. At least 5 months prior to construction, Caltrans shall submit to the Department for approval, a Mitigation and Monitoring Plan for Onsite Restoration Activities on Champlin Creek (Plan) detailing compensation for impacts at the habitat level.

2. Longitudinal surveys of the flowline of Champlin Creek from 100 feet downstream of the restoration area downstream limit to 100 feet upstream of the restoration area upstream limit will be performed and submitted to the Department as part of the mitigation Plan approval. A schedule for subsequent geomorphic stability analysis will be included in the Plan.

3. The Plan shall include a ten year monitoring and reporting schedule and appropriate success criteria for the revegetation and streambed realignment efforts. The Plan will include contingency measures for corrective actions should monitoring reveal that success criteria are not being met. Monitoring and reporting efforts will continue until success criteria are met, or until a new plan is developed with, and approved by, the Department.

4. If a rainfall event with an intensity equaling or exceeding the 4% annual probability of exceedance rainfall intensity occurs during the monitoring period, a longitudinal survey as described in condition #2 will be performed to assess the geomorphic condition of the restoration area following the event.

5. All work shall be done according to the project description and plans submitted to the Department. Caltrans shall notify the Department of any modifications made to the plans submitted to the Department that pertain to impacts to the creek or the riparian corridor.

6. Work within the stream/riparian corridor shall be confined to the period of June 15 to October 15. Revegetation work is not confined to this time period but must be completed in the same calendar year.

7. Each native riparian tree greater than 4 inches DBH that is removed or damaged, shall be replaced with native trees in a riparian area at a minimum 5:1 ratio. For each non-native riparian tree that is removed or damaged, trees shall be replaced with native riparian trees at a minimum 1:1 ratio. Temporarily impacted riparian understory shall be replaced at a 1:1 ratio. Trees that later die as a result of excavation or construction activities will be mitigated for at the aforementioned ratios.

8. If mitigation plantings cannot be accommodated onsite, then Caltrans shall submit an offsite mitigation planting plan for approval by the Department prior to construction.

9. To help ensure survival and vigor, Caltrans will procure replacement trees with sufficiently similar genetic composition to the impacted trees.

10. When possible vegetation will be trimmed to preserve root structures for re-sprouting.

11. RSP will be backfilled with clean soil and planted with local willow cuttings above the 2 year flood event line to the largest extent practicable.

12. Environmentally Sensitive Area (ESA) fencing shall be installed at the direction of a qualified biologist to delineate the work area and protect the surrounding habitat.

13. Prior to commencement of work within the stream zone, Caltrans shall photograph the project site. Upon completion of work activities, Caltrans shall photograph the project site at designated photo stations. Labeled copies of photographs shall be sent to the Department of Fish and Game within 5 days of completion of the project. Notification of work commencement shall be sent to the Department at P.O. Box 47, Yountville, CA 94599. Refer to Notification 1600-2008-0451-3 when notifying the Department.

14. All new culverts will be upgraded to enhance fish passage.

15. Roadbed and roadway materials from the abandoned stretch of SR 116 will be removed for disposal at an offsite, permitted location. Root systems of trees will be avoided during roadbed excavation.

16. Equipment shall not be operated in wetted areas (including but not limited to ponded, flowing, or wetland areas).

17. The work period for completing the work within the stream zone, shall be restricted to periods of low or no stream flow and dry weather. Excavation for and placement of the fill shall not begin unless a no precipitation forecast is obtained covering the entire construction phase (within the area covered in this Agreement) and the time necessary to implement erosion control

measures. This forecast shall be documented upon request by the Department.

18. No phase of the project may be started if that phase and its associated erosion control measures cannot be completed prior to the onset of precipitation if that construction phase may cause the introduction of sediments into the stream. After any storm event, Caltrans shall inspect all sites currently under construction and all sites scheduled to begin construction within the next 72 hours for erosion and sedimentation problems and take corrective action as needed.

19. All construction activity shall terminate at any site that has surface runoff until runoff ceases and no further storms are forecast for the following 24-hour period.

20. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channel and banks, avoiding areas of concentrated ground squirrel burrows. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream shall be positioned over drip-pans. Any equipment or vehicles driven and/or operated within or adjacent to the stream must be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. No fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge to a watercourse may occur, vehicles must be moved away from the stream prior to refueling and lubrication.

21. Erosion control measures shall be utilized throughout all phases of operation where sediment runoff from exposed slopes threatens to enter waterways. At no time shall silt laden runoff be allowed to enter the stream or directed to where it may enter the stream. Only clean rocks and boulders shall be used for the project. Erosion control structures shall be monitored for effectiveness and shall be repaired or replaced as needed. Build up of soil behind the fence shall be removed promptly and any breaches or undermined areas repaired at once.

22. Erosion control measures shall be monitored during and after each storm event. Modification, repairs and improvements to erosion control measures shall be made whenever needed. Upon Department determination that turbidity/siltation levels resulting form project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated. The Department may take enforcement action if appropriate turbidity and siltation control measures are not deployed.

23. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around or through the work area during the excavation and/or construction operations. If a diversion is needed, a plan must be submitted to the Department at least 15 days prior to the start of the diversion construction for review and approval prior to diversion construction. Normal flows will be restored to the affected stream immediately upon completion of work at that location.

24. All exposed/disturbed areas and access points within the stream zone left barren of vegetation as a result of the construction activities shall be restored by seeding with a blend

Applicant's initials
Notification Number 1600-2008-0451-3

native and non-native erosion control grass seeds. Seeded areas shall be mulched. All other areas of disturbed soil which drain toward the stream channel shall be seeded with erosion control grass seeds. Revegetation shall be completed as soon as possible after construction activities in those areas cease. Seeding placed after October 15 must be covered with broadcast straw, jute netting, coconut fiber blanket or similar erosion control blanket. Erosion control with monofilament shall not be used.

25. Building materials and/or construction equipment shall not be stockpiled or stored where they could be washed into the water or where they will cover aquatic or riparian vegetation.

26. Debris, soil, silt, bark, rubbish, creosote-treated wood, raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from project related activities, shall be prevented from contaminating the soil and/or entering the stream. Any of these materials, placed within or where they may enter a stream or lake, by Caltrans or any party working under contract, or with the permission of Caltrans, shall be removed immediately.

27. Caltrans shall not dump any litter or construction debris within the riparian/stream zone. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.

28. This Agreement does not authorize the take of any state or federally listed species. Liability for any take or incidental take of such listed species remains the responsibility of Caltrans for the duration of the project. Any unauthorized take of such listed species may result in prosecution and nullification of the agreement.

29. Prior to the beginning of any excavation, clearing, grubbing, or staging in or near the riparian area, a focused survey of all potentially suitable California red legged frog (CRLF) habitat shall be conducted 14 days prior to instream construction or disturbance of riparian areas. In the event that a CRLF is observed in the area, work in the riparian area shall be halted and the USFWS shall be contacted to determine appropriate actions. Results of pre-construction surveys shall be reported to the Department.

30. All Terms and Conditions of the USFWS Biological Opinion for the Project shall be adhered to at all times.

31. Prior to the beginning of any excavation, clearing, grubbing, or staging in or near the riparian area, a survey shall be conducted for western pond turtles. If pond turtles are discovered within the work area, the animal shall be relocated by a qualified biologist (as determined by a combination of academic training and professional experience) to an appropriate up or downstream location.

32. If earthwork, clearing and grubbing, or vegetation trimming is scheduled during bird nesting season, February 15 and August 15, pre-construction surveys shall be conducted by a qualified biologist for active bird nests. The surveys shall take place within 3 days prior to the commencement of work. If nesting birds are found a 50-foot radius buffer should be established

around the nest, a 300-foot radius buffer in the case of hawks or owls. If a lapse in project-related work of 5 days or longer occurs, another survey will be required before project work can be reinitiated.

33. Existing culverts and over-crossings shall be inspected for wildlife prior to adjacent, overhead, or nearby construction. If any wildlife is encountered during the course of the inspection, said wildlife shall be allowed to leave the area unharmed, and shall be flushed, hazed, or herded in a safe direction away from the project site. This condition does not allow for the take or disturbance of any state or federally listed species. If bats are found Caltrans shall contact Melissa Escaron, Staff Environmental Scientist at (707)339-0334.

34. If any sensitive species are observed in project surveys, Caltrans shall submit California Natural Diversity Data Base (CNDDB) forms to the CNDDB for all preconstruction survey data within five working days of the sightings, and provide DFG Region 3 with copies of the CNDDB forms and survey maps.

35. To the extent that any provisions of this Agreement provide for activities that Caltrans to traverse another owner's property, such provisions are agreed to with the understanding that Caltrans possesses the legal right to so traverse. In the absence of such right, any such provision is void.

36. In the event that the project scope, nature, or environmental impact is altered by the imposition of subsequent permit conditions by any local, state or federal regulatory authority, Caltrans shall notify the Department of any imposed project modifications that interfere with compliance to Department conditions.

If Caltrans needs more time to complete the authorized activity, the work period may be extended on a day-to-day basis by contacting Melissa Escaron at (707) 339-0334 or the Yountville office at (707) 944-5520.

A copy of this Agreement must be provided to the contractor and all subcontractors who work within the stream zone and must be in their possession at the work site.

Department personnel or its agents may inspect the work site at any time.

Caltrans is liable for compliance with the terms of this Agreement, including violations committed by the contractors and/or subcontractors. The Department reserves the right to suspend construction activity described in this Agreement if the Department determines any of the following has occurred:

A). Failure to comply with any of the conditions of this Agreement

B). Information provided in support of the Agreement is determined by the Department to be inaccurate.

C). Information becomes available to the Department that was not known when preparing the original conditions of this Agreement (including, but not limited to, the occurrence of state or federally listed species in the area or risk to resources not previously observed)

Applicant's initials
Notification Number 1600-2008-0451-3

D).The project as described in the Agreement has changed or conditions affecting fish and wildlife resources change.

Any violation of the terms of this Agreement may result in the project being stopped, a citation being issued, or charges being filed with the District Attorney. Contractors and subcontractors may also be liable for violating the conditions of this agreement.

Amendments and Extensions

Caltrans shall notify the Department before any modifications are made in the project plans submitted to the Department. Project modifications may require an amendment or a new notification.

This Agreement is transferable to subsequent owners of the project property by requesting an amendment.

To extend the Agreement beyond the expiration date, a written request or completed "Request to Extend Lake or Streambed Alteration Agreement" form, with an appropriate fee, must be submitted to the Department (1600 Program, Post Office Box 47, Yountville, California 94599) for consideration at least 30 days before the Agreement expiration date. An extension requires a fee. The Fee Schedule and Extension form can be obtained at HYPERLINK "http://www.dfg.ca.gov/habcon/1600/Forms.html" www.dfg.ca.gov/habcon/1600/Forms.html or by phone at (707) 944-5520. Extensions of the original Agreement are issued at the discretion of the Department.

To modify the project, a written request for an amendment or a completed "Request to Amend Lake or Streambed Alteration Agreement" form, with an appropriate fee, must be submitted to the Department (1600 Program, Post Office Box 47, Yountville, California 94599). An amendment requires a fee. The Fee Schedule and Amendment form can be obtained at HYPERLINK "http://www.dfg.ca.gov/habcon/1600/Forms.html" www.dfg.ca.gov/habcon/1600/Forms.html or by phone at (707) 944-5520. Amendments to the original Agreement are issued at the discretion of the Department.tc \l2 "To modify the project, a written request for an amendment must be submitted to the Department (1600 Program, Post Office Box 47, Yountville, California 94599). The fee for an amendment is one-half (½) of the original fee. Amendments to the original Agreement are issued at the discretion of the Department.

Please note that you may not proceed with construction until your proposed project has undergone CEQA review and the Department signs the Agreement.

I, the undersigned, state that the above is the final description of the project I am submitting to the Department for CEQA review, leading to an Agreement, and agree to implement the conditions above required by the Department as part of that project. I will not proceed with this project until the Department signs the Agreement. I also understand that the CEQA review may result in the addition of measures to the project to avoid, minimize, or compensate for significant environmental impacts:

Applicant's initials
Notification Number 1600-2008-0451-3

Applicant's name (print): Jeffrey G. Jensen

Applicant's signature: [signature]

Signed the 27 day of April, 2009

Applicant's initials [initials]
Notification Number 1600-2008-0461-3

U.S. Army Corps of Engineers Section 404 Permit

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1398

REPLY TO

JUN 2 2009

Regulatory Division

SUBJECT: File Number SPN-2003-282830 N

Mr. Jeffrey Jensen
Division of Biological Sciences and Permits
California Department of Transportation
111 Grand Avenue
Post Office Box 23660
Oakland, California 94623-0660

Dear Mr. Jensen:

This letter is written in response to your submittal of September 16, 2008, concerning Department of the Army authorization for the State Route 116, "Stage Gulch", Curve Correction and Realignment Project. The project area extends from Adobe Road to Arnold Drive west of Sonoma, in Sonoma County, California.

The project will widen and realign State Route 116 (SR 116) between post mile 41.8 and 44.7 to reduce the possibility of traffic accidents. In addition, the project will enhance the safety of drivers entering and exiting the highway. The project includes the following elements: widening the shoulders along SR 116, correction of non-standard horizontal and vertical curves on SR 116, relocation of the intersection of the intersection of SR 116 and the Sonoma County Transfer Station Road (dump road), and other general highway improvements. The roadway will be widened to 12-foot lanes with 9-foot shoulders. All non-standard curves will be corrected to a minimum 850-foot radius to provide sufficient sign distance for traffic speeds of 50 mph.

The intersection at the dump road will be modified to improve the road's transition onto SR 116. A 1,300-foot section of the highway between post mile 42.9 and 43.34 near the dump road will be realigned to the eastside of Champlin Creek to avoid and minimize effects to the creek's riparian corridor. The realignment of the highway along this section will also include a left turn pocket to facilitate access and egress to the dump road for trucks. General highway improvements will also be made, including the repair of failing road base and pavement. The existing pavement will be removed and a new base material with pavement will be installed. In addition, all guardrails will be upgraded to meet current standards.

The project will require the replacement and extension of 19 culverts to accommodate the highway improvements. All new culverts will be upgraded to enhance fish passage, dispersal behavior of aquatic species, and hydraulic efficiency. Along the new alignment near the dump

road, the natural-bottom culverts will reduce erosion, improve dispersal of aquatic species, and enhance fish passage.

Approximately 0.156 acre of waters of the U.S. and 0.111 acre of wetlands will be permanently impacted by the widening and reconstruction of State Route 116. Approximately 0.175 acre of waters of the U.S. and 0.089 acre of wetlands will be temporarily impacted by the project.

Based on a review of the information you submitted and an inspection of the project site conducted by Corps personnel on October 1, 2008, your project qualifies for authorization under Department of the Army Nationwide Permit 14 *Linear Transportation Projects* (72 Fed. Reg. 11092, March 12, 2007), pursuant to Section 404 of the Clean Water Act (33 U.S.C. Section 1344). See Enclosure 1. All work shall be completed in accordance with the layout plans L-1 through L-15, dated March 14, 2008, and "Impacts to Potential Waters of the U.S. and Waters of the State", dated April 2, 2009. See Enclosure 2.

The project must be in compliance with the General Conditions cited in Enclosure 1 for this Nationwide Permit authorization to remain valid. Non-compliance with any condition could result in the suspension, modification or revocation of the authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This Nationwide Permit authorization does not obviate the need to obtain other State or local approvals required by law.

This authorization will remain valid for two years from the date of this letter unless the Nationwide Permit is modified, suspended or revoked. If you have commenced work or are under contract to commence work prior to the suspension, or revocation of the Nationwide Permit and the project would not comply with the resulting Nationwide Permit authorization, you have twelve (12) months from that date to complete the project under the present terms and conditions of the Nationwide Permit. Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance, Enclosure 3, verifying that you have complied with the terms and conditions of the permit.

To ensure compliance with this Nationwide Permit authorization, the following special conditions shall be implemented:

1. General Condition 17 in the Nationwide Permit Summary Sheet, stipulates that project authorization under a Nationwide Permit does not allow for the incidental take of any federally-listed species in the absence of a Biological Opinion (BO) with incidental take provisions. The Federal Highway Administration initiated consultation with the U.S. Fish and Wildlife Service (USFWS), to address project related impacts to California red-legged frog (*Rana aurora draytonii*), pursuant to

Section 7(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. Section 1431 *et seq.*). By letter of July 15, 2005, the USFWS issued a BO for your project. The BO contains mandatory terms and conditions to ensure implementation of reasonable and prudent measures associated with "incidental take" and project minimization measures. Authorization under this Corps permit is conditional upon compliance with all of the mandatory terms and conditions associated with incidental take authorized by the attached documents, whose terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take and it would also constitute non-compliance with this Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of the BO and the Endangered Species Act.

2. All project staging and equipment storage areas shall be located away from areas subject to the jurisdiction of the Corps.

3. No debris, oil, petroleum products or other organic material resulting from construction activities shall be allowed to enter or be placed where it may be washed by rainfall or runoff into areas subject to the jurisdiction of the Corps.

4. Any temporary structures used to dewater the stream channel shall consist of clean gravel, sandbags or other non-eroding material and shall be completely removed from the work area at project completion.

5. Following project construction, disturbed areas including access points, staging and equipment storage areas, etc. shall be returned to pre-project conditions. This shall include, but is not necessarily limited to, grading to establish pre-project contours, removal of debris and planting site-specific vegetation.

6. Compensation for unavoidable impacts to riparian trees within the project area shall be conducted pursuant to the "Conceptual Planting Plans, Project: Sonoma 116 Champlin Creek", dated April 9, 2009. The planting plans were submitted to our office as a part of the "Conceptual Mitigation and Monitoring Plan for Onsite Restoration Activities", dated April 2009 (Conceptual Plan).

    a. The riparian mitigation areas will be deemed successful when plantings have 70% or greater survival.
    b. The mitigation areas shall be monitored for success for 10 years. Annual reports shall be submitted to our office. At the end of the monitoring period you shall submit the final monitoring report to our office to determine if

success criteria have been met.

c. If at year 5, survival is less than 70%, all failed tree and shrub plantings on the mitigation site should be replanted with live plantings and monitored an additional three (3) years to achieve 70% total survival.

7. To mitigate for the loss of 0.111 acre of jurisdictional wetlands, you shall purchase 0.21 credits of seasonal wetlands at the Burdell Ranch Mitigation Bank. A copy of the bank receipt must be submitted to our office prior to the start of construction.

8. To mitigate for permanent impacts to 0.156 acre of other waters of the U.S., you shall restore 0.12 acre if Champlin Creek on-site in accordance with the planting plans in Appendix C-3 in your Conceptual Plan and the Champlin "Creek Conceptual Restoration Design" (restoration design drawing), provided to our office on April 29, 2009.

   a. Restoration shall be considered successful when there has been no more than minimal natural erosion and sedimentation along Champlin Creek over a 5 year period in the mitigation area shown on the restoration design drawing. Success of the restoration of Champlin Creek shall be measured by photo-monitoring and geomorphic stability surveys as described on pages 19 and 20 of the Conceptual Plan.
   b. You shall monitor the creek banks in the area of the restoration work to ensure that no significant alteration of the creek habitat occurred as a result of construction activities. If increased sedimentation increases and/or the riparian plant species fail to establish along the bank area, you shall work with the San Francisco Bay Regional Water Quality Control Board and our office to remediate the problems and stabilize the site.
   c. You shall monitor the restored section of Champlin Creek for 10 years.
   d. If the restoration of Champlin Creek is not considered to be successful by the end of the 10-year monitoring period, we may require additional on-site mitigation or the purchase of mitigation bank credits at a greater than 2:1 loss to creation ratio for temporal impacts.
   e. The restoration area shall be set aside in perpetuity as inoperable right-of-way. The final mitigation and monitoring plan shall include documentation of long-term protection and a long-term management plan. The restoration area must be easily identifiable as an area for you and adjacent property owners to avoid when evaluating future projects in the area.
   f. You shall also provide an endowment or other financial assurance to cover the long-term maintenance activities if the restoration area.

9. A final mitigation and monitoring plan for the project shall be submitted to our office prior to construction.

10. Your responsibility to complete the required compensatory mitigation as set forth in special conditions 6, 7, and 8 will not be considered fulfilled until you have demonstrated mitigation success and have received written notification from our office.

11. In the event of any unanticipated discoveries of potential cultural/historic resources, you shall immediately halt work in the vicinity of the discovery and contact the appropriate regulatory authorities. You shall complete consultation pursuant to 36 CFR 800 to the satisfaction of the SHPO prior to resuming work.

Should you have any questions regarding this matter, please call Andrea Meier of our Regulatory Division at 415-503-6798. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available online at http://per2.nwp.usace.army.mil/survey.html.

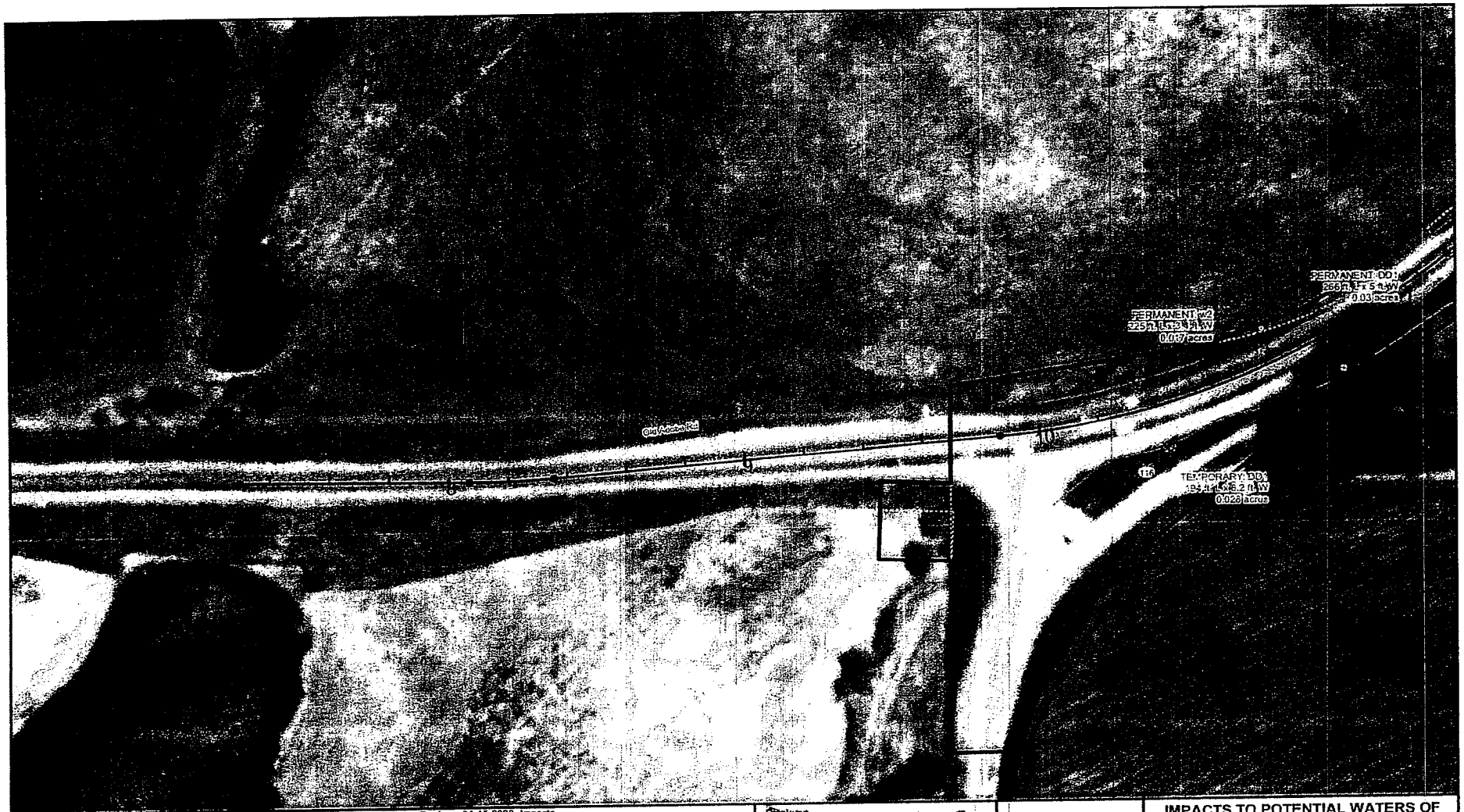
Sincerely,

for Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copies furnished without enclosures:

US EPA, San Francisco, CA
US NMFS, Santa Rosa, CA
CA DFG, Napa, CA
CA RWQCB, Santa Rosa, CA



Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification

Potential Waters of the US (Wetland)
Potential Waters of the US (culverted)
Potential Waters of the US (non-wetland)
Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
Waters of the State

Caltrans Designs, 04-15-2008
Main Alignment
Cut and Fill
Existing ROW
Proposed ROW
Existing Hydrology

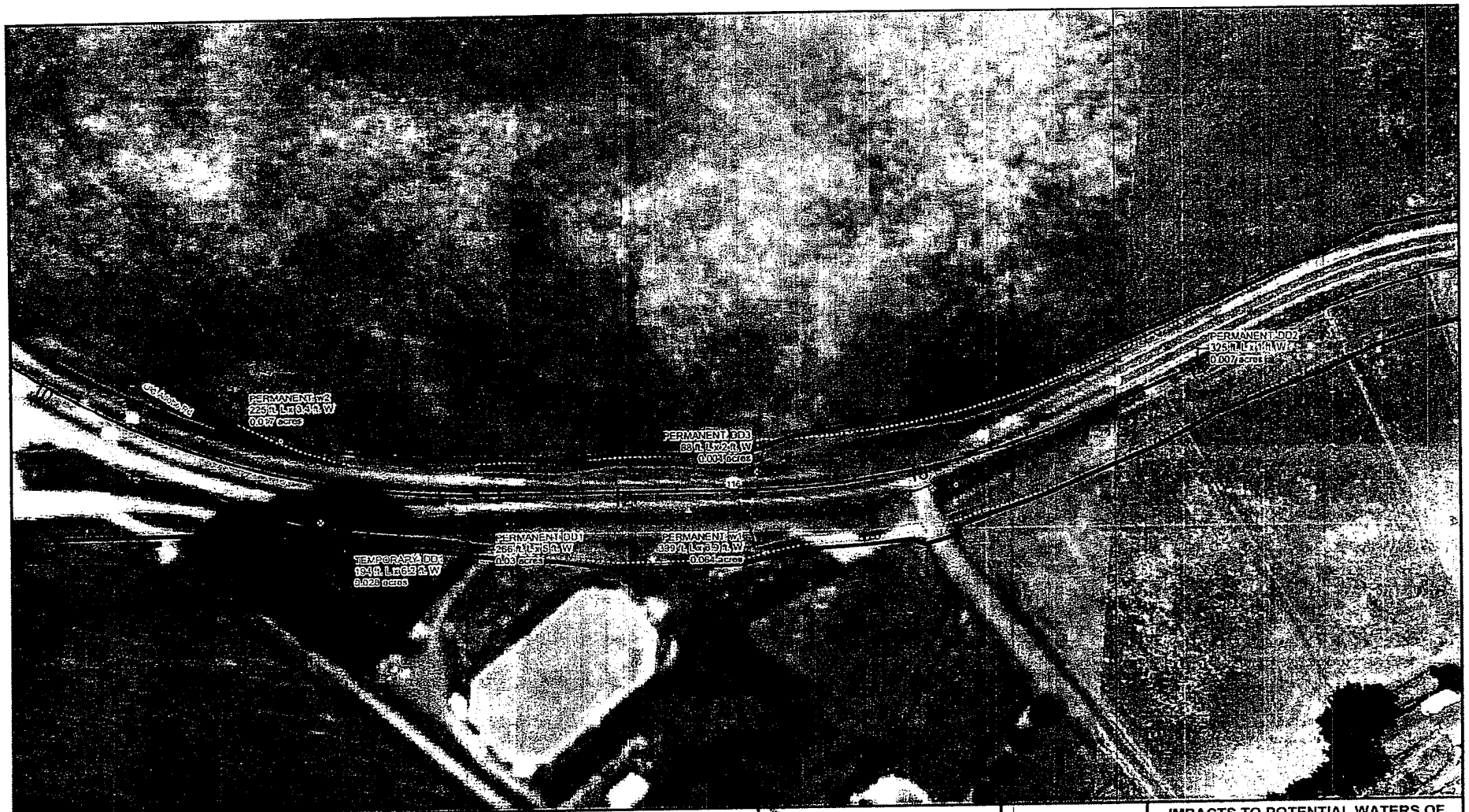
Impacts
Permanent
Temporary
Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects: 15' from the Cut & Fill
Restore: Existing pavement to be restored to natural conditions

Petaluma

0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 1 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



- Culvert
- Upland Data Point
- Wetland Data Point
- Flow Lines
- Boundary of USACE Jurisdictional Verification
- Potential Waters of the US (Wetland)
- Potential Waters of the US (culverted)
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Temp Effects: 15' from the Cut & Fill
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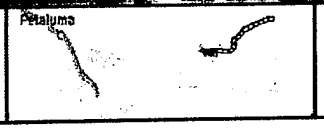

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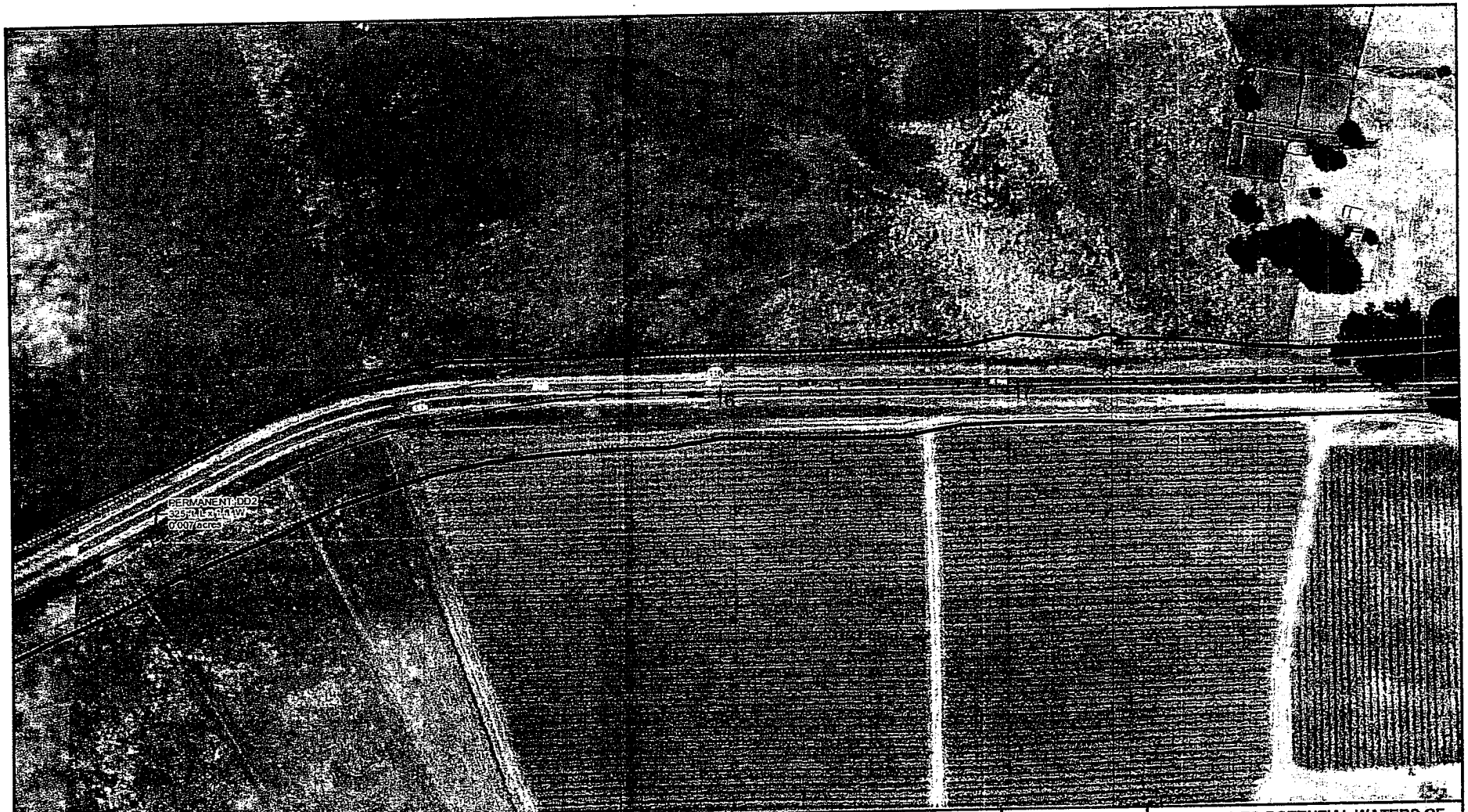
0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 2 OF 16

SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 28380
SONOMA COUNTY, CA



Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification

Potential Waters of the US (Wetland)
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Caltrans Designs, 04-15-2008
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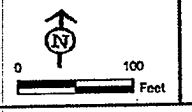
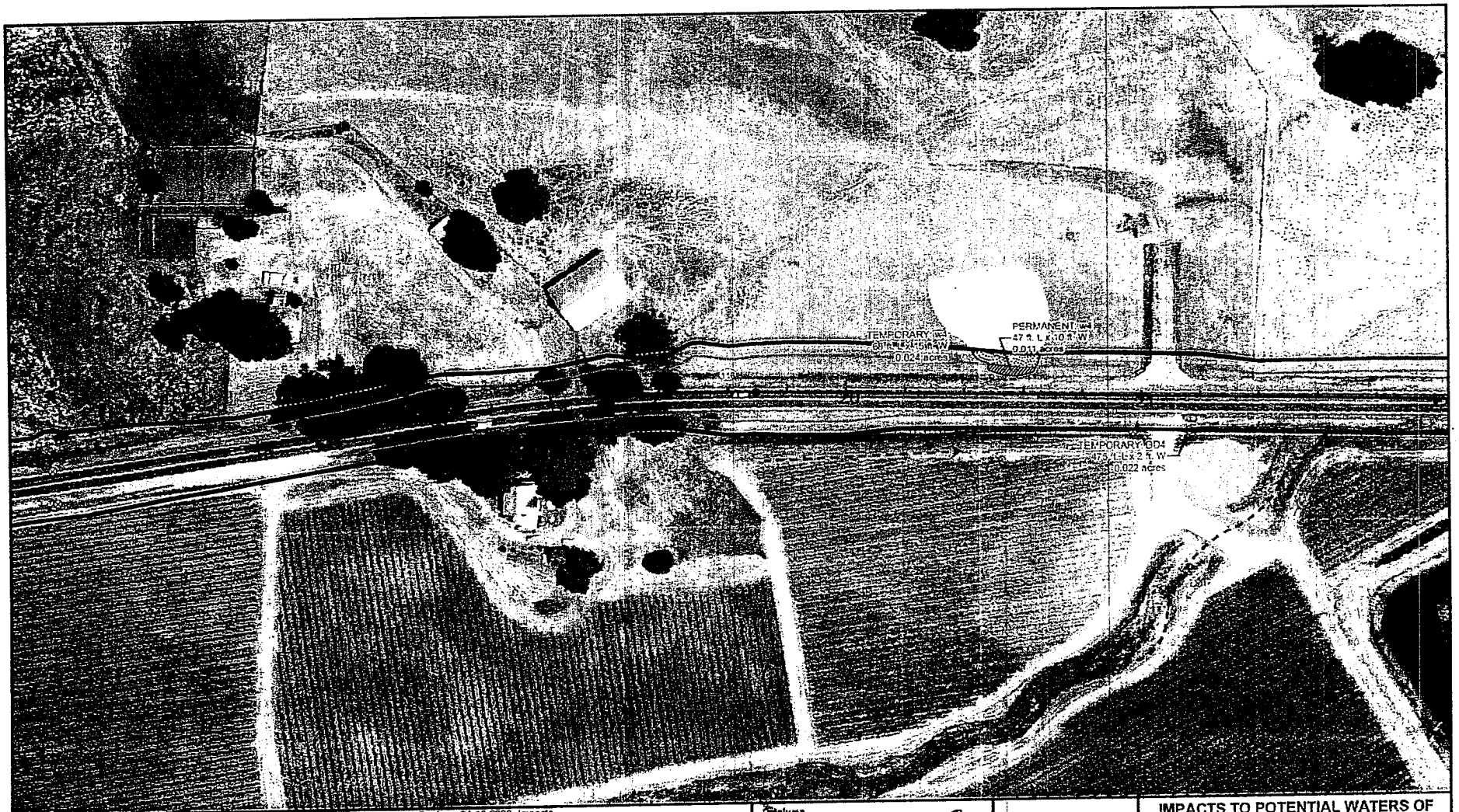


IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 3 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



Culvert
Upland Data Point
Wetland Data Point
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Temporary
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Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects: 15 from the Cut & Fill
Remove Existing pavement to be restored to natural conditions

Petaluma

N
0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 4 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA

- Culvert
- Upland Data Point
- Wetland Data Point
- Flow Lines
- Boundary of USACE Jurisdictional Verification
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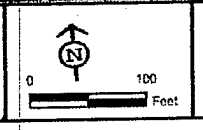
- Temporary
- Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill

Temp Effects: 15 from the Cut & Fill

Restore: Existing pavement to be restored to natural conditions



IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE

MAP 5 OF 16

SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801

SONOMA COUNTY, CA

Culvert
Upland Data Point
Wetland Data Point
Flow Lines
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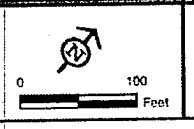
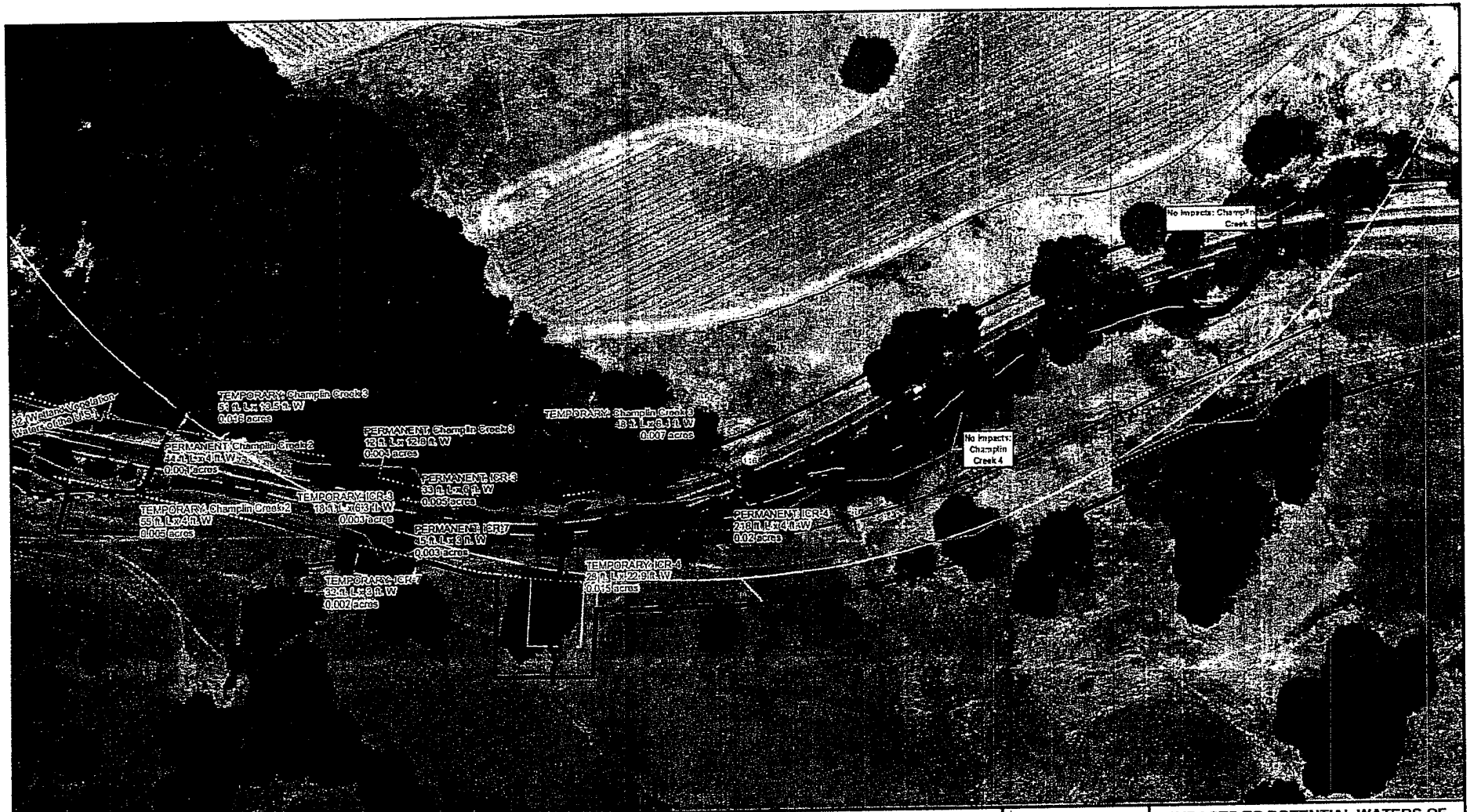


IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE

MAP 6 OF 16

SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 293801
SONOMA COUNTY, CA

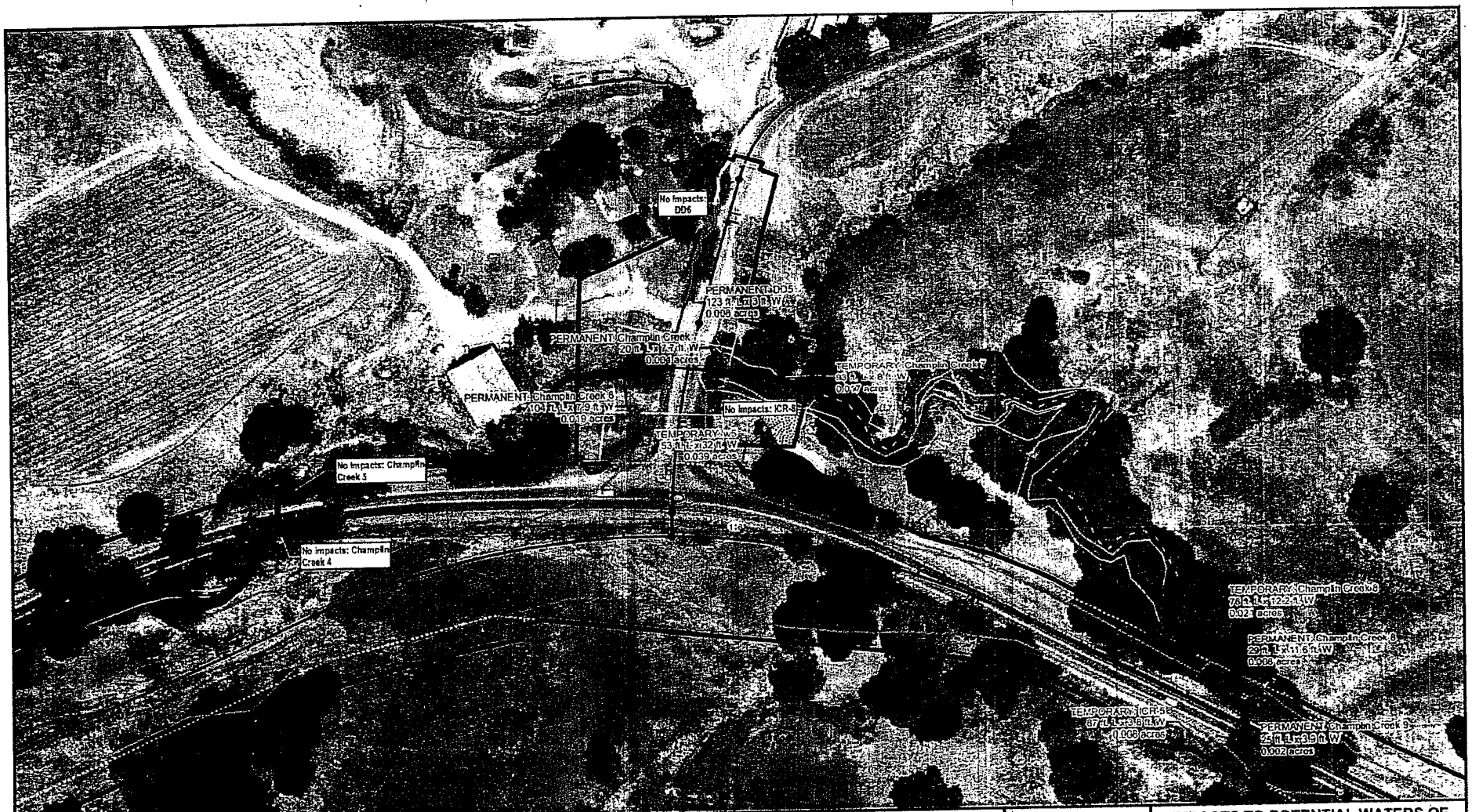


IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE

MAP 7 OF 16

SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 2B3801

SONOMA COUNTY, CA



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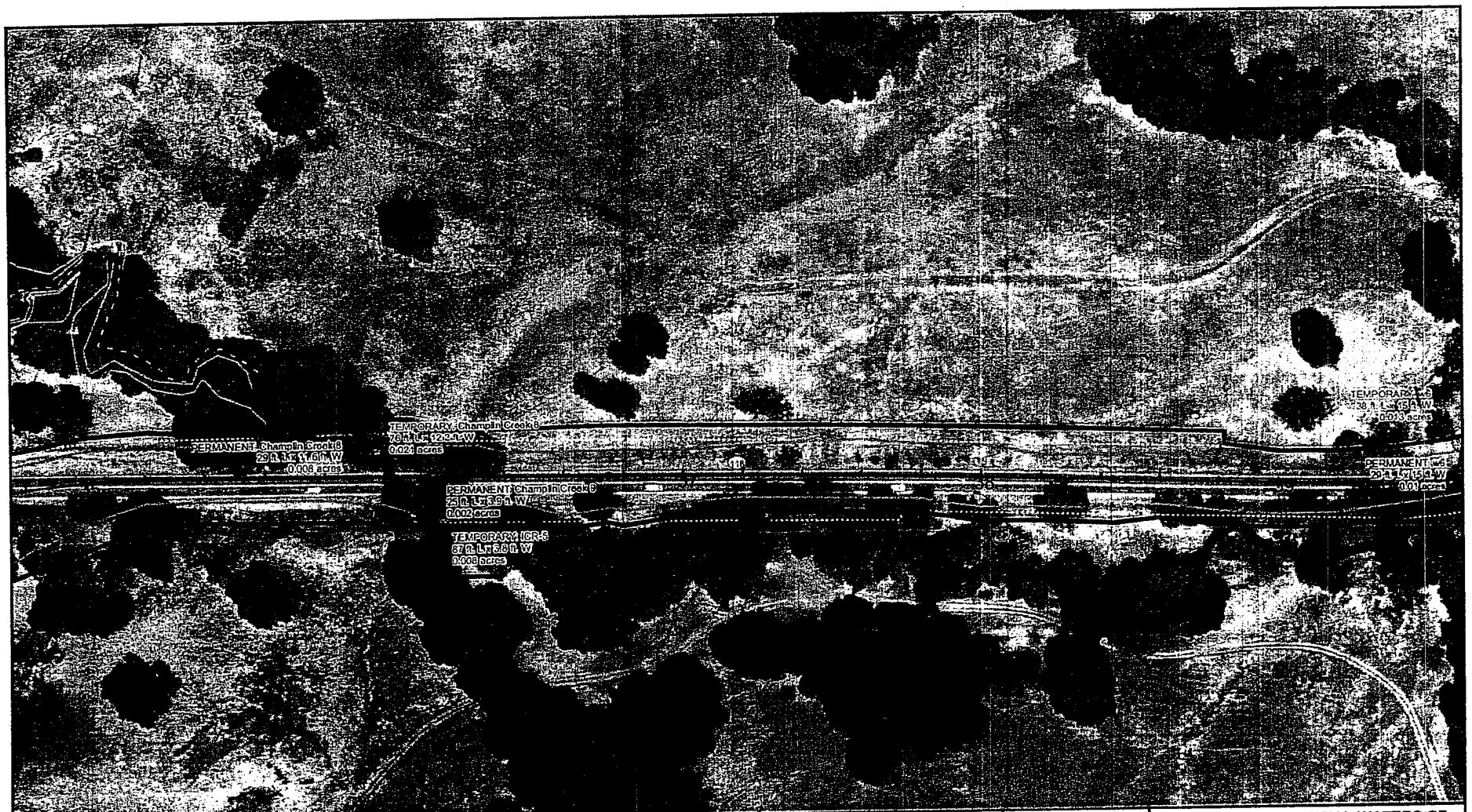
0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 8 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



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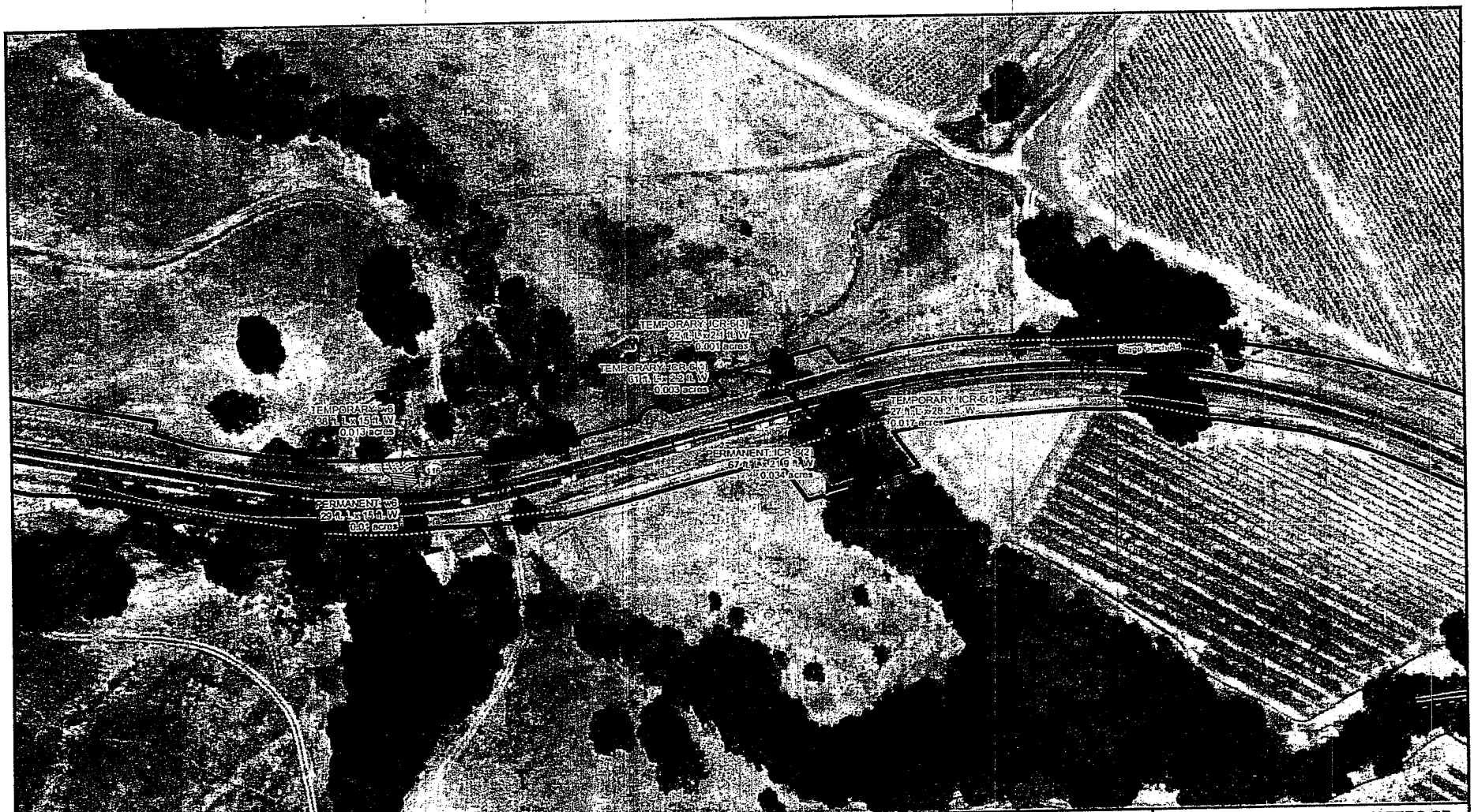
Petaluma

0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 9 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283501
SONOMA COUNTY, CA



Caltrans Designs, 04-15-2008

- Culvert
- Upland Data Point
- Wetland Data Point
- Flow Lines
- Boundary of USACE Jurisdictional Verification
- Potential Waters of the US (Wetland)
- Potential Waters of the US (culverted)
- Potential Waters of the US (non-wetland)
- Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
- Waters of the State
- Main Alignment
- Cut and Fill
- Existing ROW
- Proposed ROW
- Existing Hydrology

Impacts

- Permanent
- Temporary
- Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill

Temp Effects: 15' from the Cut & Fill

Restore: Existing pavement to be restored to natural conditions

Petaluma

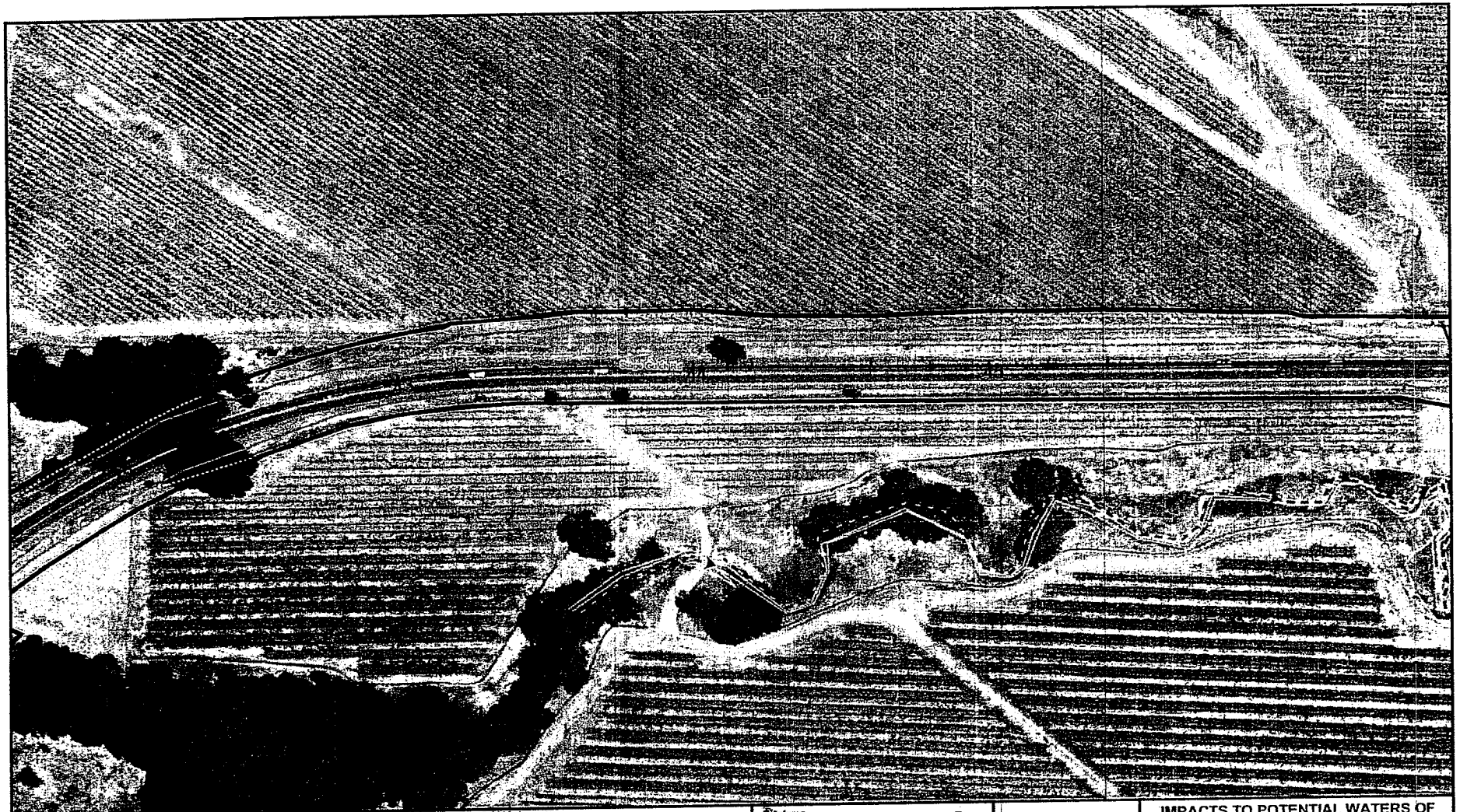
0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE

MAP 10 OF 16

SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801

SONOMA COUNTY, CA



Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification

Potential Waters of the US (Wetland)
Potential Waters of the US (culverted)
Potential Waters of the US (non-wetland)
Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
Waters of the State

Caltrans Designs, 04-15-2008
Main Alignment
Cut and Fill
Existing ROW
Proposed ROW
Existing Hydrology

Impacts
Permanent
Temporary
Restored

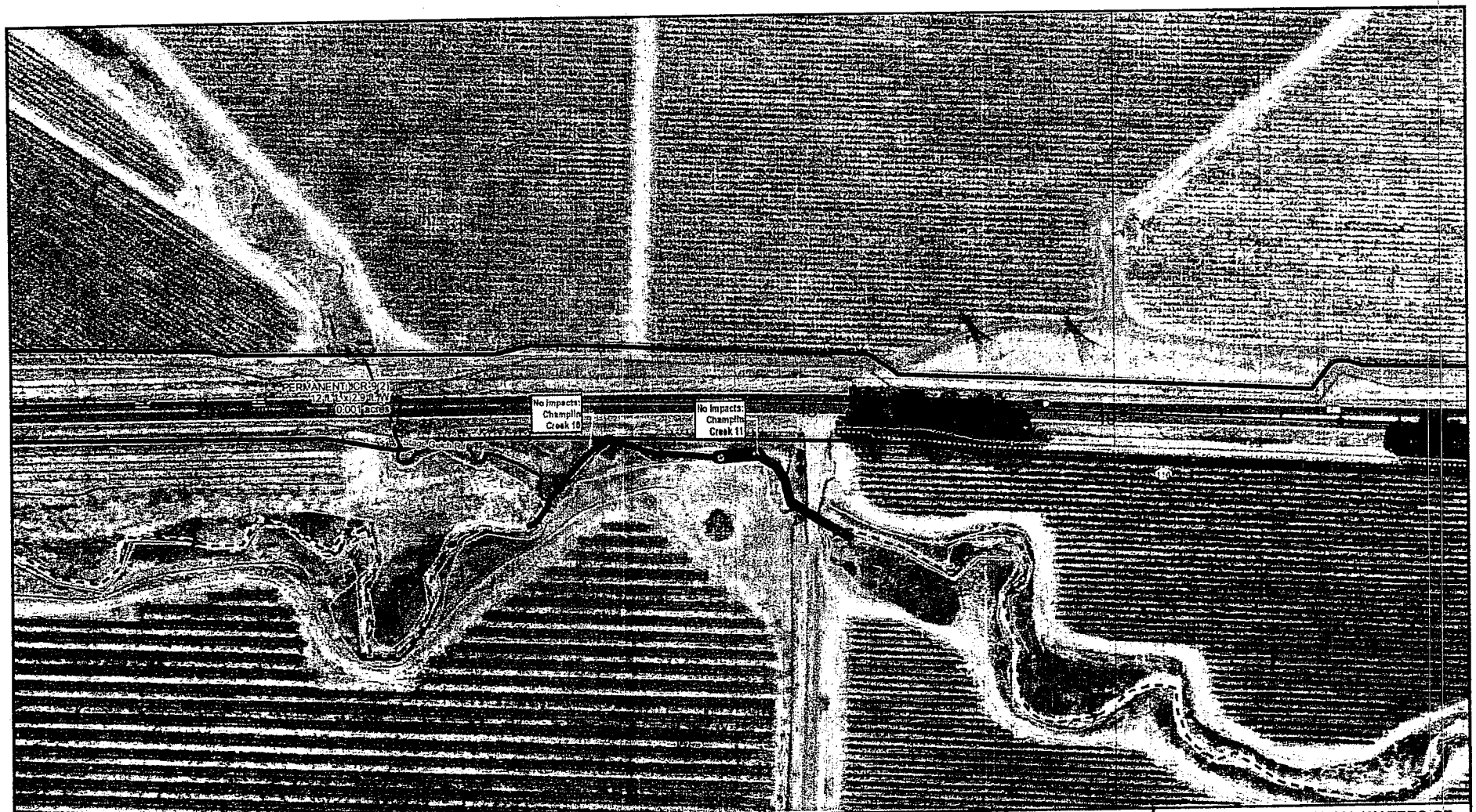
Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects: 15' from the Cut & Fill
Remark: Existing pavement to be restored to nature conditions

Petaluma

N

0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 11 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification

Potential Waters of the US (Wetland)
Potential Waters of the US (culverted)
Potential Waters of the US (non-wetland)
Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
Waters of the State

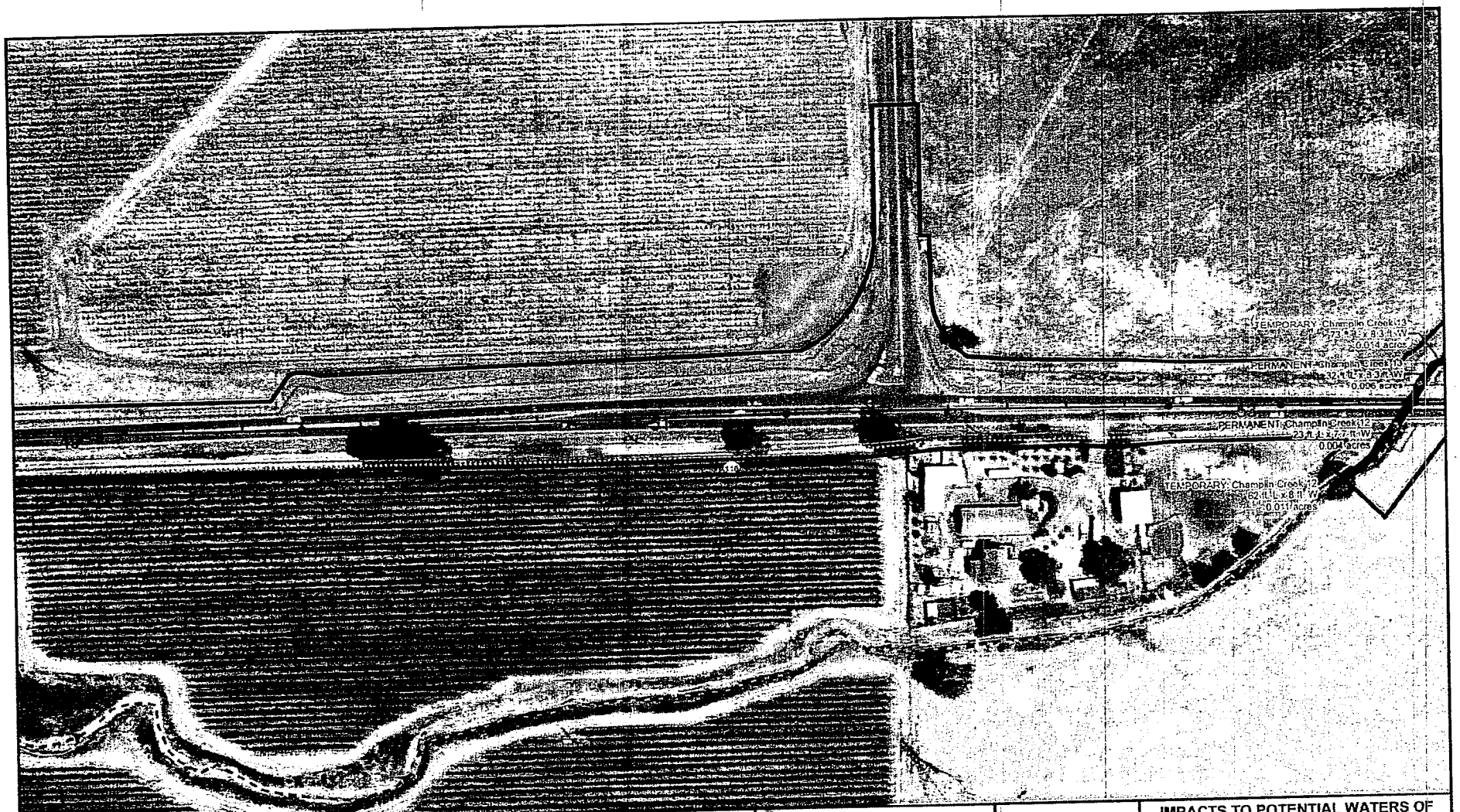
Caltrans Designs, 04-15-2008
Main Alignment
Cut and Fill
Existing ROW
Proposed ROW
Existing Hydrology

Impacts
Permanent
Temporary
Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects: 15' from the Cut & Fill
Restore: Existing pavement to be restored to natural conditions

0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 12 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification

Potential Waters of the US (Wetland)
Potential Waters of the US (culverted)
Potential Waters of the US (non-wetland)
Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
Waters of the State

Caltrans Designs, 04-15-2008
Main Alignment
Cut and Fill
Existing ROW
Proposed ROW
Existing Hydrology

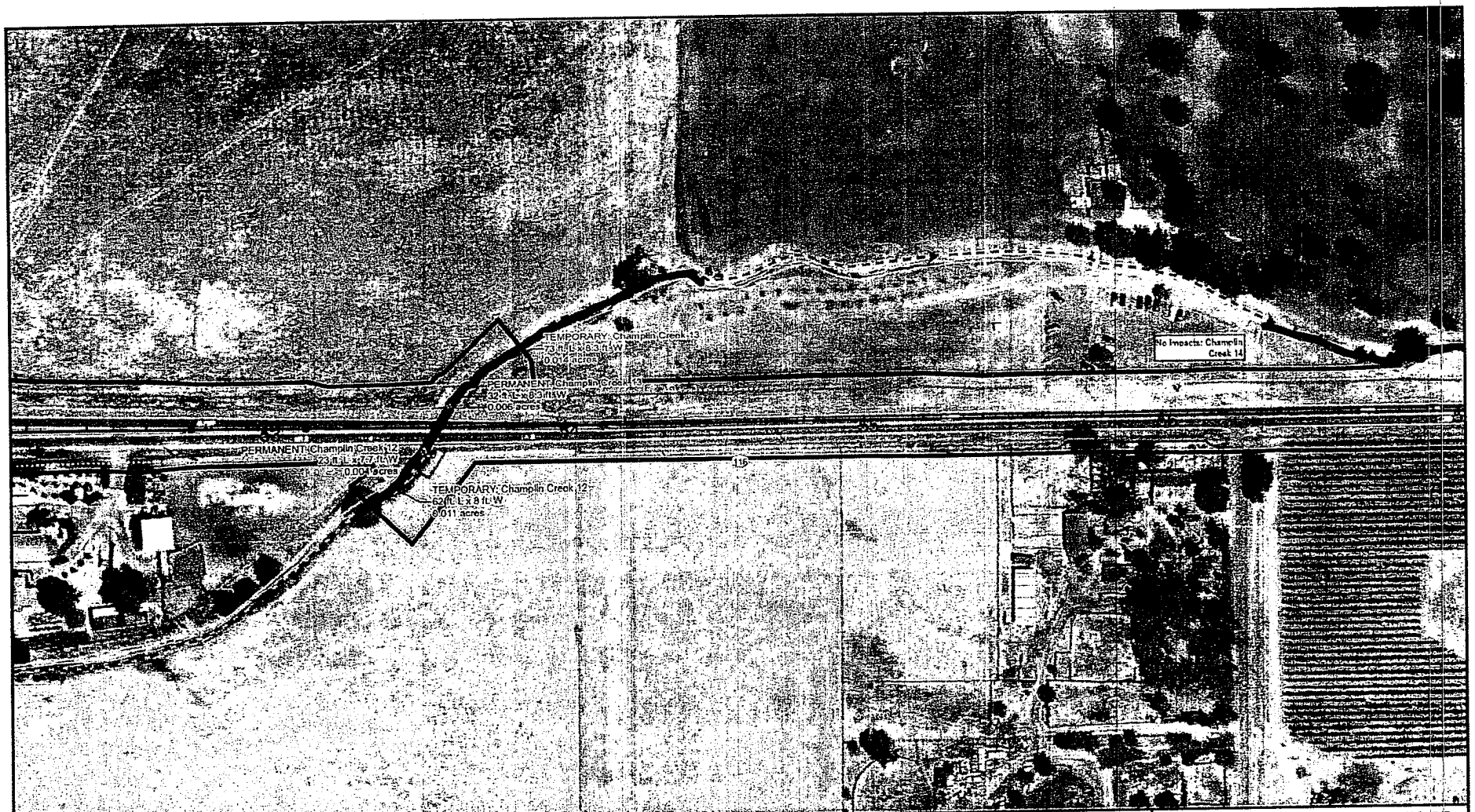
Impacts
Permanent
Temporary
Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects: 15' from Edge Cut & Fill
Restore: Existing Pavement to be restored to natural conditions

Petaluma

0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 13 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification

Potential Waters of the US (Wetland)
Potential Waters of the US (culverted)
Potential Waters of the US (non-wetland)
Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
Waters of the State

Caltrans Designs, 04-15-2008
Main Alignment
Cut and Fill
Existing ROW
Proposed ROW
Existing Hydrology

Impacts
Permanent
Temporary
Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects, 15' from the Cut & Fill
Restore: Existing pavement to be restored to natural conditions

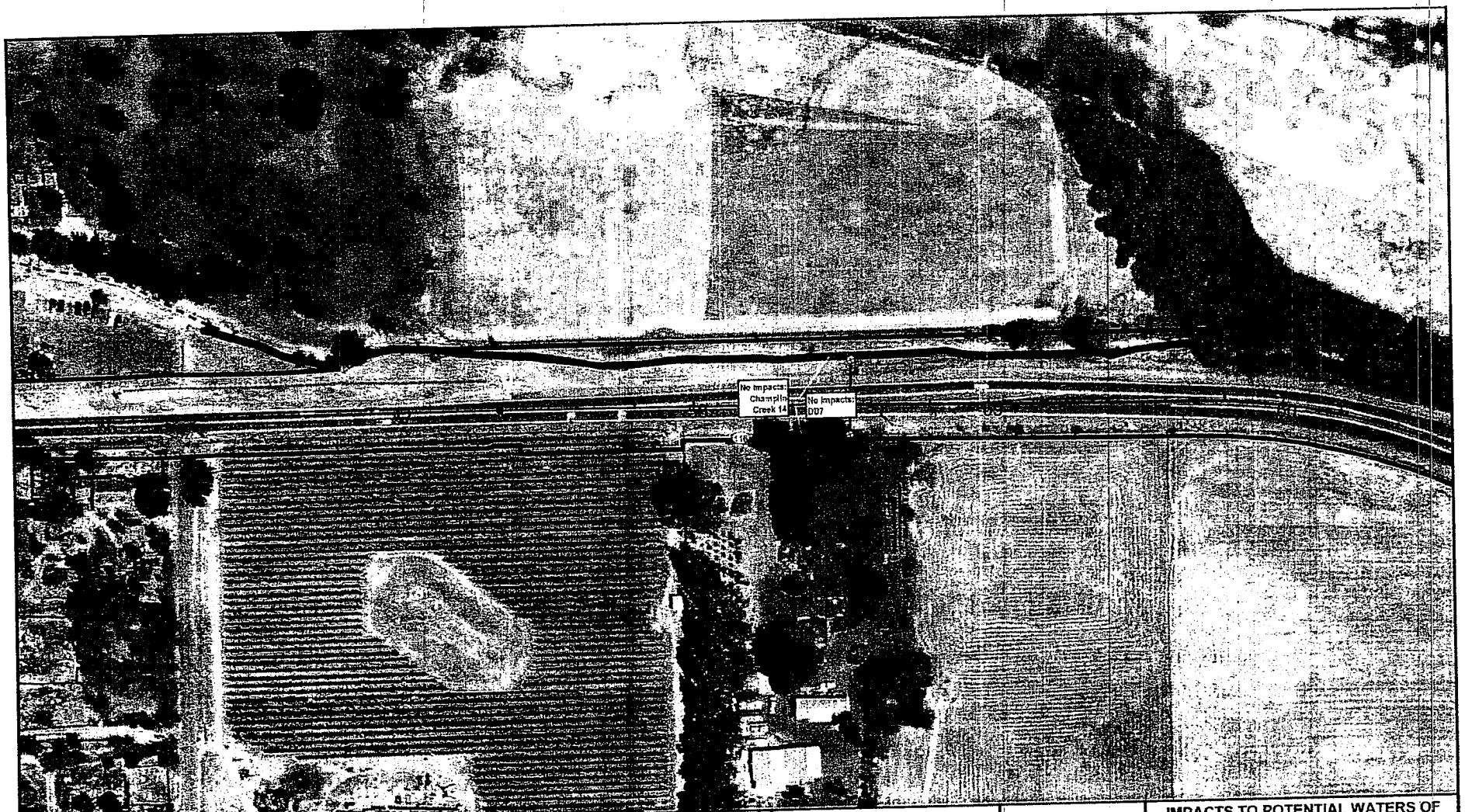
Petaluma

0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE

MAP 14 OF 16

SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification
Potential Waters of the US (Wetland)
Potential Waters of the US (culverted)
Potential Waters of the US (non-wetland)
Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
Waters of the State

Caltrans Designs, 04-15-2008
Main Alignment
Cut and Fill
Existing ROW
Proposed ROW
Existing Hydrology

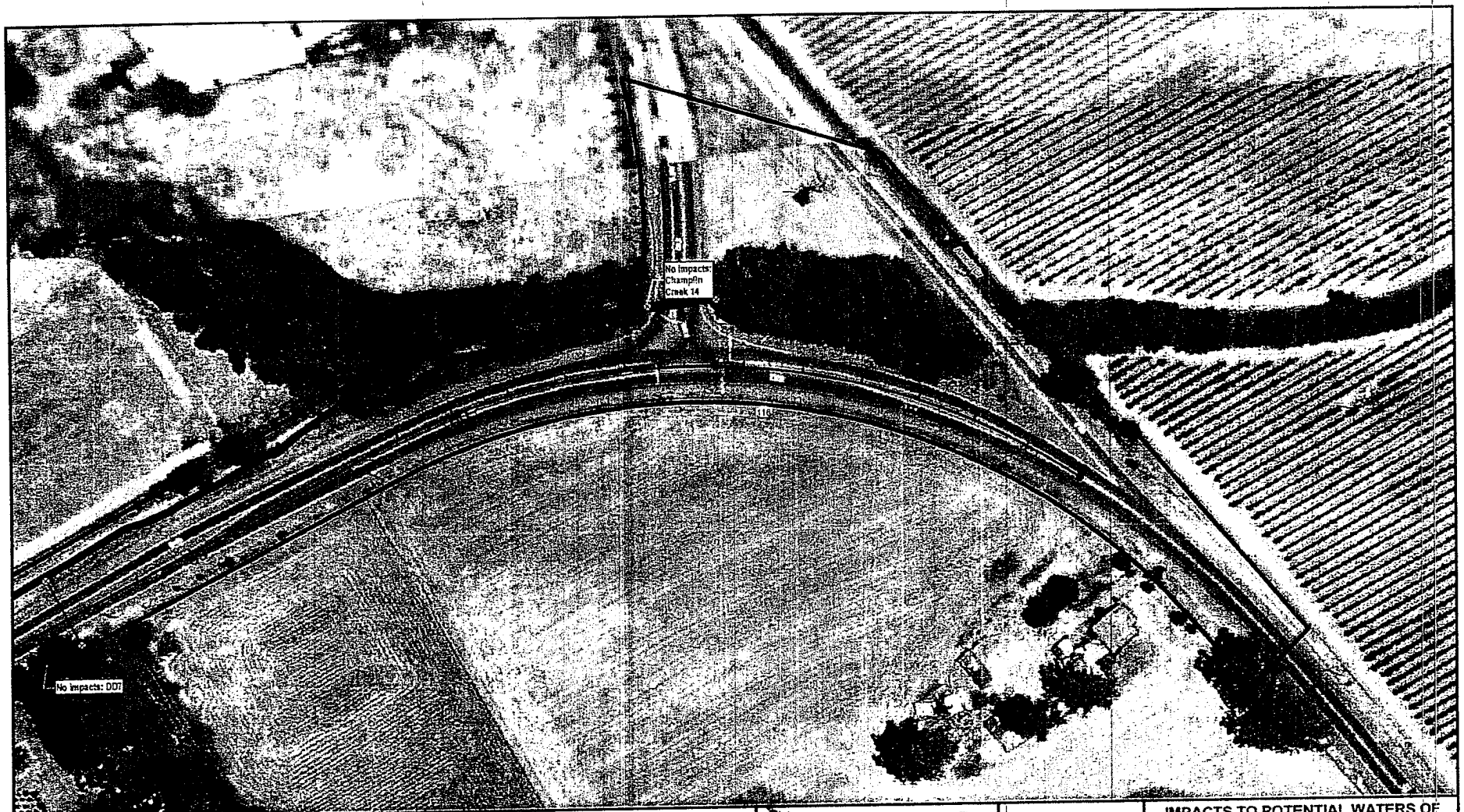
Impacts
Permanent
Temporary
Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects: 15' from toe Cut & Fill
Restore: Existing pavement to be restored to natural conditions

Petaluma

0 100 Feet

IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 15 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA



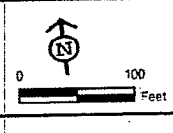
Culvert
Upland Data Point
Wetland Data Point
Flow Lines
Boundary of USACE Jurisdictional Verification

Potential Waters of the US (Wetland)
Potential Waters of the US (culverted)
Potential Waters of the US (non-wetland)
Potential Waters of the US (Wetlands) as identified to Caltrans by USACE during November 2008 field verification
Waters of the State

Caltrans Designs, 04-15-2008
Main Alignment
Cut and Fill
Existing ROW
Proposed ROW
Existing Hydrology

Impacts
Permanent
Temporary
Restored

Perm Effects: Existing Edge of Pavement to Cut & Fill
Temp Effects: 15' from the Cut & Fill
Restore: Existing pavement to be restored to natural conditions



IMPACTS TO POTENTIAL WATERS OF THE U.S. AND WATERS OF THE STATE
MAP 16 OF 16
SR 116 "STAGE GULCH" CURVE CORRECTION AND REALIGNMENT PROJECT EA 283801
SONOMA COUNTY, CA

District	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Jason R. Phoen 57553 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

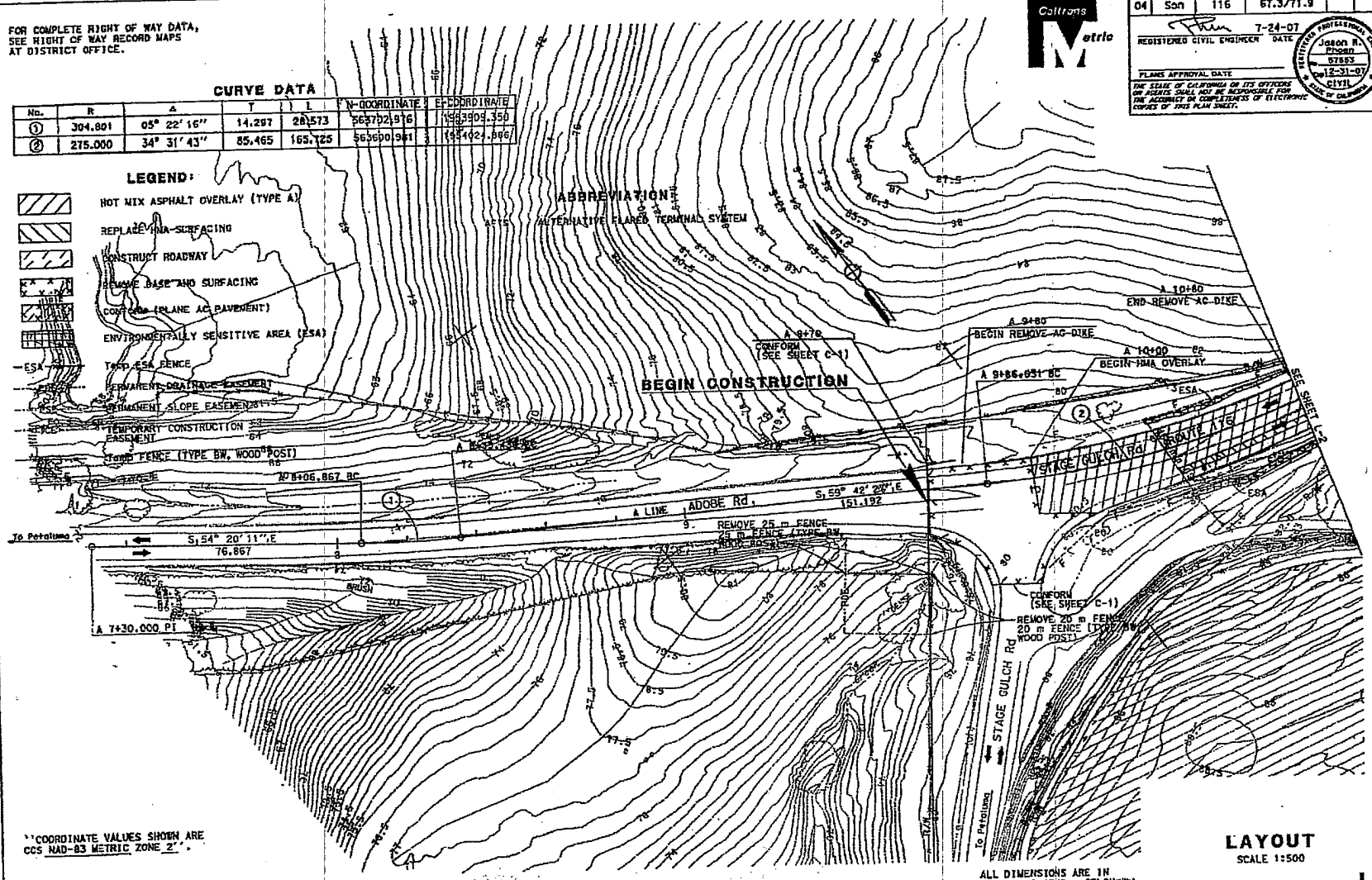
No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
1	304.801	05° 22' 16"	14.297	28.573	563702.976	1993909.350
2	275.000	34° 31' 43"	85.465	165.725	563600.961	1994024.866

LEGEND:

- HOT MIX ASPHALT OVERLAY (TYPE A)
- REPLACEMENT SURFACING
- CONSTRUCT ROADWAY
- REMOVE BASE AND SURFACING
- CONTOUR (PLANE AC PAVEMENT)
- ENVIRONMENTALLY SENSITIVE AREA (ESA)
- TEMP ESA FENCE
- PERMANENT DRAINAGE EASEMENT
- PERMANENT SLOPE EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- STOCK FENCE (TYPE BW, WOOD POST)

ABBREVIATION:

ATS ALTERNATIVE FLARED TERMINAL SYSTEM



**COORDINATE VALUES SHOWN ARE CCS NAD-83 METRIC ZONE 2"

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: EMARNAN PONGPAIROJ

REVISED BY: JSP

DATE REVISED: 5/07

CU 04261

EA 283801

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s126649
DGN FILE => 4283800c001.dgn

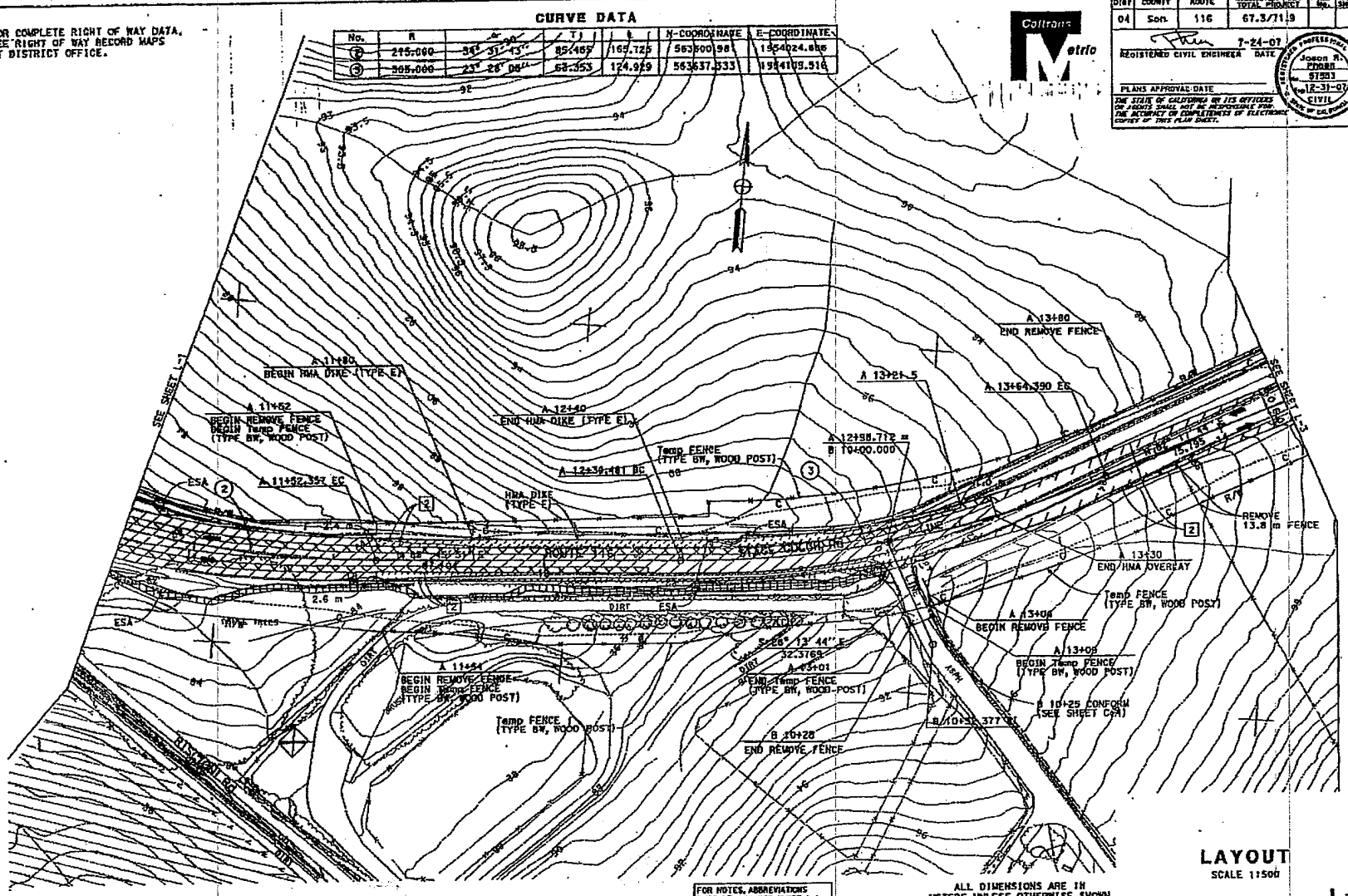
DATE PLOTTED => 14-MAR-2008
TIME PLOTTED => 11:23

BORDER LAST REVISED 3/1/2007

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
2	275.000	34° 31' 13"	85.467	165.725	563900.981	1954024.886
3	305.000	23° 28' 08"	63.353	124.919	563637.333	1954105.516



FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-2

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son.	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA BY ITS OFFICERS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Jason R. Phoen No. 61503 Exp. 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans District 4 Metro

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: EMANNIAN PONGPAURCJ

REVISED BY: JRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s129787

DGN FILE => 429360ea002.dgn

CU 04261

EA 283801

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Jason R. Phogen 67883 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans District 4

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	L	PC	N-COORDINATE	E-COORDINATE
4	305.000	24° 09' 54.710"	85.274	729+08	563332.401	1[illegible]006.218

A 14+20 BEGIN HMA DIKE (TYPE E) BEGIN HMA SIDE GUTTER

A 14+25 BEGIN REMOVE BASE AND SURFACING

A 14+50 END HMA DIKE (TYPE E) END HMA SIDE GUTTER

A 14+90 BEGIN REMOVE FENCE

A 15+05 END REMOVE BASE AND SURFACING

A 15+86.792 EC

A 15+70 100 BEGIN HMA OVERLAY

3.1 m

Temp FENCE (TYPE BW, WOOD POST)

1 m AC SIDE GUTTER (SEE DETAIL A ON SHEET X-1)

HMA DIKE (TYPE E)

ROUTE 116

STAGE CULDE Rd

A 17+43 END REMOVE FENCE

REMOVE 19 m FENCE

REMOVE 15 m FENCE

A 14+80 END TEMP FENCE (TYPE BW, WOOD POST)

Temp FENCE (TYPE BW, WOOD POST)

A 14+40.184 BC

N 68° 17' 14" E 75.795'

SEE SHEET L-2

SEE SHEET L-4

Y 563 500

Y 563 400

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOGEN

CHECKED BY: EMANUAN PONGPAIROJ

REVISED BY: JRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 10

USERNAME => s129287

DGN FILE => 4283000093.dgn

CU 04261

EA 283601

DATE PLOTTED => 13-MAR-2008

TIME PLOTTED => 10:37

12-12-07

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOT SHEE
.04	Son	116	67.3/71.9		

7-24-07
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

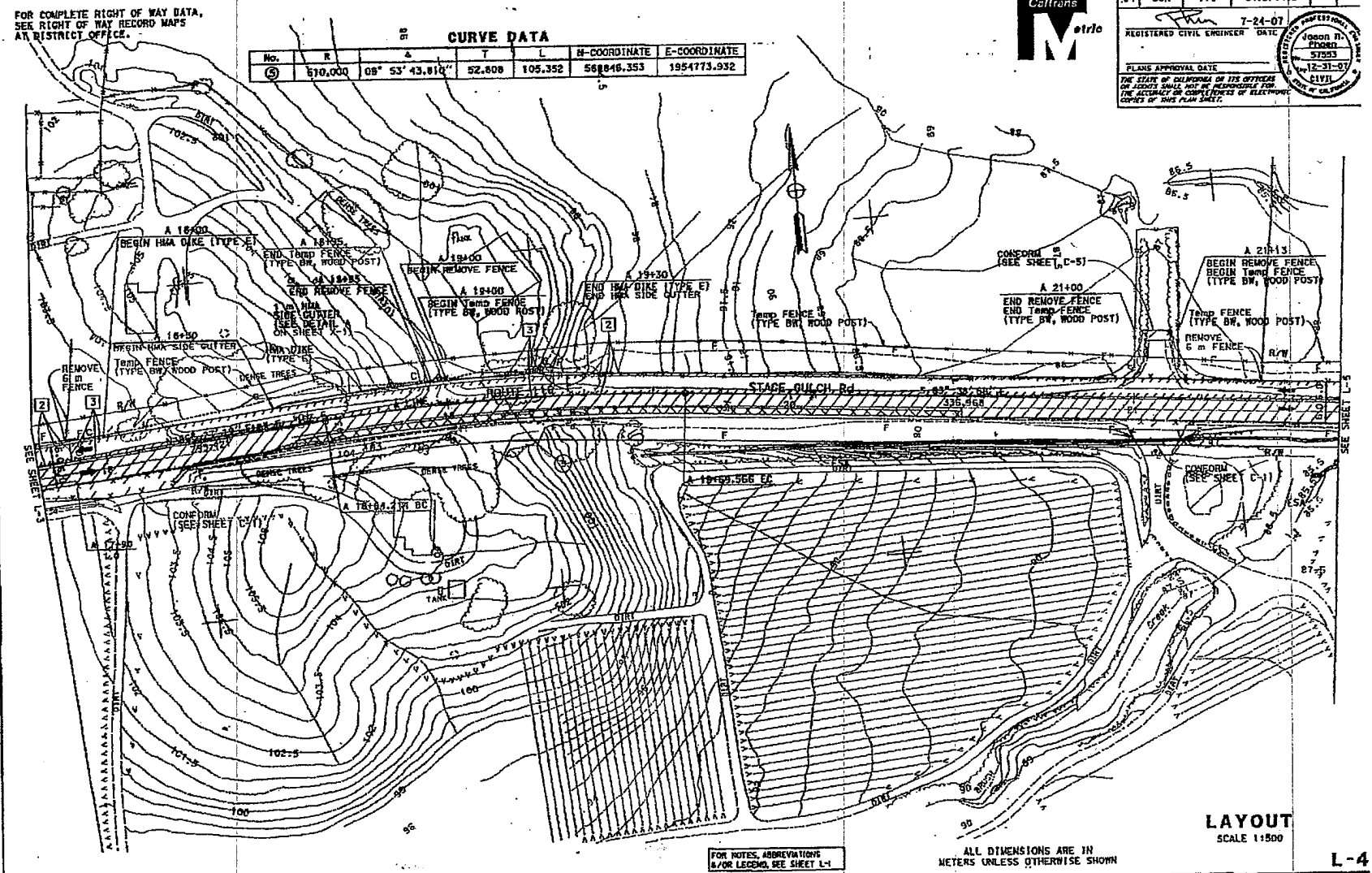
REGISTERED PROFESSIONAL ENGINEER Jason R. Phoen No. 57553 Exp. 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
5	610.000	08° 53' 43.810"	52.608	105.352	568846.353	1954773.932



FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT
SCALE 1:500

L-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: STEWART LEE
CALCULATED-DESIGNED BY: JASON R. PHOEN
CHECKED BY: EMARNAN PONGPAIROJ
REVISED BY: JRP
DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 10 20 30 40

USERNAME => s128787
DGN FILE => 42838p0004.dgn

CU 04261

EA 283801

District	County	Route	Kilometer Post Total Project	Sheet No.	Total Sheets
04	Son	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

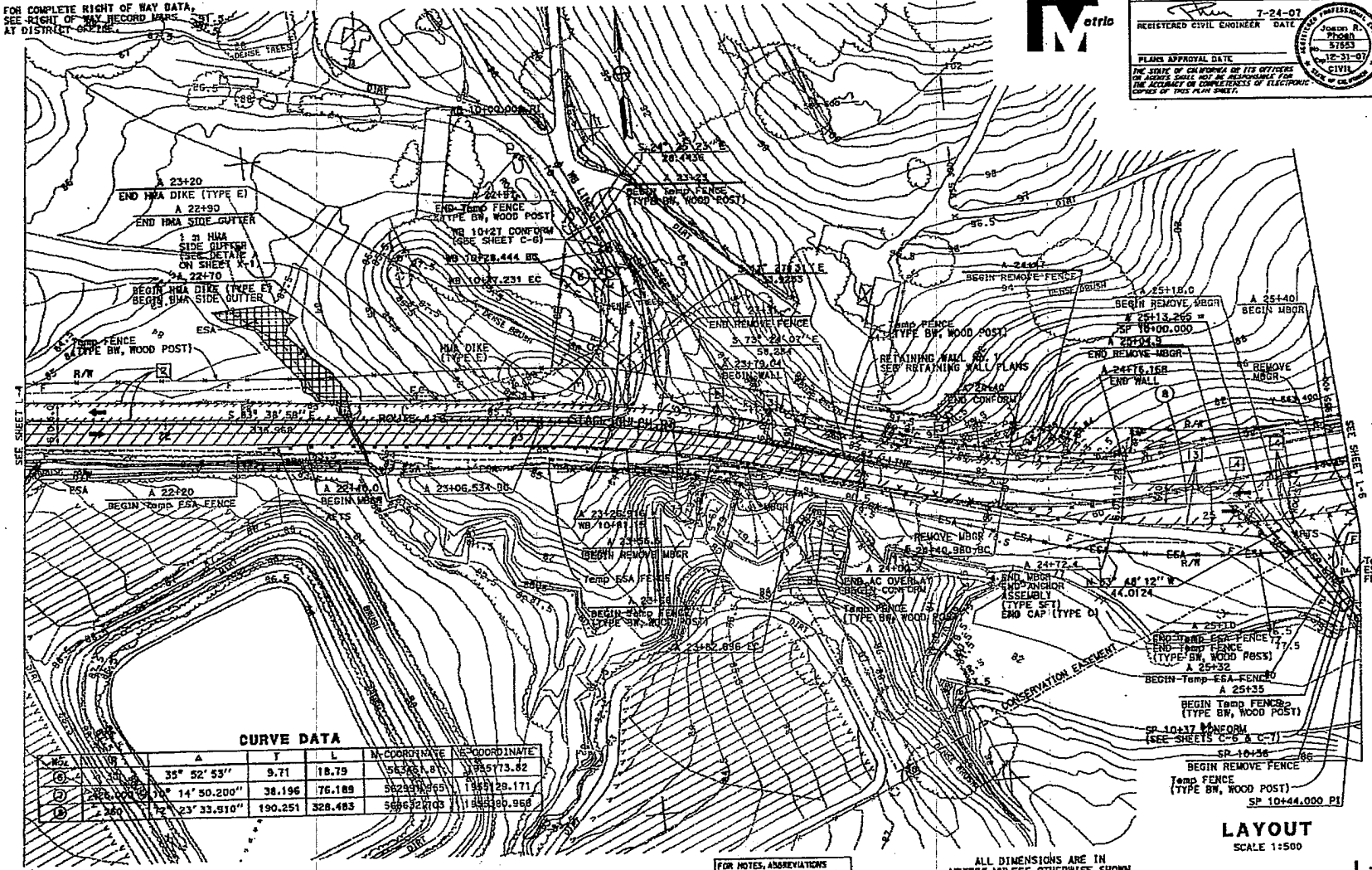
PLANS APPROVAL DATE

Joseph R. Phoen 57653 12-31-07 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CURVE DATA

	Δ	T	L	N COORDINATE	E COORDINATE
35° 52' 53"	9.71	18.79	563651.8	1935173.82	
70° 14' 50.200"	38.196	76.189	562991.965	1935129.171	
72° 23' 33.910"	190.251	328.483	566632.103	1935380.968	

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-5

JRP	5/07		
JASON R. PHOEN	EMANNAN PONGPAIROJ		
CALCULATED-DESIGNED BY	CHECKED BY		
FUNCTIONAL SUPERVISOR	STEWART LEE		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		
REVISED BY	DATE REVISED		

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => 6126767
DGN FILE => 4283800005.dgn

CU 04261 | EA 283801

LAST REVISED DATE PLOTTED => 17-MAR-2006
TIME PLOTTED => 04:56
03-17-06

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOT. SHTS
04	Son	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

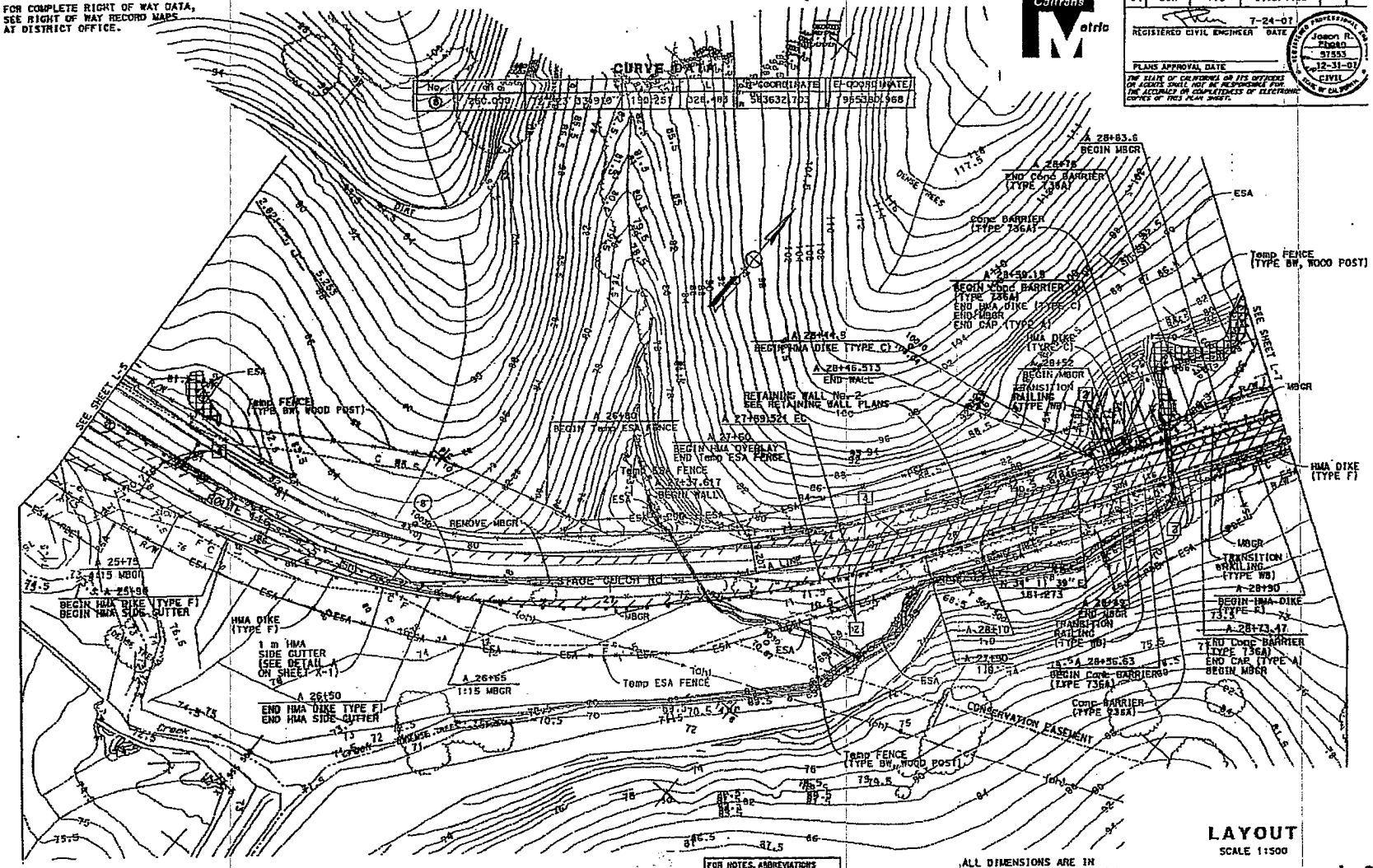
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Jason R. Phoen 57553 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans District 4

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: EMANNAN PONOPAJIROJ

REVISED BY: JRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => 4128767

DGN FILE => 4283601006.dgn

CU 04261

EA 283601

District	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Jason R. Phoen 57553 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

No.	R	L	N-COORDINATE	E-COORDINATE
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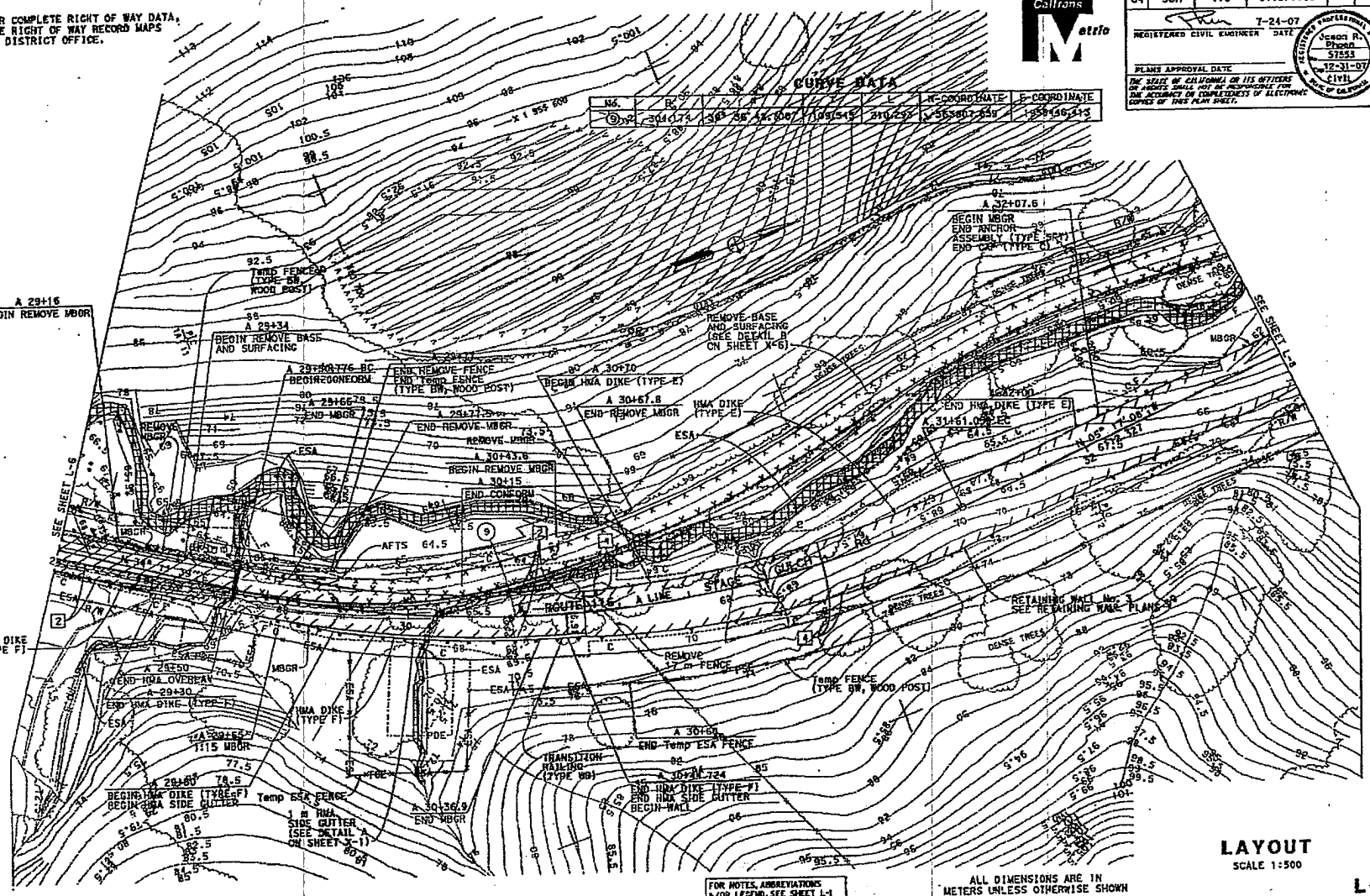


FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: EMARNAN PONDPAIROJ

REVISED BY: KRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s128787
DGN FILE => 4283000007.dgn

CU 04261

EA 283801

DATE PLOTTED => 11-MAR-2008
TIME PLOTTED => 11:21

03-17-08

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	57.3/71.9		

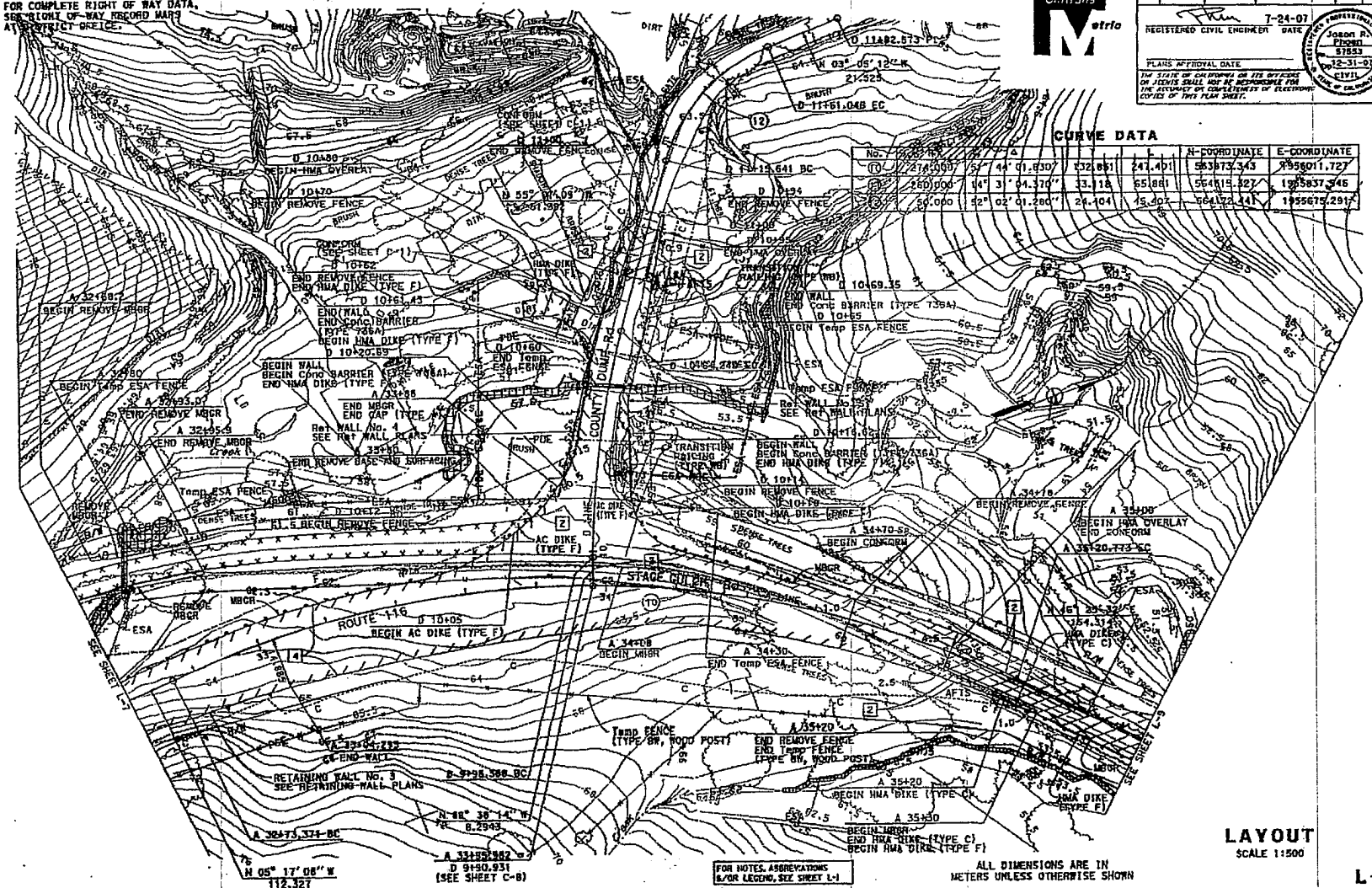
REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CURVE DATA

No.	Radius	Δ	L	T	N-COORDINATE	E-COORDINATE
10	274.000'	5° 44' 01.830"	32.861	16.441	563973.343	1956011.727
11	260.000'	14° 31' 04.370"	33.118	16.661	564015.327	1955837.346
12	50.000	52° 02' 01.280"	24.404	13.407	564172.341	1955675.291

LAYOUT

SCALE 1:500

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

L-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: EMARIANN PONCE-AURIOL

REVISED BY: JRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s119910

DGN FILE => 4203000008.dgn

CU 04261

EA 283801

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	San	116	67.3/71.9		

REGISTERED CIVIL ENGINEER — DATE 7-24-07

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

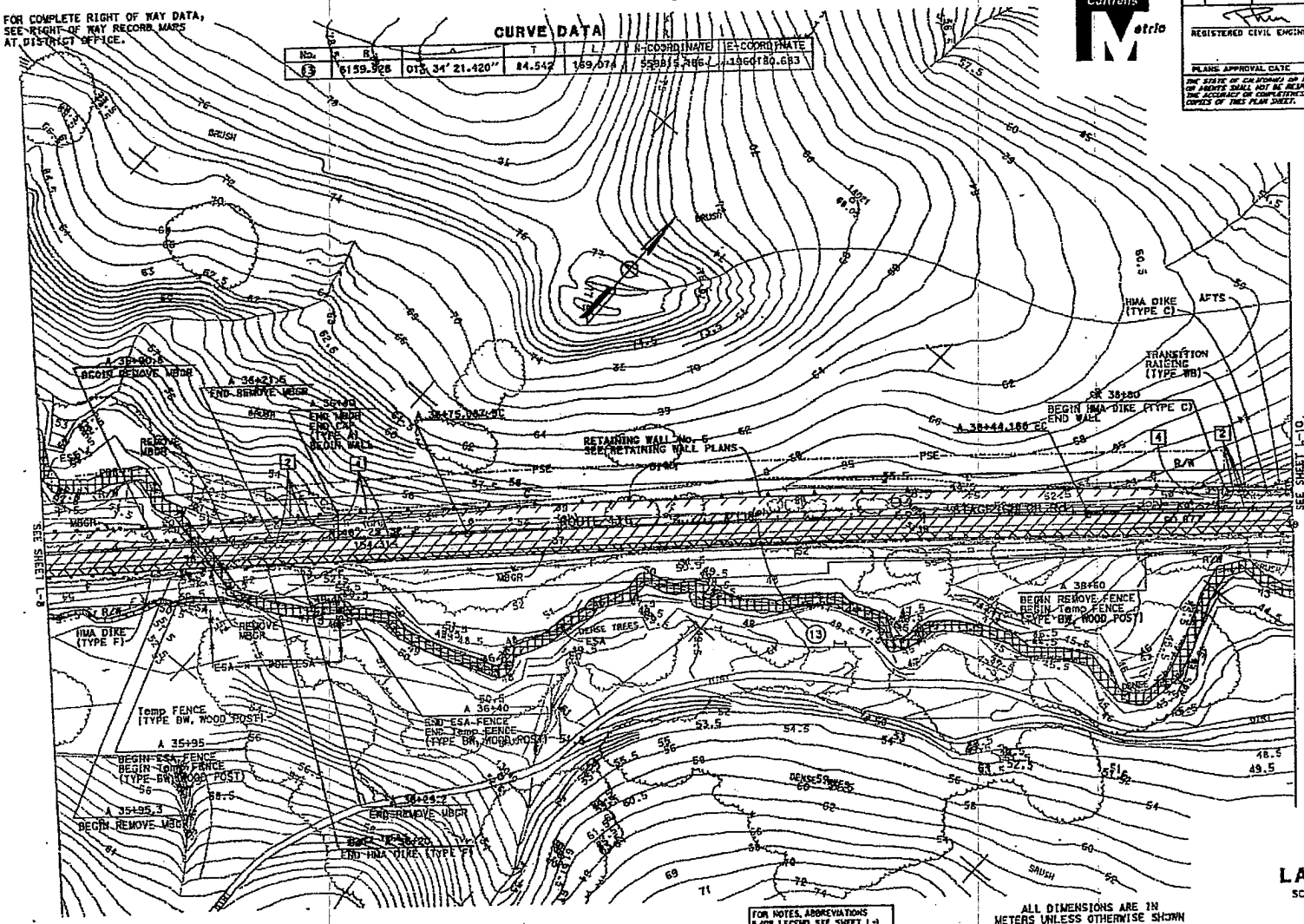
REGISTERED PROFESSIONAL ENGINEER — Jason R. Phogen — 57553 — 12-31-07 — CIVIL — STATE OF CALIFORNIA

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L	P.I. N-COORDINATE	P.I. E-COORDINATE
13	6159.926	015° 34' 21.420"	84.542	169.074	555815.486	1960180.683



FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-9

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s126787
DGN FILE => 423806ab003.dgn

CU 04261 | EA 283801

DATE PLOTTED => 19-JUL-2007
TIME PLOTTED => 15:01
DATE REVISED 03-17-03

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE
CALCULATED-DESIGNED BY: JASON R. PHOGEN
CHECKED BY: ENARNAN PONGPAIROJ
REVISED BY: JRP
DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	San	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

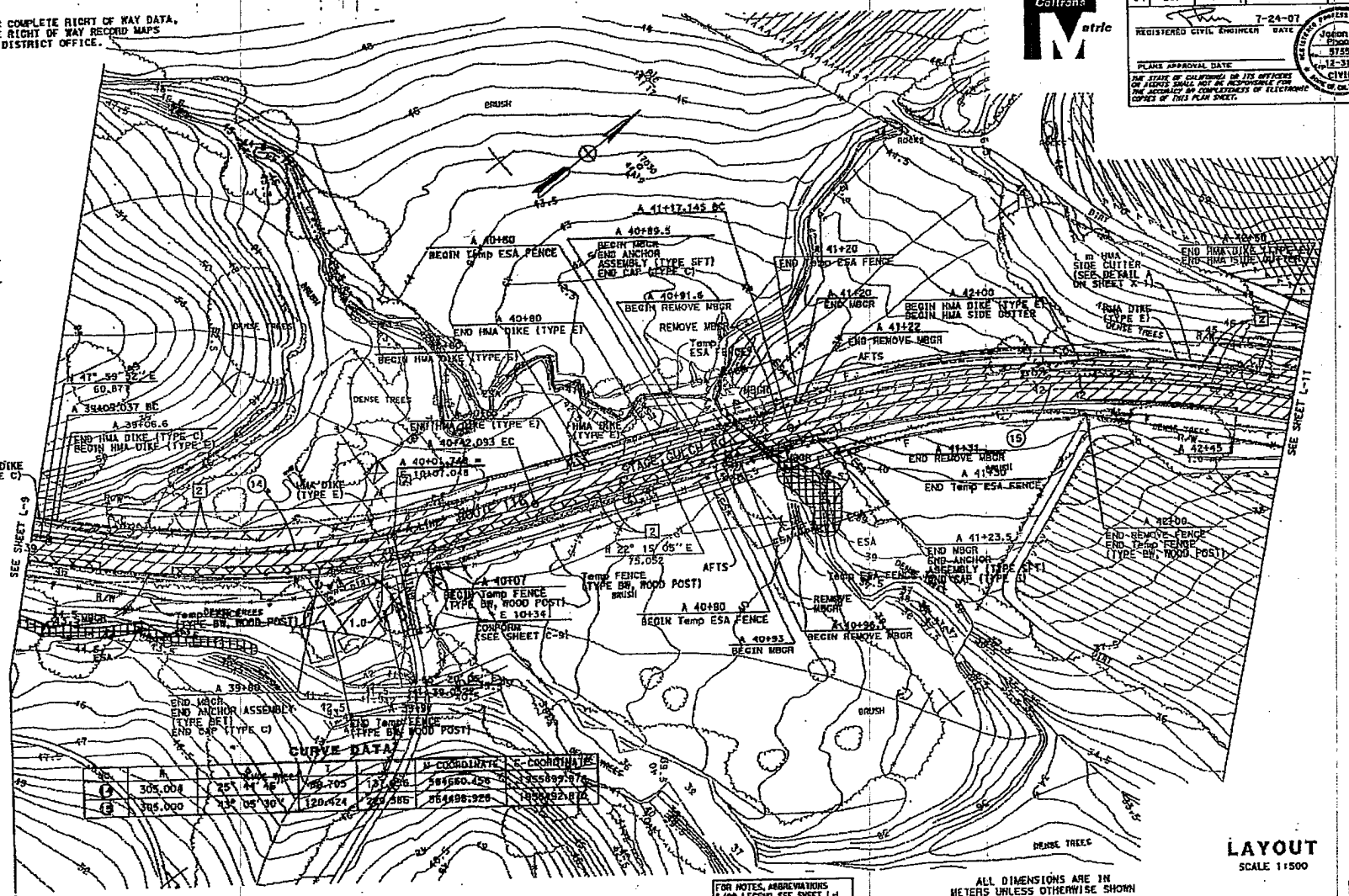
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — Jason R. Phoon — No. 67553 — Exp. 12-31-07 — CIVIL — STATE OF CALIFORNIA

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CURVE DATA

No.	R	Delta	L	T	E	N-COORDINATE	E-COORDINATE
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2	305.000	23° 05' 30"	120.424	243.385	24.498	584498.928	1956192.816

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOON

CHECKED BY: EMANUAL PONDPATROJ

REVISED BY: JMP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s123737

DGN FILE => 426190ms010.dgn

CU 04261

EA 283801

DATE PLOTTED => 18-MAR-2008

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

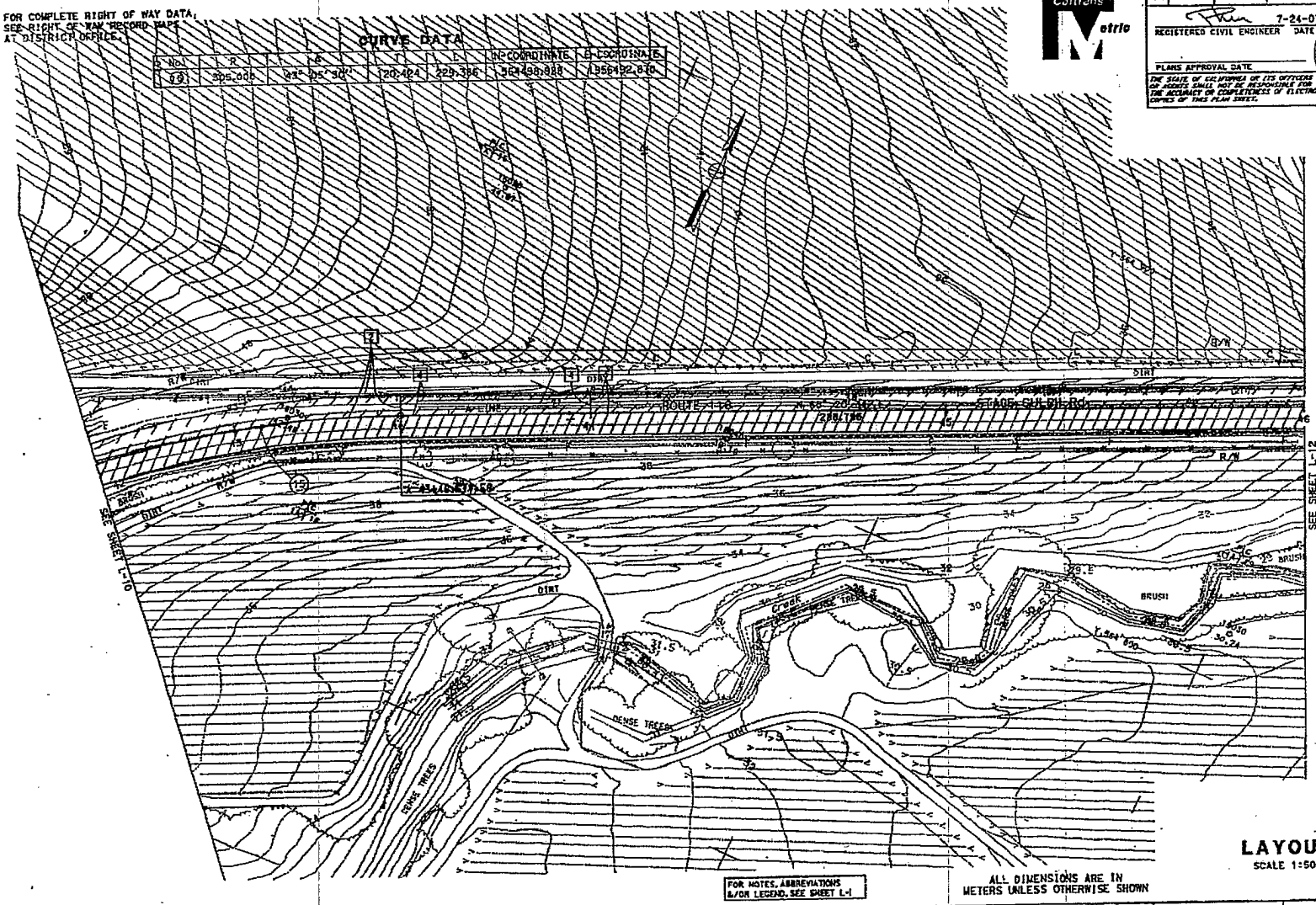
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — Jason R. Phoen — 51553 — 12-31-07 — CIVIL — STATE OF CALIFORNIA

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

D No.	R	Δ	T	L	NP COORDINATE	E COORDINATE
69	305.000	93° 05' 30"	20.424	229.396	564298.888	1356492.870



FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-11

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: EMANNAR PONGRATROJ

REVISED BY: JRP

DATE REVISED: 5/07

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s127f1ST

DGN FILE => 4283e0ec011.dgn

CU 04261

EA 283801

BORDER LAST REVISED 3/1/2007

LAST REVISION DATE PLOTTED => 19-JUL-2007

TIME PLOTTED => 08:49

12-19-07

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

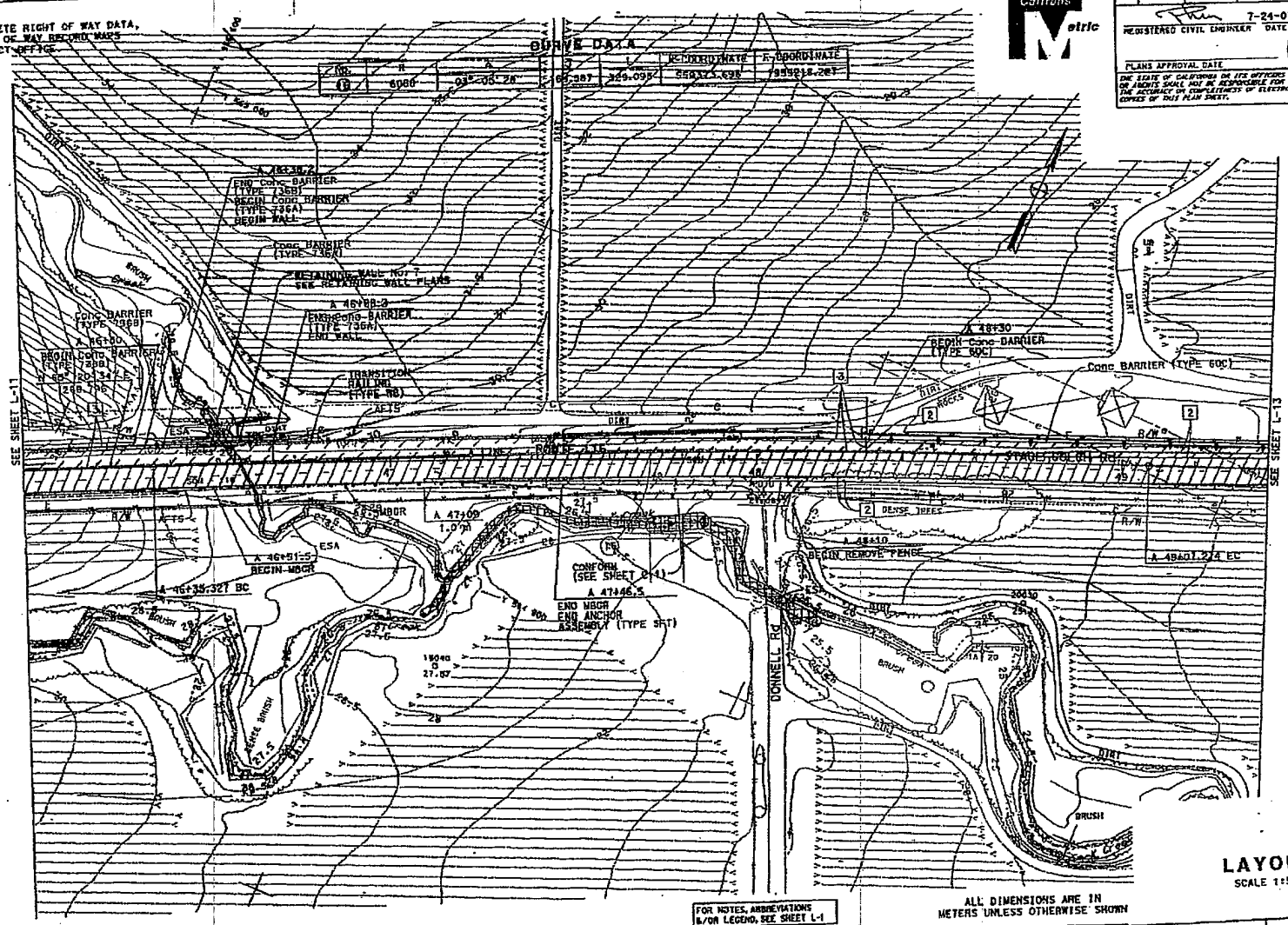
REGISTERED PROFESSIONAL ENGINEER — TERRY R. RIGGS — 57553 — EXP. 12-31-07 — CIVIL — STATE OF CALIFORNIA

Caltrans Metric

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE

CURVE DATA

No.	R	Δ	L	N-COORDINATE	E-COORDINATE
1	6080	035°06'28"	69.987	329.095'	550325.698	1959218.287



FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: EMARMAN PONGPAIROJ

REVISED BY: JRP

DATE REVISED: 5/07

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => 412876T

DGN FILE => 423800c012.dgn

CU 04261

EA 283801

BORDER LAST REVISED 3/1/2007

DATE PLOTTED => 12-APR-2007

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Scn	116	67.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Jason R. Pham 57533 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans District 4

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE

CURVE DATA

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
(7)	6000	01° 14' 34.6"	65.083	130.160	555554.0718	1959309.2189

SEE SHEET L-12

SEE SHEET L-14

ROUTE 116 STAGE GULCH RD

W. WATTLAUGH RD.

CONFORM (SEE SHEET C-1)

A 51+72 END REMOVE FENCE

A 51+64 1.0 m

A 51+97.5

N 68° 41' 03.4" E 38.306

A 52+75.090 EC

A 48+72 END CONC BARRIER (TYPE 60C)

TRANSITION RAILING (TYPE WB)

CONC BARRIER (TYPE 60C)

AFTS

A 49+80.001 PCI

A 51+44.923 BC

A 51+74 1.0 m

A 51+86 END REMOVE FENCE

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHAN

CHECKED BY: EMANUAN PONDPAIROJ

REVISED BY: JRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s128761

DGN FILE => 4283806013.dgn

CU 04261

EA 283801

DATE PLOTTED => 18-JUL-2008

TIME PLOTTED => 01:43

12-19-07

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	116	67.3/71.9		

7-24-07
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Jason R. Phoen 57555 12-31-07 CIVIL STATE OF CALIFORNIA

Caltrans Metric

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
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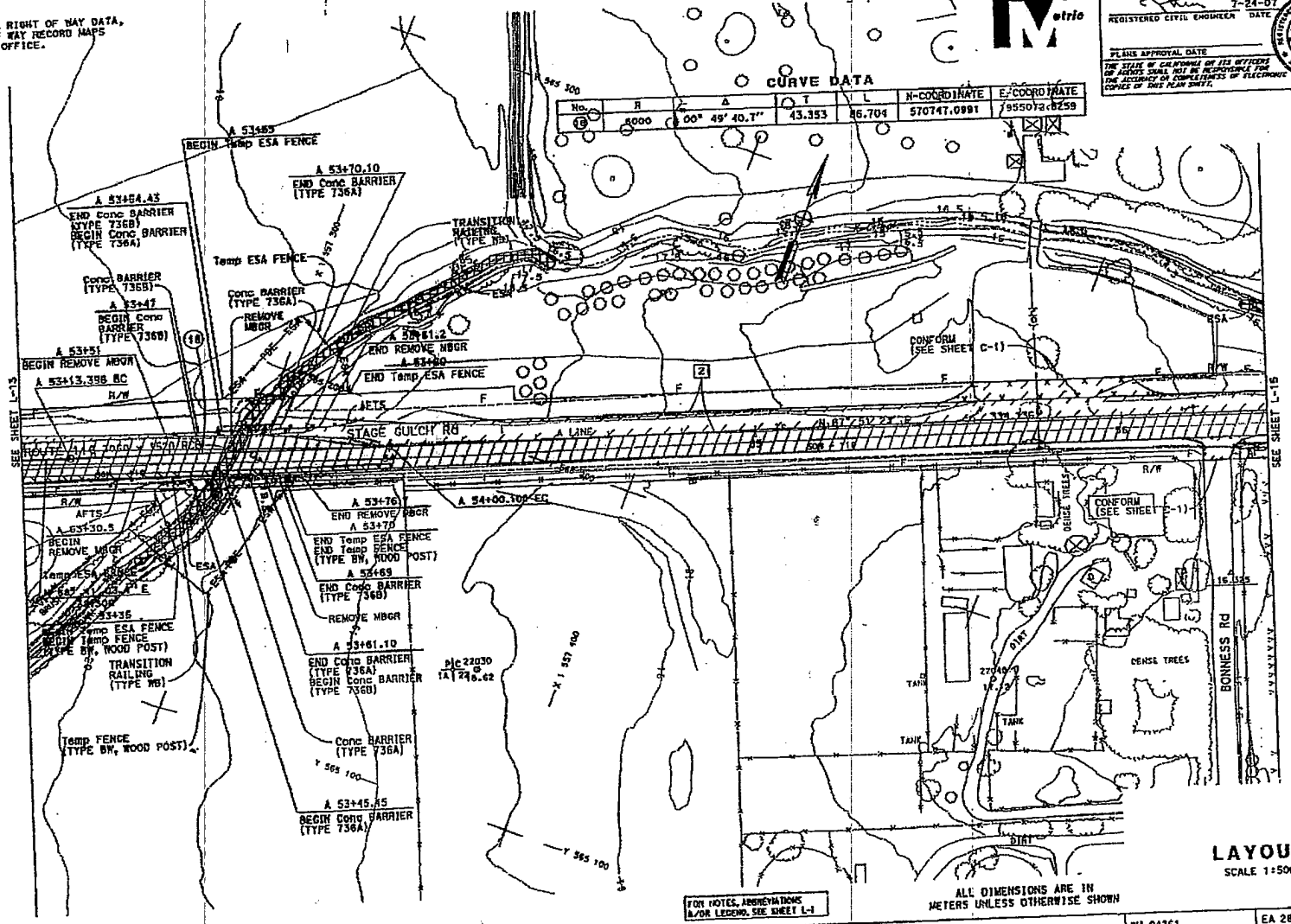


FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-14

JRP	5/07	JASON R. PHOEN	EKARNIAN PONGPAIROJ
REVISED BY	DATE REVISED	CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR: STEWART LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

Caltrans

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s120761
DGN FILE => 423400a014.dgn

CU 04261

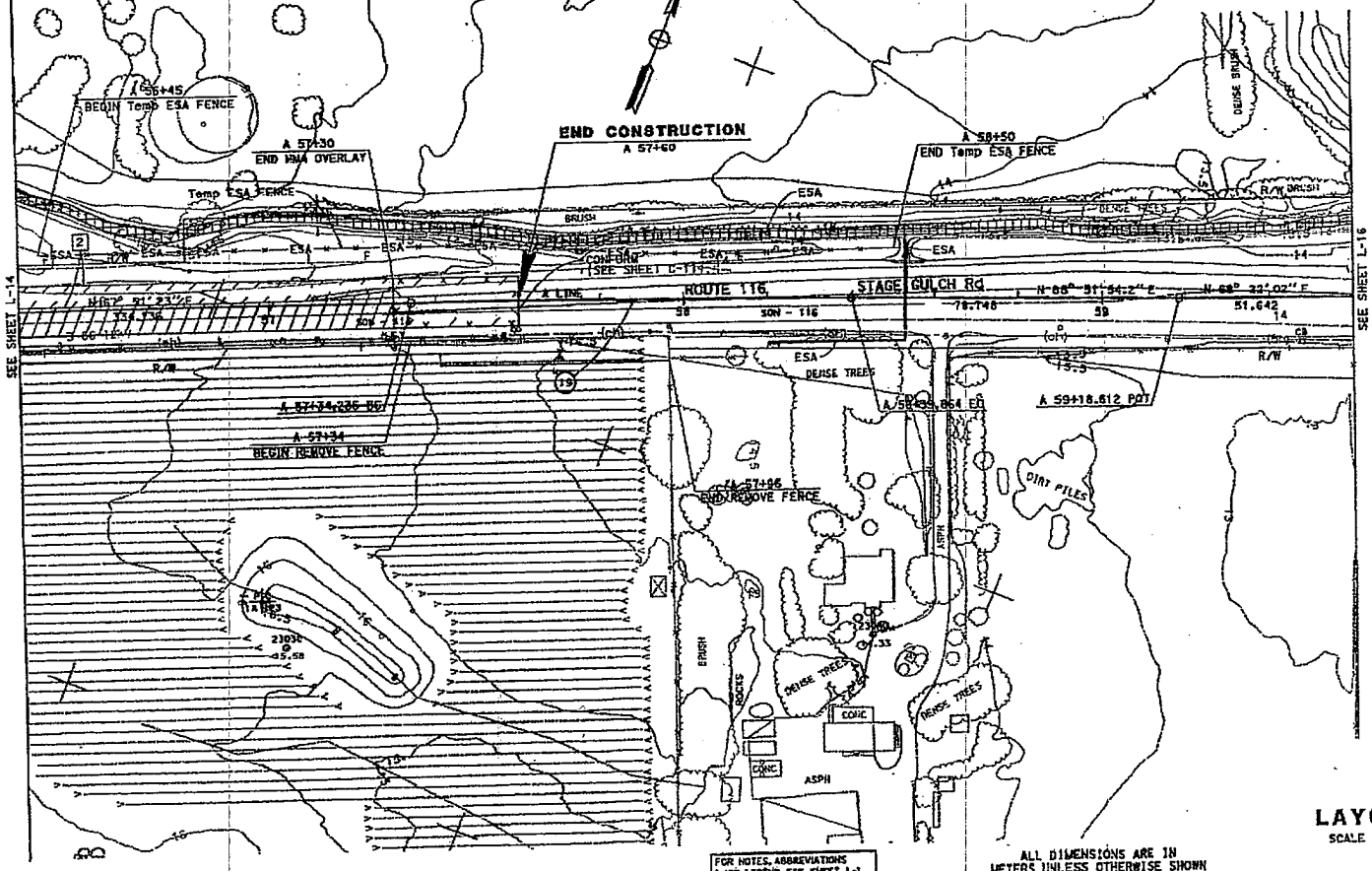
EA 283801

DATE PLOTTED => 13-AUG-2008
TIME PLOTTED => 10:41

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
19	5000	01° 00' 31.2"	52.815	105.628	559758.1420	1959905.4722



FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-15

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	57.3/71.9		

REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Jason R. Phoen 57553 12-31-07 CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PHOEN

CHECKED BY: SHARMAN PONGPAIROJ

REVISED BY: JRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s128787

DGN FILE => 283801ea0015.dgn

CU 04261

EA 283801

DATE PLOTTED => 16-MAR-2008

TIME PLOTTED => 08:48

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	116	67.3/71.9		

Caltrans District 4

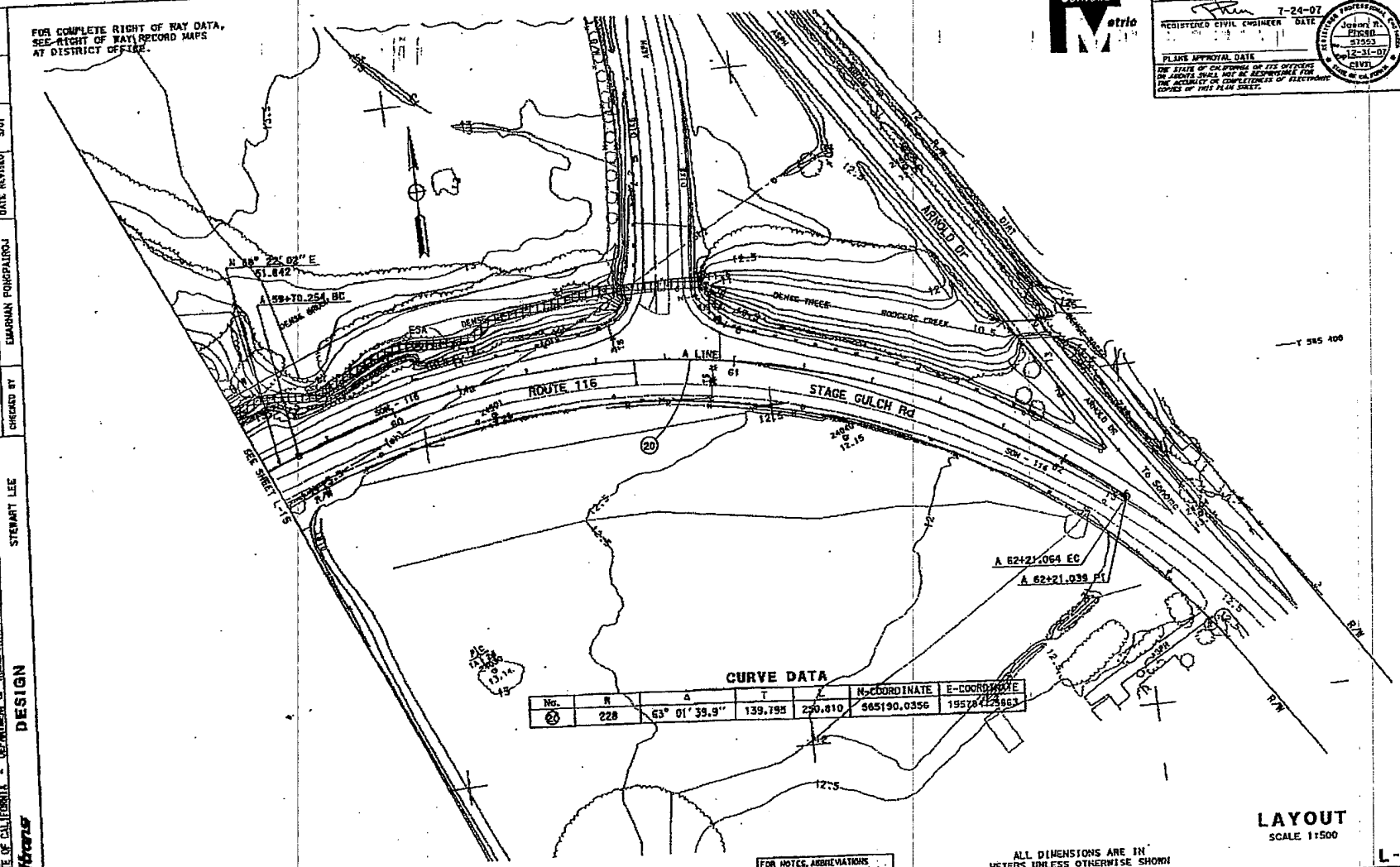
REGISTERED CIVIL ENGINEER 7-24-07 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jason R. Pinon 67553 12-31-07 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CURVE DATA

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
20	228	63° 01' 39.9"	139.795	250.810	565190.0356	1557[illegible]5863

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET L-1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1:500

L-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE

CALCULATED-DESIGNED BY: JASON R. PINON

CHECKED BY: EMARMAN PONGPAIROJ

REVISED BY: JRP

DATE REVISED: 5/07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s126787

DGN FILE => 4283000016.dgn

CU 04261

EA 283601

DATE PLOTTED => 15-MAR-2008

TIME PLOTTED => 08:48

Champlin Creek Conceptual Restoration Design

Date Received: April 29, 2009

Regional Water Quality Control Board

CWA 401 Certification

California Regional Water Quality Control Board
San Francisco Bay Region

Linda S. Adams
Agency Secretary

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.waterboards.ca.gov/sanfranciscobay

Arnold Schwarzenegger
Governor

May 28, 2009
Site No.: 02-49-C0198 (BT)
CIWQS Place No.: 725448

Sent via electronic mail: No hard copy to follow

California Department of Transportation
Attn: Mr. Jason Mac
Jason_Mac@dot.ca.gov
111 Grand Ave.
Oakland, CA 94623

Subject: Water Quality Certification for the State Route 116 Stage Gulch Road Curve Correction and Realignment Project, Sonoma County

Caltrans Project No.: EA 04-283801

Dear Mr. Mac:

We have reviewed and hereby issue water quality certification to the California Department of Transportation (Department) for the project referenced above (hereinafter Project). The Department has applied to the U.S. Army Corps of Engineers (Corps) for Nationwide Permit Nos. 13, *Bank Stabilization,* 14, *Linear Transportation Projects,* 27, *Wetland and Riparian Restoration and Creation Activities, and,* 33, *Temporary Construction, Access and Dewatering*, pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344). As such, the Department has applied to the Water Board for a Clean Water Act Section 401 water quality certification that the Project will not violate State water quality standards.

Project: The Department proposes to realign and widen State Route 116 (SR 116) between Old Adobe Road and Arnold Drive in unincorporated Sonoma County to reduce the frequency of traffic accidents. Also, the intersection of SR 116 and County Dump Road will be reconfigured to improve the ingress and egress. The Project is proposed to begin construction in January 2010 and last approximately 36 months.

The Project area is characterized by grazing and vineyard land uses, and hilly topography with upland oak and high-quality oak-bay riparian woodlands. SR 116 and intermittent Champlin Creek are adjacent each other throughout the approximately 3-mile Project length, and cross each other at several locations.

SR 116 will be widened, reworked, and realigned. An approximately 1,275 linear foot segment of SR 116 west of the Sonoma County Transfer Station Road will be completely removed from the riparian corridor and relocated east to the adjacent upland area. The Department will abandon and remove this portion of SR 116 and restore the riparian corridor.

Impacts: The proposed project will result in permanent fill to approximately 1,436 linear feet (0.16 acres) of jurisdictional waters, 0.11 acres of jurisdictional wetlands, and, 165 linear feet (0.012) acres of state jurisdictional roadside ditches as a result of culvert extensions and roadway widening and realignment. The Project will also result in temporary impacts to approximately 1,065 linear feet (0.17 acres) of jurisdictional waters, 0.089 acres of jurisdictional wetlands, and 475 linear feet (0.022 acres) of state jurisdictional roadside ditches.

Project implementation would result in approximately 8.14 acres of added impervious area. Stormwater runoff from impervious areas may contain hydrocarbons, metals, volatile organic compounds, trash, and sediment at levels that may significantly impact jurisdictional waters if left untreated.

Mitigation: To compensate for permanent impacts to approximately 1,436 linear feet (0.16 acres of jurisdictional waters), the Department shall remove 1,274 linear feet of the existing SR 116 from the riparian zone of Champlin Creek and restore the area to riparian habitat. Two culverts shall be removed at the upper and lower limits of the restoration area. Also, two creek meanders may be altered to better-suit the site conditions. Restoration activities (i.e., removal of roadway and construction of riparian bench, meander re-build) through the Champlin Creek corridor shall total approximately 1.2 acres.

The Department shall mitigate for permanent impacts to jurisdictional wetlands by the purchase of 0.2 acres of seasonal freshwater wetland mitigation credits at the Burdell Ranch Wetland Mitigation Bank.

Because the Department shall be constructing approximately 5,200 linear feet of new roadside drainage ditches on-site that shall be vegetated using native grass mix, additional mitigation is not required for permanent impacts to state jurisdictional roadside drainage ditches. The approximately 5,200 linear feet of ditches shall be placed in areas where ditches do not currently exist.

To mitigate for temporary impacts to jurisdictional wetlands, waters, and state jurisdictional drainage ditches, all areas disturbed during construction shall be stabilized and revegetated using any combination of native grasses, shrubs, and legumes.

As mitigation for increased pollutant loads associated with impervious areas, the Department shall provide treatment of stormwater runoff from an area equivalent to the added and reworked impervious areas (8.75 acres). The Department shall install three biofiltration swales and 14 biofiltration strips at the following locations:

- **Biofiltration swale 1** shall be located adjacent westbound SR 116 between post miles 41.98 and 42.01. The swale will treat approximately 0.53 acres of impervious area;

- **Biofiltration swale 2** shall be located adjacent westbound SR 116 stations 44.02 and 44.05. The swale will treat approximately 0.48 acres of impervious area;

- **Biofiltration swale 3** shall be located adjacent westbound SR 116 stations 44.17 and 44.19. The swale will treat approximately 0.32 acres of impervious area;

- **Biofiltration strip 1** shall be located adjacent westbound SR 116 between post miles 41.81 and 41.87. The strip will treat approximately 0.40 acres of impervious area;

- **Biofiltration strip 2** shall be located adjacent eastbound SR 116 between post miles 42.08 and 42.18. The strip will treat approximately 0.48 acres of impervious area;

- **Biofiltration Strip 3** shall be located adjacent westbound SR 116 between post miles 42.22 and 42.30. The strip will treat approximately 0.21 acres of impervious area;

- **Biofiltration Strip 4** shall be located adjacent eastbound SR 116 between post miles 42.42 and 42.50. The strip will treat approximately 0.27 acres of impervious area;

- **Biofiltration Strip 5** shall be located adjacent westbound SR 116 between post miles 42.48 and 42.54. The strip will treat approximately 0.16 acres of impervious area;

- **Biofiltration Strip 6** shall be located adjacent westbound SR 116 between post miles 42.74 and 42.87. The strip will treat approximately 0.66 acres of impervious area;

- **Biofiltration Strip 7** shall be located adjacent westbound SR 116 between post miles 43.04 and 43.09. The strip will treat approximately 0.28 acres of impervious area;

- **Biofiltration Strip 8** shall be located adjacent eastbound SR 116 between post miles 43.25 and 43.38. The strip will treat approximately 1.38 acres of impervious area;

- **Biofiltration Strip 9** shall be located adjacent eastbound SR 116 between post miles 43.73 and 44.09. The strip will treat approximately 1.35 acres of impervious area;

- **Biofiltration Strip 10** shall be located adjacent eastbound SR 116 between post miles 44.19 and 44.43. The strip will treat approximately 0.67 acres of impervious area;

- **Biofiltration Strip 11** shall be located adjacent westbound SR 116 between post miles 44.29 and 44.42. The strip will treat approximately 0.48 acres of impervious area;

- **Biofiltration Strip 12** shall be located adjacent westbound SR 116 between post miles 44.42 and 44.52. The strip will treat approximately 0.35 acres of impervious area;

- **Biofiltration Strip 13** shall be located adjacent westbound SR 116 between post miles 44.54 and 44.78. The strip will treat approximately 0.57 acres of impervious area; and,

- **Biofiltration Strip 14** shall be located adjacent eastbound SR 116 between post miles 44.76 and 44.82. The strip will treat approximately 0.14 acres of impervious area.

CEQA Compliance: A Mitigated Negative Declaration for the Project was filed by the California Department of Transportation on July 28, 2005.

Wetland Tracker System: It has been determined through regional, state, and national studies that tracking of mitigation/restoration projects must be improved to better assess the performance of these projects, following monitoring periods that last several years. In addition, to effectively carry out the State's No Net Loss Policy for wetlands, the state needs to closely track both wetland losses and mitigation/restoration project success. Therefore, we require that the Authority use a standard form to provide Project information related to impacts and mitigation/restoration measures. An electronic copy of the form and instructions can be downloaded at: http://www.waterboards.ca.gov/sanfranciscobay/certs.shtml. Project information concerning impacts and mitigation/restoration will be made available at the web link: http://www.wetlandtracker.org.

Certification: I hereby issue an order certifying that any discharge from the referenced project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003 - 0017 – DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification" which requires compliance with all conditions of this Water Quality Certification. The following conditions are associated with this certification:

1. The Agency shall adhere to the Standard and Regional conditions imposed by Nationwide Permit Nos. 13, 24, 27, and 33, issued to the Department by the Corps and to the conditions

of the California Department of Fish and Game (CDFG) Final Streambed Alteration Agreement (Agreement);

2. The Department shall submit a Final Mitigation and Monitoring Plan (Plan) no later than September 1, 2009. The Plan shall include, at a minimum, all of the following:

Riparian Restoration

a. A riparian restoration plan that includes:
   i. Restoration and enhancement of an approximately 2.9 acre riparian area;
   ii. Complete removal of asphalt concrete from 1,274 linear feet of the existing SR 116 and subsequent revegetation in and adjacent this area;
   iii. A survey supported proposal to sub-excavate areas of roadway removal for purposes of restoring riparian habitat;
   iv. A detailed riparian planting plan based upon baseline conditions documented from thriving riparian areas within or nearby the Project area.
   v. Use of biostabilization or biotechnical bank stabilization where bank stabilization is proposed;
   vi. Removal of the two Champlin Creek culverts from the abandoned section of SR 116 and restoration of the creek channel at these locations;
   vii. Realignment of Champlin Creek meanders where justified by survey data.

b. A maintenance and monitoring plan for riparian restoration activities. The maintenance and monitoring plan shall include success criteria and require that:
   i. Any individual planting not be considered successfully established if two or fewer growing seasons have passed from the time of planting and/or the termination of supplemental irrigation;
   ii. Photographic monitoring points be used during the monitoring period, with color photos included in every monitoring report; and,
   iii. Final success criteria shall not be considered achieved on any element of the riparian restoration plan until ten years have passed from the time of mitigation construction.

Annual Monitoring Reports

c. A time schedule for submittal of annual monitoring reports to the Water Board;

Temporary Impacts

d. A planting and mitigation plan for onsite restoration of temporary impacts. The planting plan shall include a diversity of native oak species. The planting plan shall also include maple, buckeye, laurel, willow, snowberry, California blackberry, coffee berry, sticky monkeyflower, mugwort, and dogbane. The Department shall also include a plan to ensure that temporarily impacted areas revegetate successfully;

Supporting Surveys

e. Survey data, including longitudinal profiles, to support proposed work in Champlin Creek that may significantly change the existing creek grade, direction,

dimensions, or resilience to down-cutting (i.e., installation of impermeable creek bed liner[1]); and,

Planted Rock-Slope Protection

f. A plan to install appropriate woody riparian vegetation within all areas where rock slope protection is being proposed at culvert outfalls; in these areas where vegetation is not being proposed, the Department shall explain why inclusion of vegetation is not feasible. The Plan shall also include a maintenance and monitoring plan that ensures successful establishment of rock slope protection-planted vegetation. Individual plantings may not be considered successfully established until two growing seasons have passed from their initial planting, and, individual RSP-planted areas may not be considered successful any sooner than five years from the initial planting episode.

3. The Final Mitigation and Monitoring Plan shall be found acceptable to the Water Board Executive Officer before any Project-related construction may commence;

4. On-site riparian restoration mitigation shall not be considered complete until the Final Mitigation Report is found acceptable to the Executive Officer, in writing;

5. Certification is conditioned upon submission to the Water Board a receipt for purchase of 0.2 acres of seasonal freshwater wetland mitigation credits at Burdell Ranch Wetland Mitigation Bank;

6. The Department shall commence onsite riparian restoration construction activities no later than June 15, 2011. Failure to meet this deadline shall result in an enforcement action by the Water Board;

7. Project construction within waters of the state shall be restricted to the dry season, specifically, April 15 to October 15, or the end of any extension granted by CDFG;

8. All temporarily disturbed areas shall be revegetated with a combination of grass, shrub, and legume species native to the project area, and, restored to improved or pre-construction conditions;

9. During clearing and grubbing activities in areas of temporary impact, which are not within the limits of excavation or embankment construction, the Department shall trim vegetatively-propagating tree species, such as willows, above ground, without damaging their root structures. Where this is not feasible, and the tree is removed or otherwise

[1] The Department has proposed an in-stream California red-legged frog "stilling basin" with an impermeable bed liner as mitigation for potential impacts to the frog. At the time of certification issuance, the Department has not provided evidence that the proposed stilling basin will not be deleterious to the long-term stability of Champlin Creek. As such, installation of the stilling basin is not accepted under this certification.

irreparably damaged, the Department shall replace the damaged tree no later than fourteen days from the time of impact and report this activity in the annual report;

10. Biofiltration swales shall be equipped with underdrains to ensure vertical infiltration of stormwater. In locations where biofiltration strips and swales are proposed in Type C and D soils, the strips and/or swales shall be compost-amended to enhance infiltration;

11. Not later than 30 days prior to the beginning of construction of any Project component, the Department shall submit, acceptable to the Executive Officer, a final SWPPP to address the Project's expected construction stage impacts, prepared pursuant to the State Water Resources Control Board Water Quality Order No. 99-06-DWQ, the NPDES Statewide Permit for Storm Water Discharges From the State of California City of Transportation Properties, Facilities, and Activities. If the Department is proposing rainy season construction activities, the Department shall provide a detailed schedule of activities and the associated pollution prevention measures that shall be in place to protect Champlin Creek;

12. The Department shall maintain a copy of this Water Quality Certification at the Project site so as to be available at all times to site operating personnel. It is the responsibility of the Department to assure that all personnel (employees, contractors, and subcontractors) are adequately informed and trained regarding the conditions of this certification;

13. This certification does not allow for the take, or incidental take, of any special status species. The Department shall use the appropriate protocols, as approved by the California Department of Fish and Game and the U.S. Fish and Wildlife Service, to ensure that Project activities do not impact the Beneficial Use of the Preservation of Rare and Endangered Species;

14. No fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge to Champlin Creek may occur. Construction materials and heavy equipment must be stored outside the active flow of Champlin Creek;

15. The Department is required to use the standard Wetland Tracker form to provide Project information describing impacts and mitigation/restoration measures not later than September 15, 2009, to the Executive Officer. The completed Wetland Tracker form shall be submitted electronically to wetlandtracker@waterboards.ca.gov, or, shall be submitted as a hard copy to both: 1) San Francisco Bay Regional Water Quality Control Board (see letterhead for address), to the attention of Wetland Tracker, and, 2) San Francisco Estuary Institute, 7770 Pardee Lane, Oakland, CA 94621-1424, to the attention of Mike May;

16. Except as expressly allowed in this Certification, the discharge, or creation of the potential for discharge, of debris, rubbish, or any soil materials including fresh concrete, cement, silts, clay, sand and other organic materials to Champlin Creek is prohibited. Any of these materials placed within or where they may enter Champlin Creek by the Department or any party working under contract, or with the permission of the Department, shall be removed

immediately. When construction is completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into Champlin Creek. During construction, the Department and the contractor shall not dump any litter or construction debris within the riparian/stream zone. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site;

17. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the California Water Code (CWC) and Section 3867 of Title 23 of the California Code of Regulations (23 CCR);

18. This certification action does not apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to California Code of Regulations (CCR) Title 23, Subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought; and,

19. Certification is conditioned upon total payment of the full fee required in State regulations (23 CCR Section 3833). Water Board staff received full payment of $27,615.60 on November 20, 2008.

We anticipate your cooperation in implementing these conditions. However, please be advised that any violation of water quality certification conditions is a violation of State law and subject to administrative civil liability pursuant to California Water Code (CWC) section 13350. Failure to respond, inadequate response, late response, or failure to meet any condition of this certification may subject you to civil liability imposed by the Water Board to a maximum of $5,000 per day per violation or $10 for each gallon of waste discharged in violation of this certification.

Condition Nos. 2, 5, 11 and 15 are requirements for submittal of information or reports. Any requirement for a report made as a condition to this action is a formal requirement pursuant to CWC section 13267, and failure or refusal to provide, or falsification of such required report is subject to civil liability as described in CWC section 13268.

Should new information come to our attention that indicates a water quality problem with this project, the Water Board may issue Waste Discharge Requirements pursuant to 23 CCR Section 3857.

If you have any question, please contact Brendan Thompson of my staff at (510) 622-2506, or via e-mail to BThompson@waterboards.ca.gov.

Sincerely,

Bruce H. Wolfe
Executive Officer

cc (via e-mail): Mr. Bill Orme SWRCB-DWQ
Mr. Hal Durio, Regulatory Branch, USACE
Ms. Jane Hicks, Regulatory Branch, USACE
Ms. Holly Costa, Regulatory Branch, USACE
Mr. Cameron Johnson, Regulatory Branch, USACE
Mr. Dale Bowyer, Water Board
Ms. Melissa Escaron, CDFG
Mr. Hardeep Takhar, Caltrans
Mr. David Smith, USEPA

Attachment AA
SWPPP Amendments

STATE OF CALIFORNIA-DEPARTMENT OF TRANSPORTATION
SWPPP-WPCP AMENDMENTS LOG
CEM-2009 (NEW 10/2010)

ADA Notice	For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
	WDID NUMBER
CONTRACTOR NAME AND ADDRESS	PROJECT SITE RISK LEVEL ☐ Risk Level 1 ☐ Risk Level 2 ☐ Risk Level 3

Amendments Log

Amendment Number	Date	Brief Description of Amendment	Requested by	Approval Date

Instructions

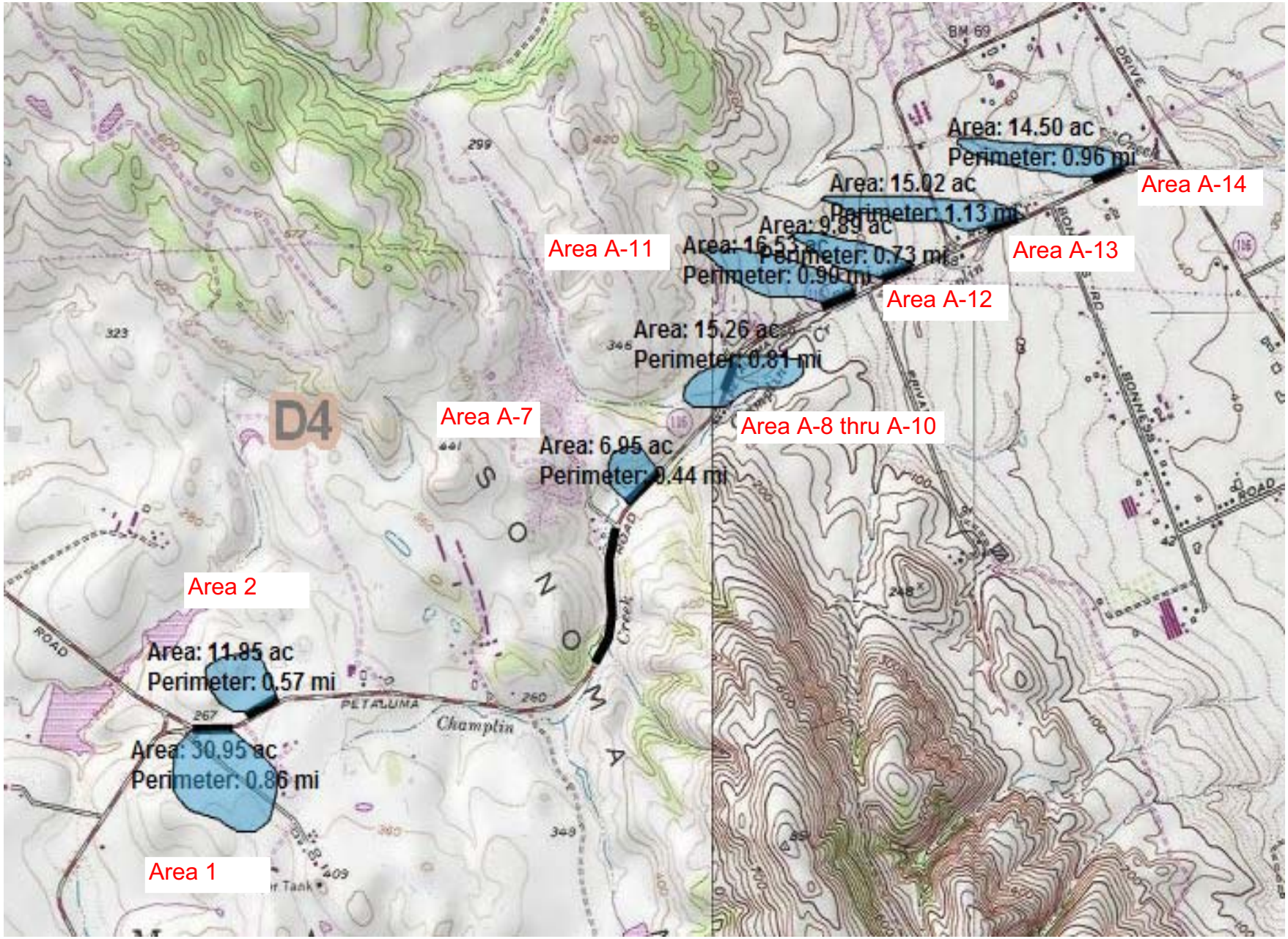
GENERAL INFORMATION

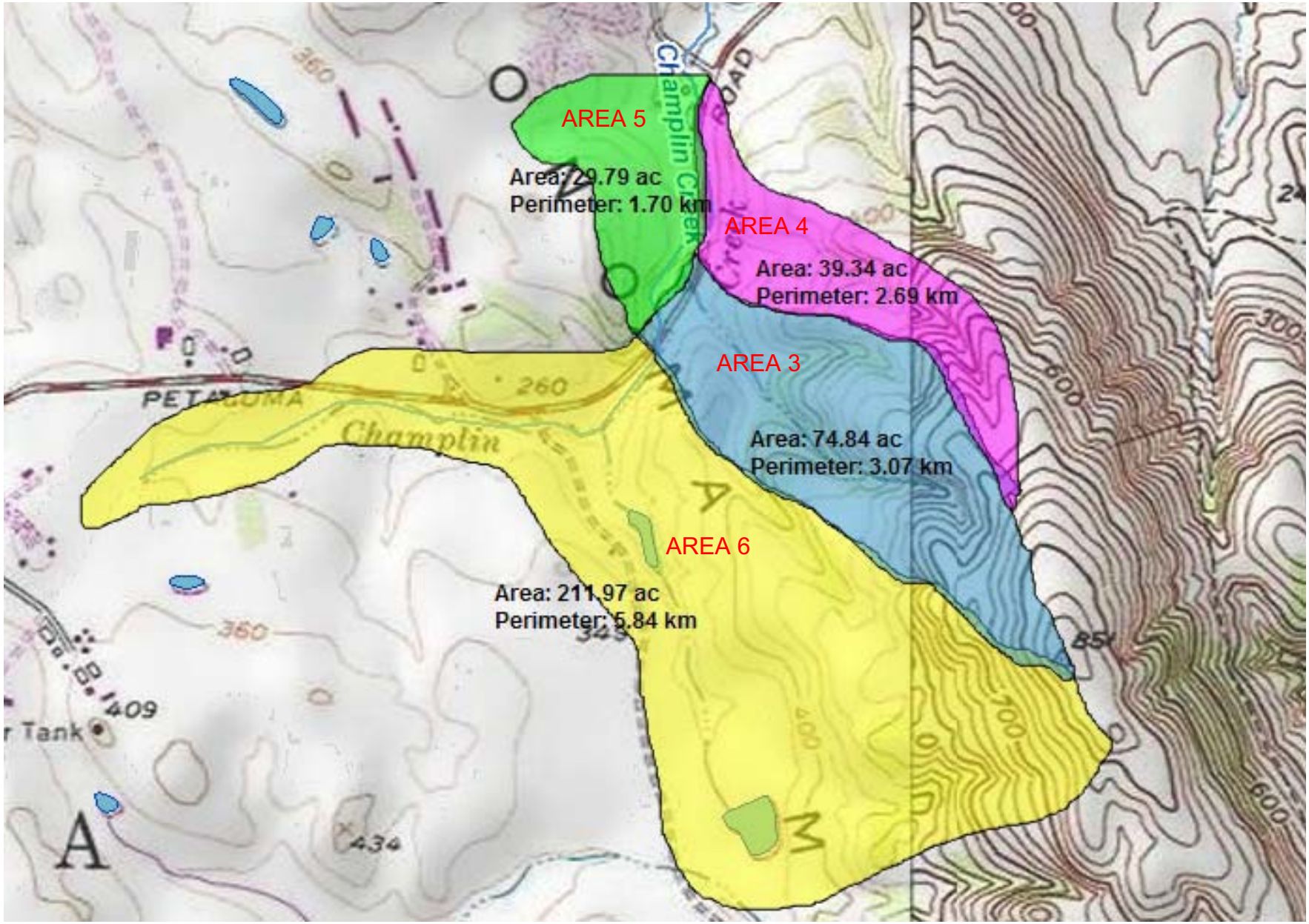
- Projects with either a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP) require the information on this form to document amendments.
- Attach a completed copy of the form to each approved SWPPP-WPCP amendment, and include in SWPPP Attachment DD or WPCP Attachment C.

FORM

- **Contract Number/Co/Rte/PM**
  For local agency encroachment permit projects write the encroachment permit number in the Contract Number field.
- **Project Identifier Number**
  Caltrans projects starting July 1, 2010, will have a project identifier number. For projects without one, write “N/A” in the field.
- **WDID Number**
  For projects with a Water Pollution Control Program, enter “WPCP” in this field.
- When the resident engineer has approved SWPPP or WPCP amendments, enter:
  1. The amendment number.
  2. The date.
  3. A brief description of the amendment.
  4. The name and title of person who requested the amendment.
  5. The date the resident engineer approved it.

Attachment BB
Water Pollution Control Drawings


Area: 14.50 ac
Perimeter: 0.96 mi
Area A-14
Area: 15.02 ac
Perimeter: 1.13 mi
Area A-13
Area: 9.89 ac
Perimeter: 0.73 mi
Area: 16.53 ac
Perimeter: 0.90 mi
Area A-11
Area A-12
Area: 15.26 ac
Perimeter: 0.81 mi
Area A-8 thru A-10
Area A-7
Area: 6.95 ac
Perimeter: 0.44 mi
D4
Area 2
Area: 11.85 ac
Perimeter: 0.57 mi
Area: 30.95 ac
Perimeter: 0.86 mi
Area 1
PETALUMA
Champlin
Creek
ROAD
DRIVE
BONNESS
BM 69


AREA 5
Area: 29.79 ac
Perimeter: 1.70 km
AREA 4
Area: 39.34 ac
Perimeter: 2.69 km
AREA 3
Area: 74.84 ac
Perimeter: 3.07 km
AREA 6
Area: 211.97 ac
Perimeter: 5.84 km
Champlin Creek
ROAD
PETALUMA
Champlin
Tank
A
A
A
360
260
409
434
343
300
600
700
400
600

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	43.1/43.4		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. EXP. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

WRECO
1814 FRANKLIN STREET
SUITE 608
OAKLAND, CA 94612

CALTRANS
111 GRAND AVENUE
OAKLAND, CA 94612

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. VERTICAL DATUM IS NAVD 1988.
3. FOR FINISHED GRADE, SEE PROFILES, CONTOUR GRADING & CONSTRUCTION DETAILS SHEETS.
4. STATION & OFFSET TIES OF DRAINAGE STRUCTURES ARE MEASURED PER DETAILS ON SHEET DD-1.
5. CONTRACTOR IS RESPONSIBLE TO PROVIDE POSITIVE DRAINAGE FROM ALL ROADWAY AREA AT ALL TIME.
6. LOCATIONS AND ELEVATIONS OF EXISTING DRAINAGE FACILITIES ARE APPROXIMATE. VERIFY LOCATION AND ELEVATION OF EXISTING DRAINAGE FACILITIES PRIOR TO CONSTRUCTION.

LEGEND:

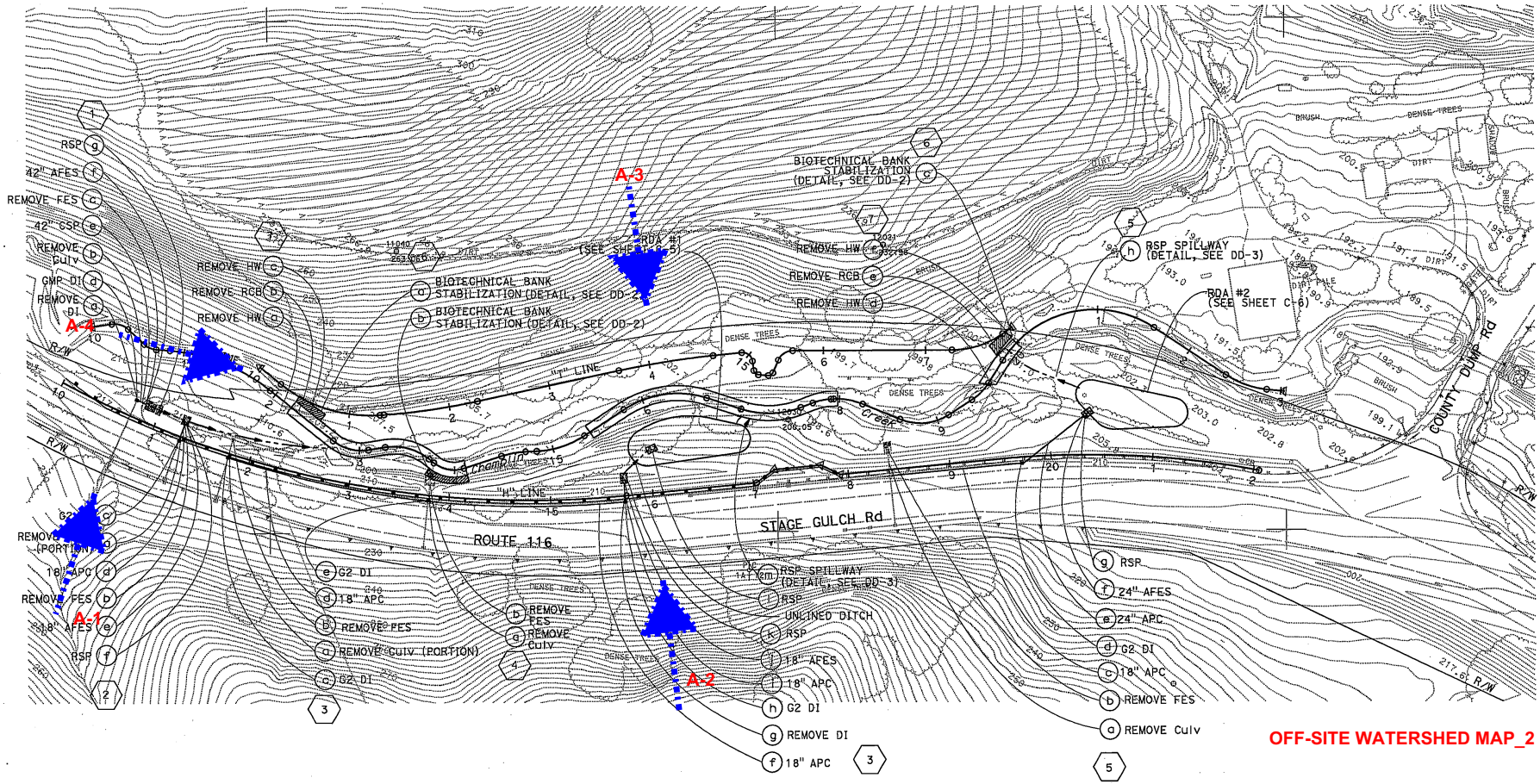
- (No.) DRAINAGE SYSTEM NUMBER
- (a) DRAINAGE UNIT
- EXISTING STORM DRAIN
- EXISTING DI
- AFES
- RSP
- BIOTECHNICAL BANK STABILIZATION
- DITCH/GUTTER

ABBREVIATIONS:

w/ WITH

LEGEND

FLOW DIRECTION



OFF-SITE WATERSHED MAP_2

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

BORDER LAST REVISED 7/2/2010	USERNAME => s119910 DGN FILE => D-1.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 0738	PROJECT NUMBER & PHASE	04000007721

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: HAN-BIN LIANG

CALCULATED-DESIGNED BY: IRENE LIU

CHECKED BY: ULYSSES HILLARD

REVISED BY / DATE REVISED

LAST REVISION 00-00-00 DATE PLOTTED => 20-JAN-2011 TIME PLOTTED => 10:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT ALEXANDER T. McDONALD No. 5267 STATE OF CALIFORNIA
Alex McDonald
8-31-12
Expiration Date
Date

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. EROSION CONTROL LOCATIONS ARE DIAGRAMMATIC ONLY. EXACT LOCATIONS AND LIMITS SHALL BE DETERMINED BY THE ENGINEER.
3. SEE DRAINAGE DETAILS FOR EROSION CONTROL (TYPE 4) INSTALLATION IN BIOTECHNICAL BANK STABILIZATION (BRUSH LAYERING).
4. USE TYPE 2 INSTALLATION FOR FIBER ROLLS ON ROLLED EROSION CONTROL PRODUCT (NETTING).
5. ROLLED EROSION CONTROL PRODUCT (NETTING) AND FIBER ROLLS SHALL NOT BE INSTALLED BELOW HIGH WATER MARK AS ESTABLISHED BY THE ENGINEER.
6. SEE PLANTING PLANS FOR TYPE, SIZE AND QUANTITY OF LINER PLANTS.

LEGEND:

EROSION CONTROL (TYPE 1)
- EROSION CONTROL (COMPOST BLANKET)
- EROSION CONTROL (POLYMER STABILIZED FIBER MATRIX), (SEED TYPE 1)

EROSION CONTROL (TYPE 2)
- COMPOST (INCORPORATE)
- EROSION CONTROL (POLYMER STABILIZED FIBER MATRIX), (SEED TYPE 2)
- LINER PLANTS (PLANT GROUP M) (SEE PLANTING PLANS)

EROSION CONTROL (TYPE 3)
- ROLLED EROSION CONTROL PRODUCT (NETTING), (TYPE B AND TYPE C)
- EROSION CONTROL (POLYMER STABILIZED FIBER MATRIX), (SEED TYPE 1)

EROSION CONTROL (TYPE 4)
- ROLLED EROSION CONTROL PRODUCT (NETTING), (TYPE B)
- EROSION CONTROL (POLYMER STABILIZED FIBER MATRIX), (SEED TYPE 1)

EROSION CONTROL (TYPE 5)
- EROSION CONTROL (COMPOST BLANKET)
- ROLLED EROSION CONTROL PRODUCT (NETTING), (TYPE A)
- EROSION CONTROL (POLYMER STABILIZED FIBER MATRIX), (SEED TYPE 1)

EROSION CONTROL (TYPE 6)
- COMPOST (INCORPORATE)
- EROSION CONTROL (POLYMER STABILIZED FIBER MATRIX), (SEED TYPE 1)

SELECTED MATERIAL (CHANNEL BOTTOM) PLACEMENT (SEE TYPICAL CROSS SECTIONS AND CONSTRUCTION DETAILS)

IMPORTED TOPSOIL

EXISTING BIOFILTRATION STRIP

DRAINAGE INLET PROTECTION (EROSION CONTROL)

FIBER ROLLS

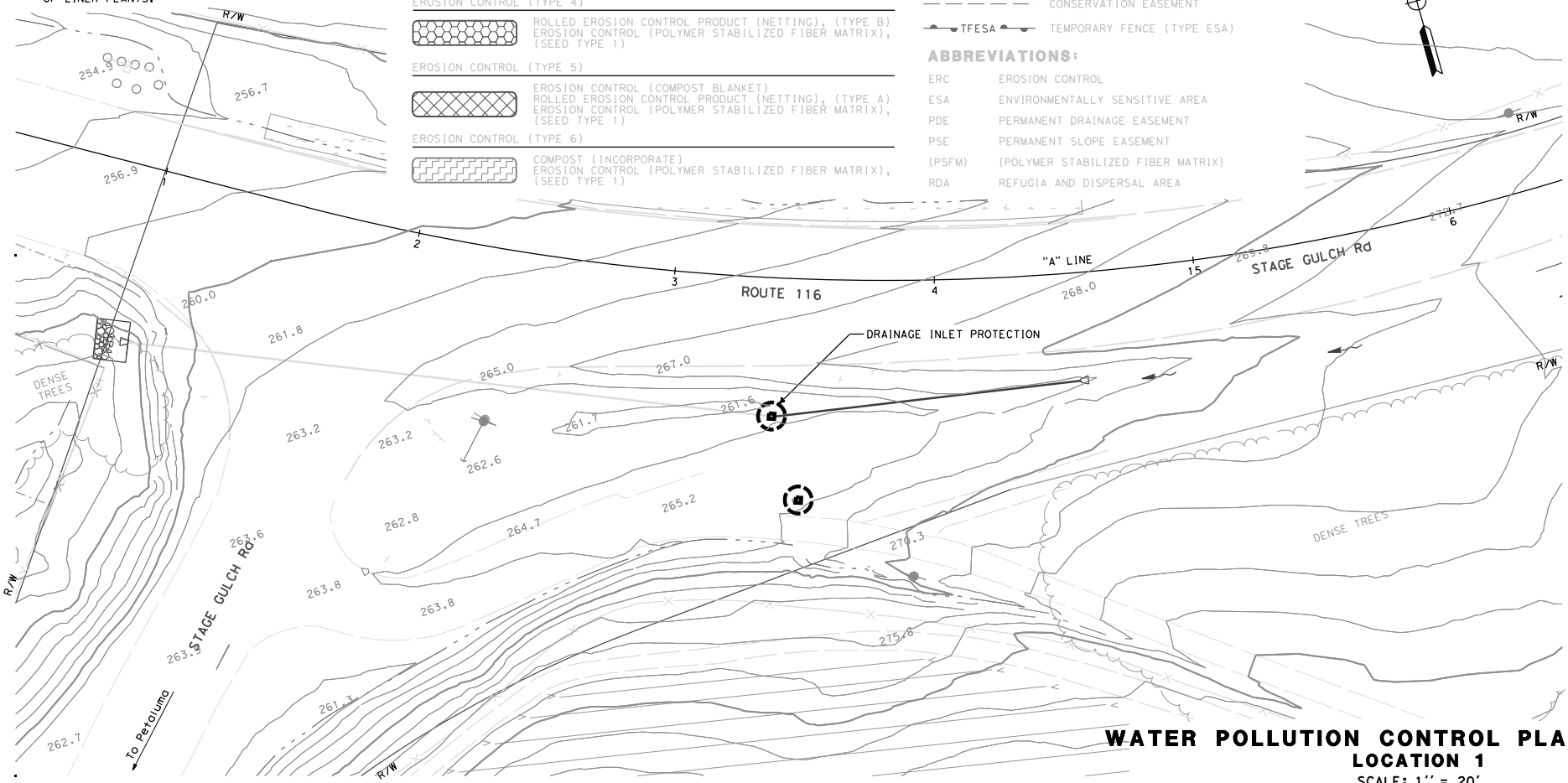
CHECK DAM (EROSION CONTROL)

CONSERVATION EASEMENT

TFESA — TEMPORARY FENCE (TYPE ESA)

ABBREVIATIONS:

ERC	EROSION CONTROL
ESA	ENVIRONMENTALLY SENSITIVE AREA
PDE	PERMANENT DRAINAGE EASEMENT
PSE	PERMANENT SLOPE EASEMENT
(PSFM)	(POLYMER STABILIZED FIBER MATRIX)
RDA	REFUGIA AND DISPERSAL AREA



WATER POLLUTION CONTROL PLAN
LOCATION 1
SCALE: 1'' = 20'

WPC-0

APPROVED FOR EROSION CONTROL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	AKM/JC
Caltrans WATER QUALITY	KAMRAN NAKHJIRI	CHECKED BY: Alex McDonald	DATE REVISED	4/13/12

Jennifer Chen

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT — ALEXANDER K. MCDONALD No. 3367 — Alex McDonald — Expiration 8-31-12 — Renewal Date — Date — STATE OF CALIFORNIA

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

WATER POLLUTION CONTROL NOTES:

CONTRACTOR TO PROTECT ALL INLETS WITHIN VICINITY OF WORK.

BMPS SHALL BE ADJUSTED OR ADDED IN THE FIELD AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER

ALL DISTURBED SOIL AREA SHALL BE COVERED OR ADEQUATELY PROTECTED PRIOR TO RAIN OR PERIODS OF INACTIVITIES OVER 14 DAYS

WATER POLLUTION CONTROL LEGEND:

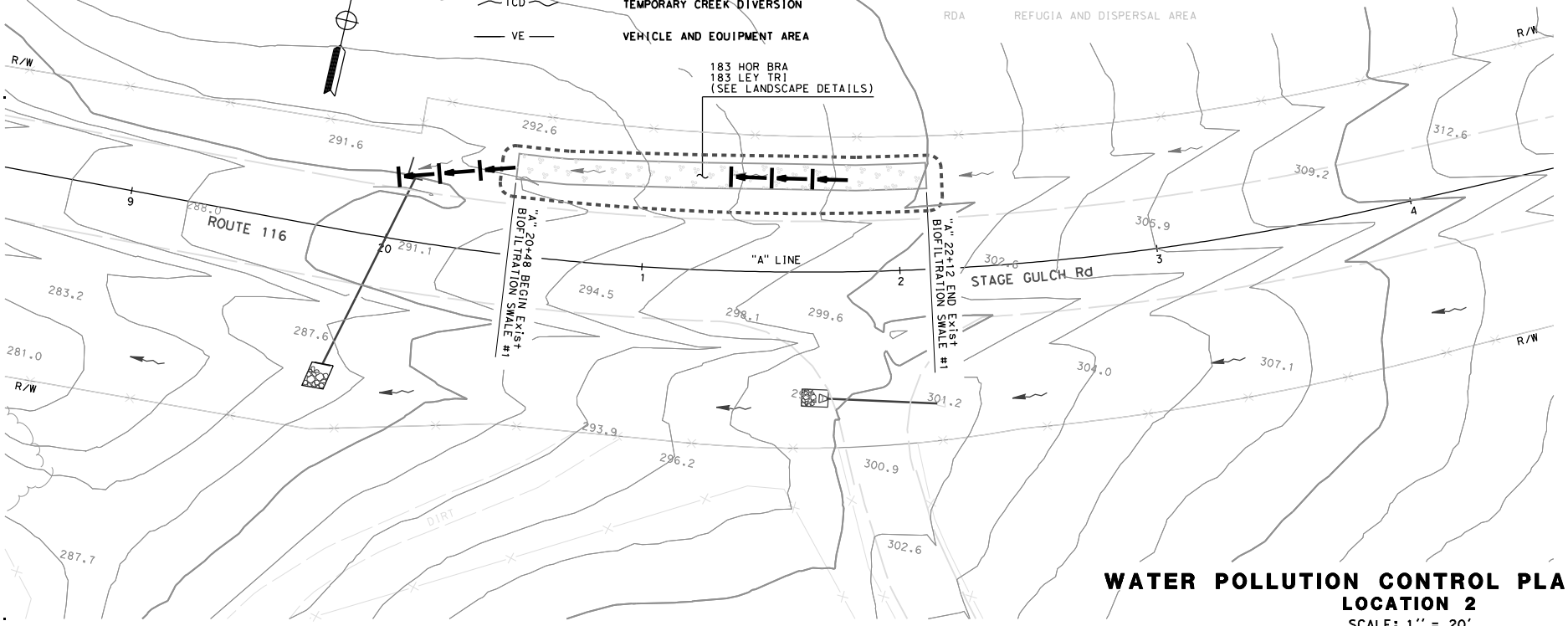
- TEMPORARY HYDRAULIC MULCH (BFM)
- TEMPORARY FIBER ROLL
- TSF — TEMPORARY SILT FENCE
- TEMPORARY FENCE (TYPE ESA)
- TEMPORARY DRAINAGE INLET PROTECTION
- TEMPORARY CHECK DAM
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY COVER
- CWM — TEMPORARY CONCRETE WASHOUT (PORTABLE)
- TSD — TEMPORARY SLOPE DRAIN
- TCD — TEMPORARY CREEK DIVERSION
- VE — VEHICLE AND EQUIPMENT AREA

LEGEND:

- LIMIT OF ROADSIDE CLEARING
- EXISTING BIOFILTRATION STRIP
- EROSION CONTROL (TYPE 2) (SEE EROSION CONTROL SHEETS)
- MAINTAIN EXISTING PLANTED AREAS
- TEMPORARY FENCE (TYPE BW)
- 4' TEMPORARY GATEWAY
- Std Plan No. DETAIL
- TFESA — TEMPORARY FENCE (TYPE ESA)
- CONSERVATION EASEMENT
- PERMANENT DRAINAGE EASEMENT

ABBREVIATIONS:

ESA	ENVIRONMENTALLY SENSITIVE AREA
PDE	PERMANENT DRAINAGE EASEMENT
PSE	PERMANENT SLOPE EASEMENT
RDA	REFUGIA AND DISPERSAL AREA



WATER POLLUTION CONTROL PLAN
LOCATION 2
SCALE: 1" = 20'

WPC-1

APPROVED FOR PLANTING WORK ONLY

REVISED BY	AKM/JC	CALCULATED-DESIGNED BY	Jennifer Chen
DATE REVISED	4/13/12	CHECKED BY	Alex McDonald

FUNCTIONAL SUPERVISOR: Kamran Nakhjiri

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans — WATER QUALITY

LAST REVISION 09-15-11 — DATE PLOTTED => $DATE — TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

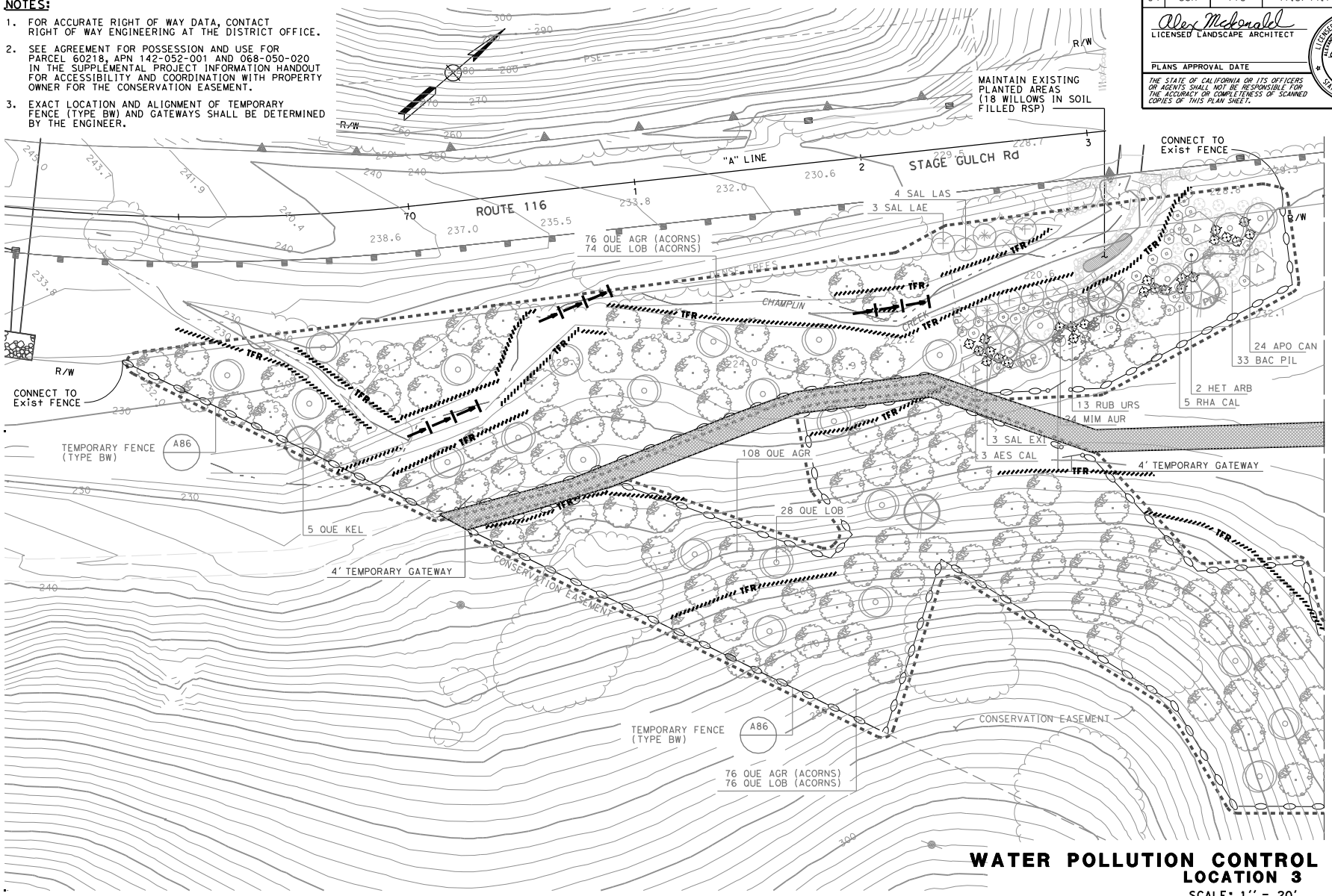
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER K. McDONALD No. 3343 Signature 8-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
3. EXACT LOCATION AND ALIGNMENT OF TEMPORARY FENCE (TYPE BW) AND GATEWAYS SHALL BE DETERMINED BY THE ENGINEER.



WATER POLLUTION CONTROL PLAN
LOCATION 3

SCALE: 1'' = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-2

REVISED BY	AKM/JC
DATE REVISED	4/13/12
CALCULATED-DESIGNED BY	Jennifer Chen
CHECKED BY	Alex McDonald
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

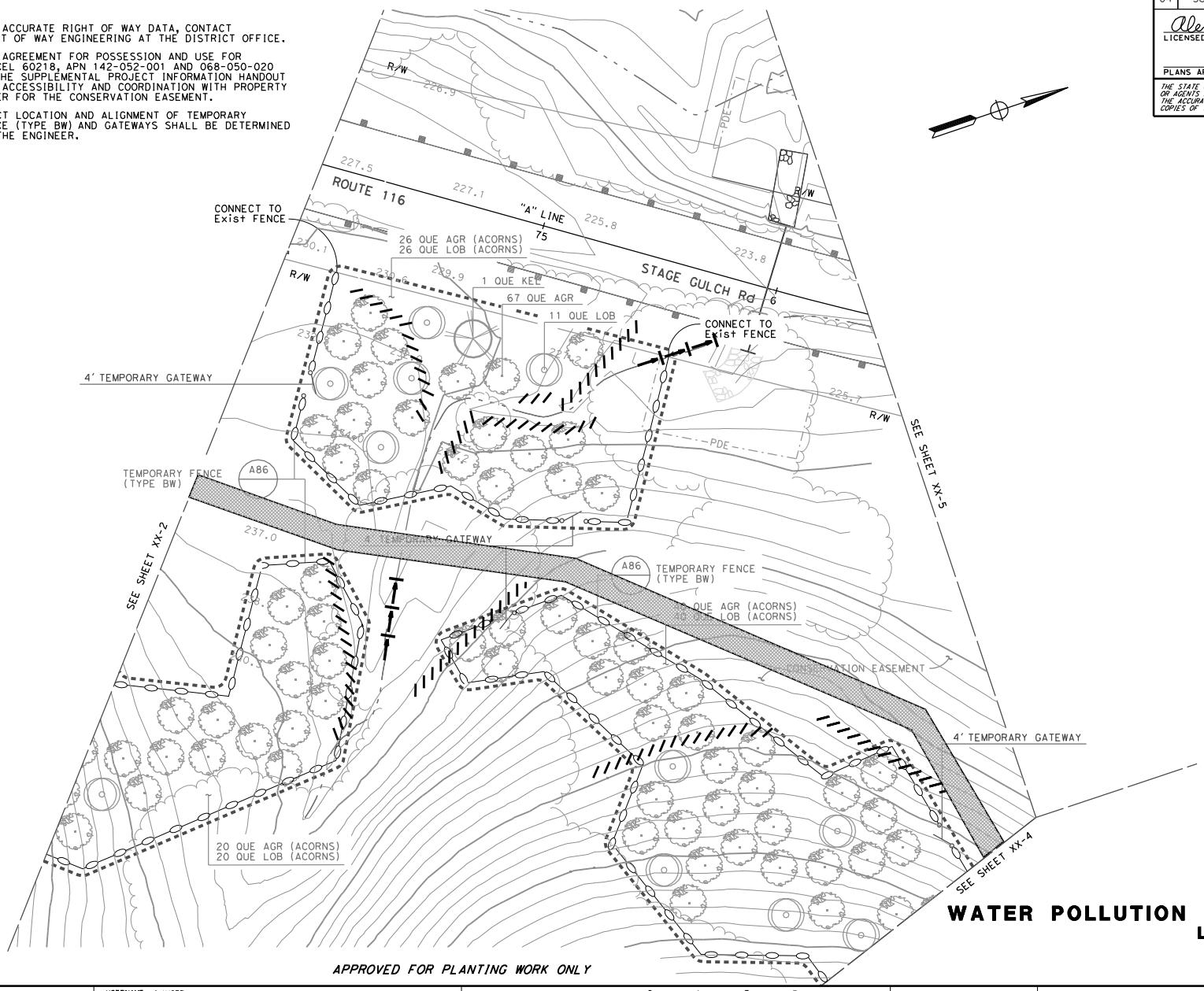
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER K. MCDONALD No. 3367
Alex McDonald
Signature
5-31-12
Renewal Date
Date
STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
3. EXACT LOCATION AND ALIGNMENT OF TEMPORARY FENCE (TYPE BW) AND GATEWAYS SHALL BE DETERMINED BY THE ENGINEER.



APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

WPC-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

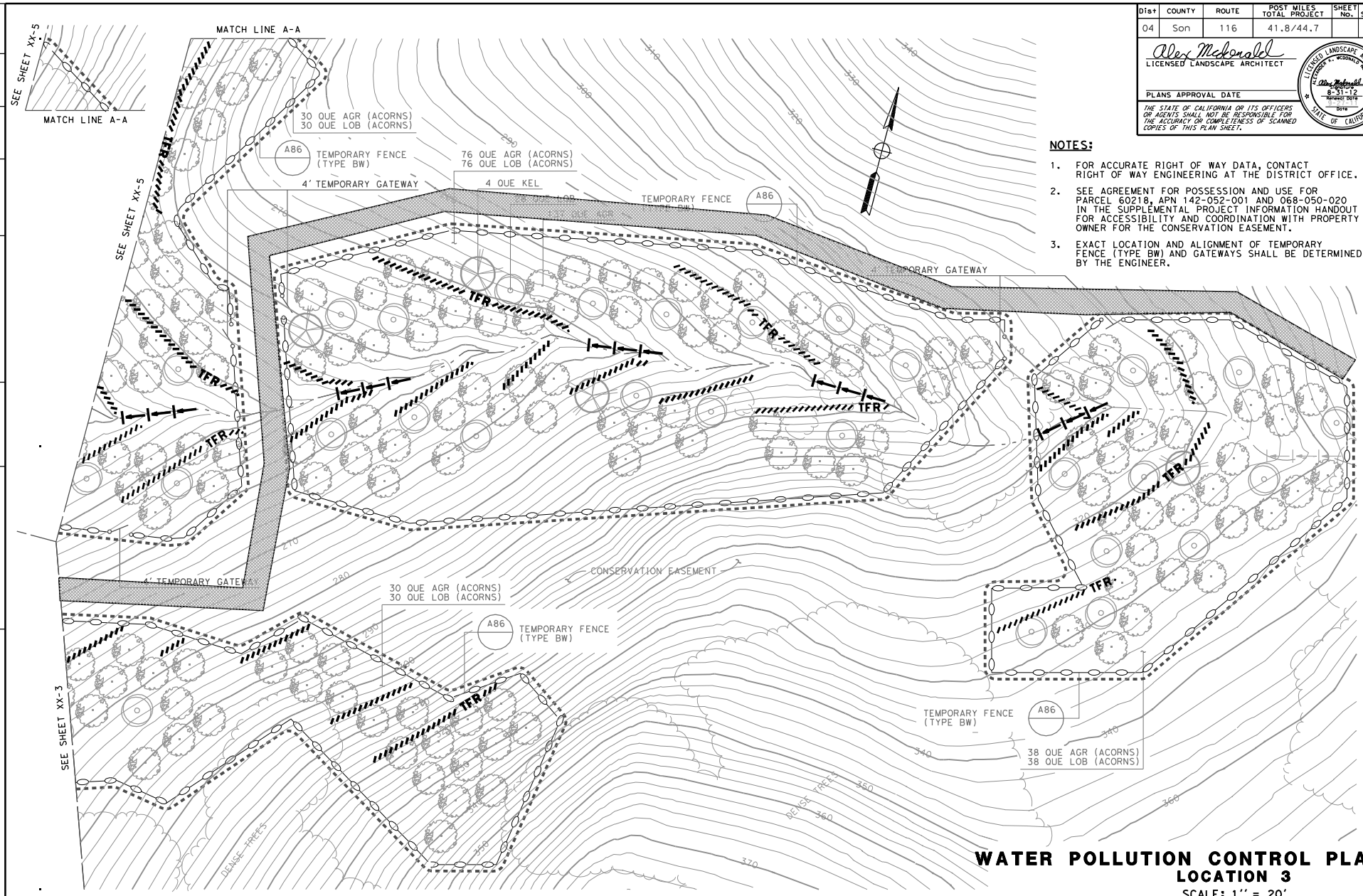
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER K. MCDONALD No. 4154
Alex McDonald
Expiration
6-31-12
Renewal Date
Date
STATE OF CALIFORNIA



NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
3. EXACT LOCATION AND ALIGNMENT OF TEMPORARY FENCE (TYPE BW) AND GATEWAYS SHALL BE DETERMINED BY THE ENGINEER.

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
WATER QUALITY

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	Jennifer Chen	REVISED BY	AKM/JC
KAMRAN NAKHJIRI	CHECKED BY	Alex McDonald	DATE REVISED	4/13/12

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

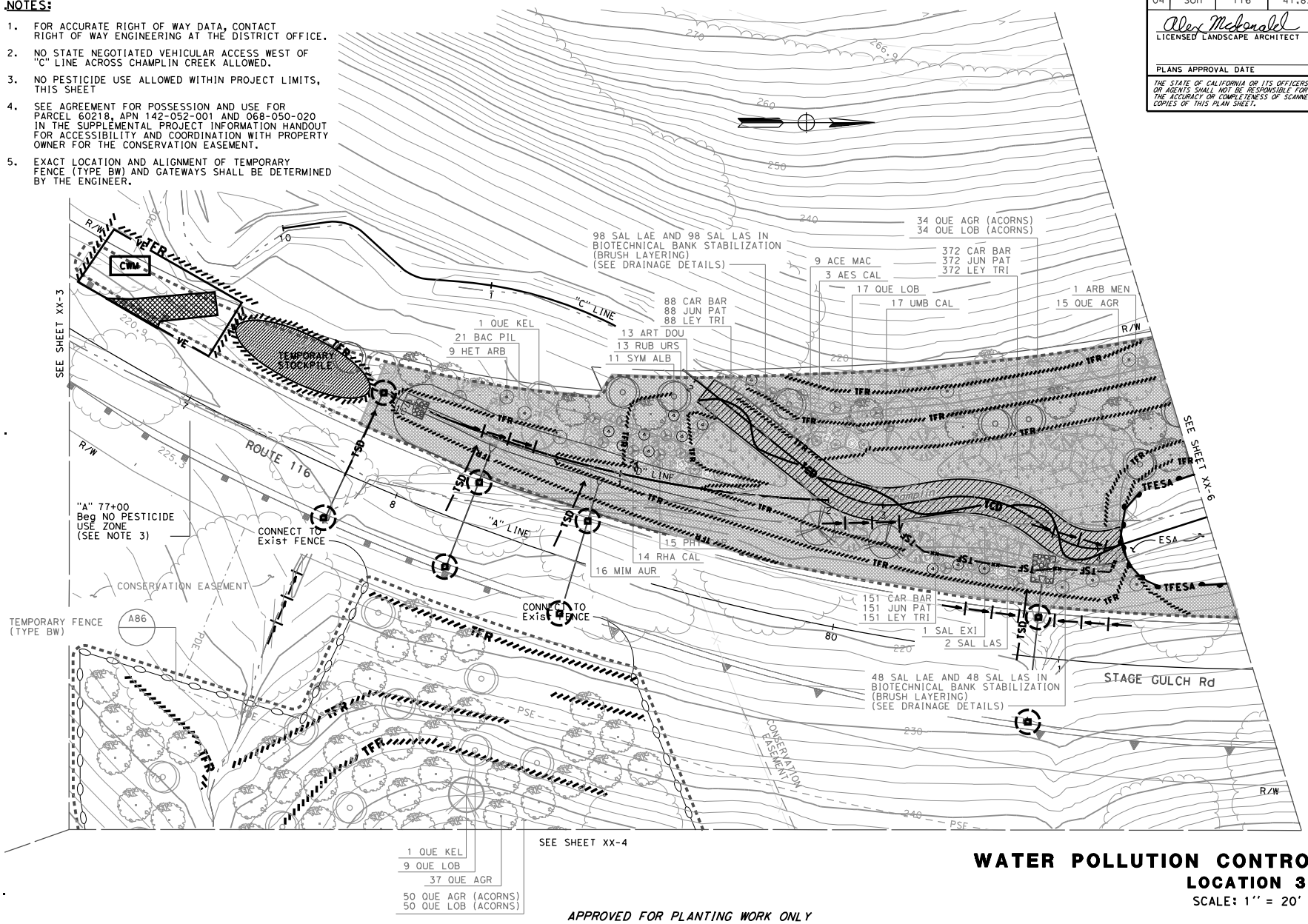
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER K. MCDONALD
8-31-12
Renewal Date
Date
STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NO STATE NEGOTIATED VEHICULAR ACCESS WEST OF "C" LINE ACROSS CHAMPLIN CREEK ALLOWED.
3. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET
4. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
5. EXACT LOCATION AND ALIGNMENT OF TEMPORARY FENCE (TYPE BW) AND GATEWAYS SHALL BE DETERMINED BY THE ENGINEER.



APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1" = 20'

WPC-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	Jennifer Chen
Caltrans	KAMRAN NAKHJIRI	CHECKED BY	Alex McDonald
WATER QUALITY		REVISED BY	AKM/JC
		DATE REVISED	4/13/12

LAST REVISION 09-15-11 DATE PLOTTED => $DATE TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

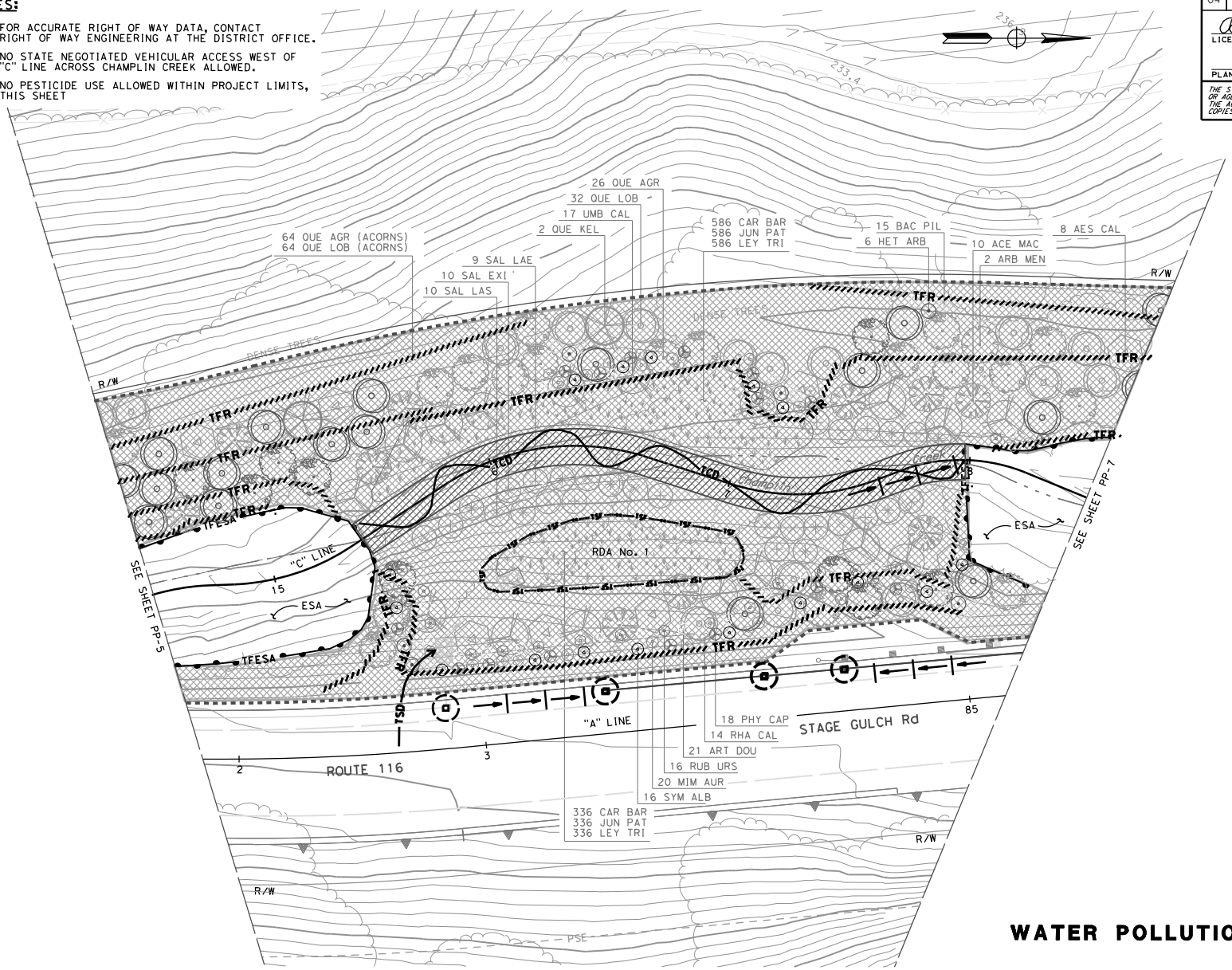
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER K. MCDONALD No. 2132
Alex McDonald
8-31-12
Renewal Date
Date
STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NO STATE NEGOTIATED VEHICULAR ACCESS WEST OF "C" LINE ACROSS CHAMPLIN CREEK ALLOWED.
3. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET



WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

WPC-6

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0792
PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

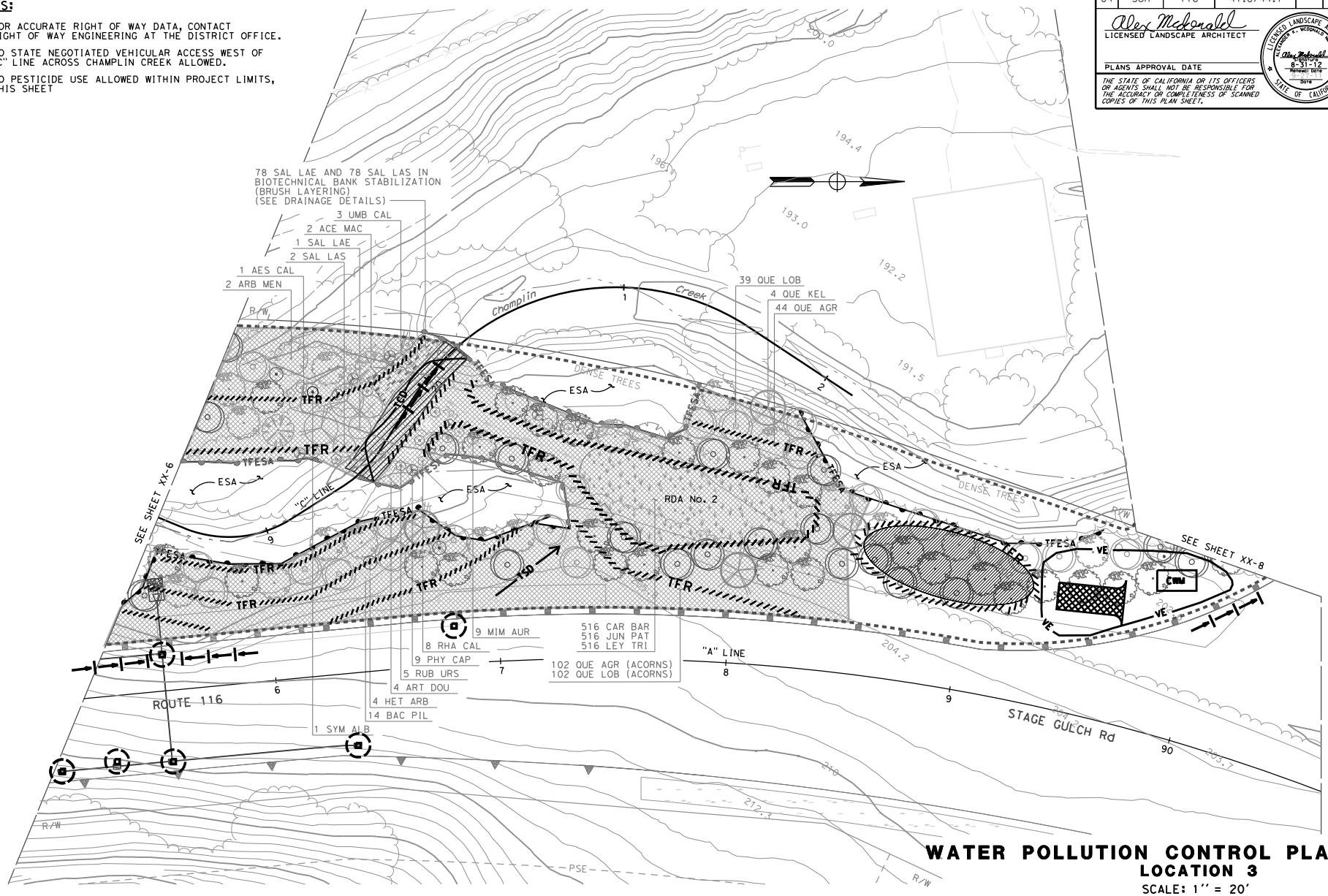
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER T. McDONALD No. 3343
Alex McDonald
Signature
8-31-12
Renewal Date
Date
STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NO STATE NEGOTIATED VEHICULAR ACCESS WEST OF "C" LINE ACROSS CHAMPLIN CREEK ALLOWED.
3. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET



WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

WPC-7

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	Jennifer Chen
Caltrans	KAMRANA NAKHJIRI	CHECKED BY	Alex McDonald
WATER QUALITY		REVISED BY	AKM/JC
		DATE REVISED	4/13/12

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

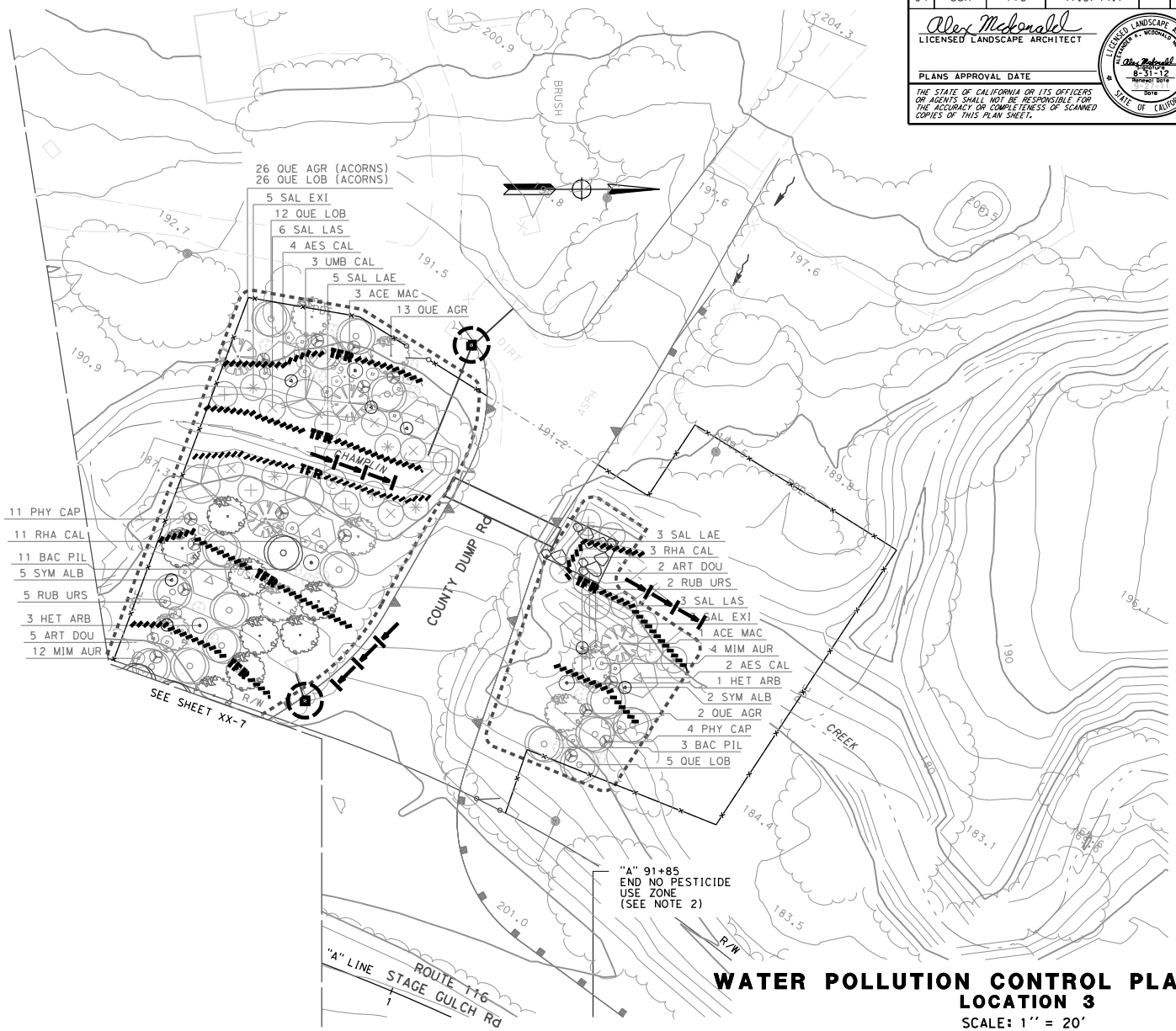
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER F. McDONALD No. 3343
Alex McDonald
Expiration
8-31-12
Renewal Date
Date
STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET



APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

WPC-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	
Caltrans WATER QUALITY	
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY	Jennifer Chen
CHECKED BY	Alex McDonald
REVISED BY	AKM/JC
DATE REVISED	4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => \$DATE
TIME PLOTTED => \$TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

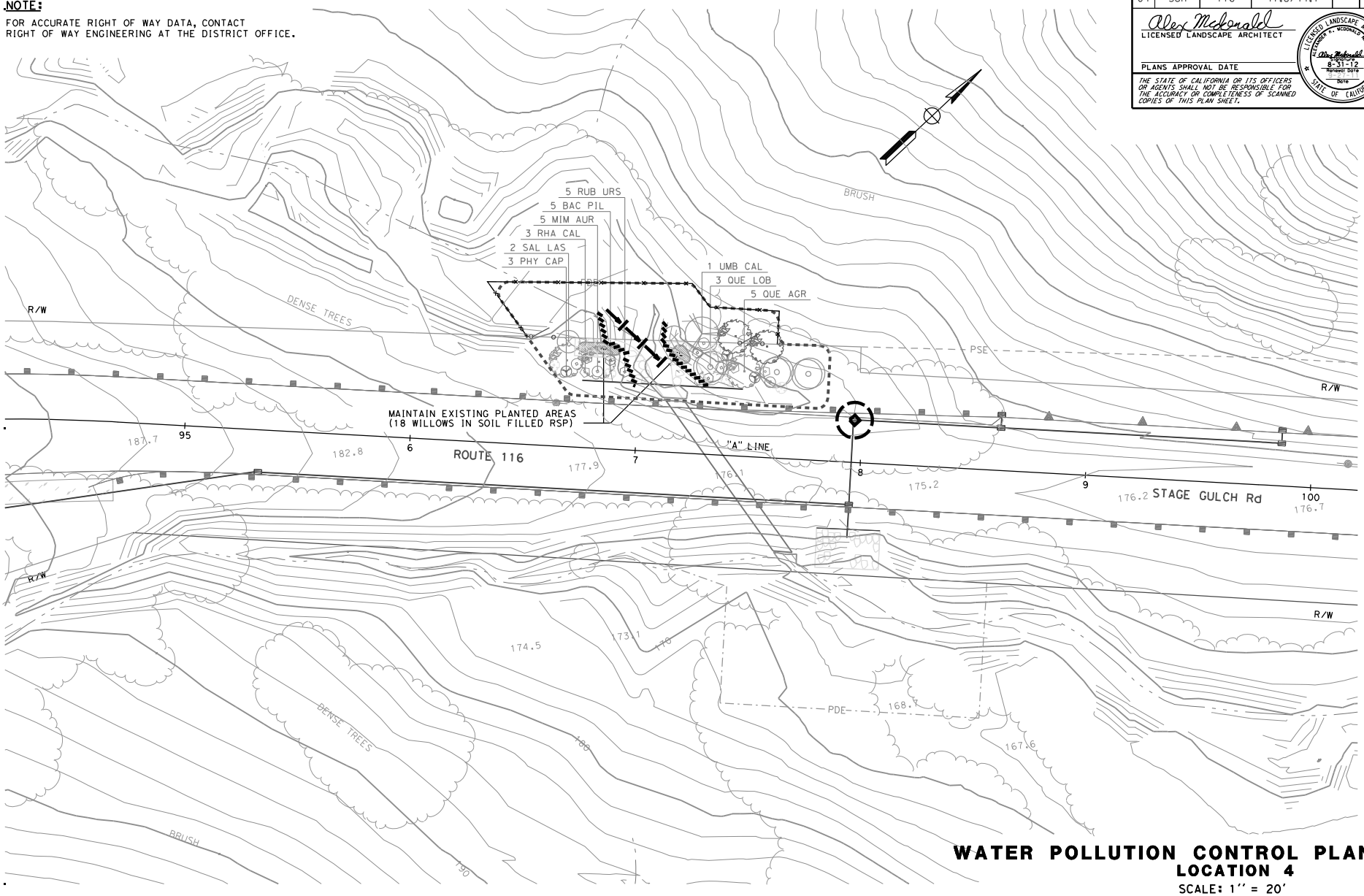
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER T. McDONALD No. 5347
Alex McDonald
Signature
8-31-12
Renewal Date
Date
STATE OF CALIFORNIA

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN
LOCATION 4
SCALE: 1'' = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-9

REVISED BY	AKM/JC
DATE REVISED	4/13/12
CALCULATED-DESIGNED BY	Jennifer Chen
CHECKED BY	Alex McDonald
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

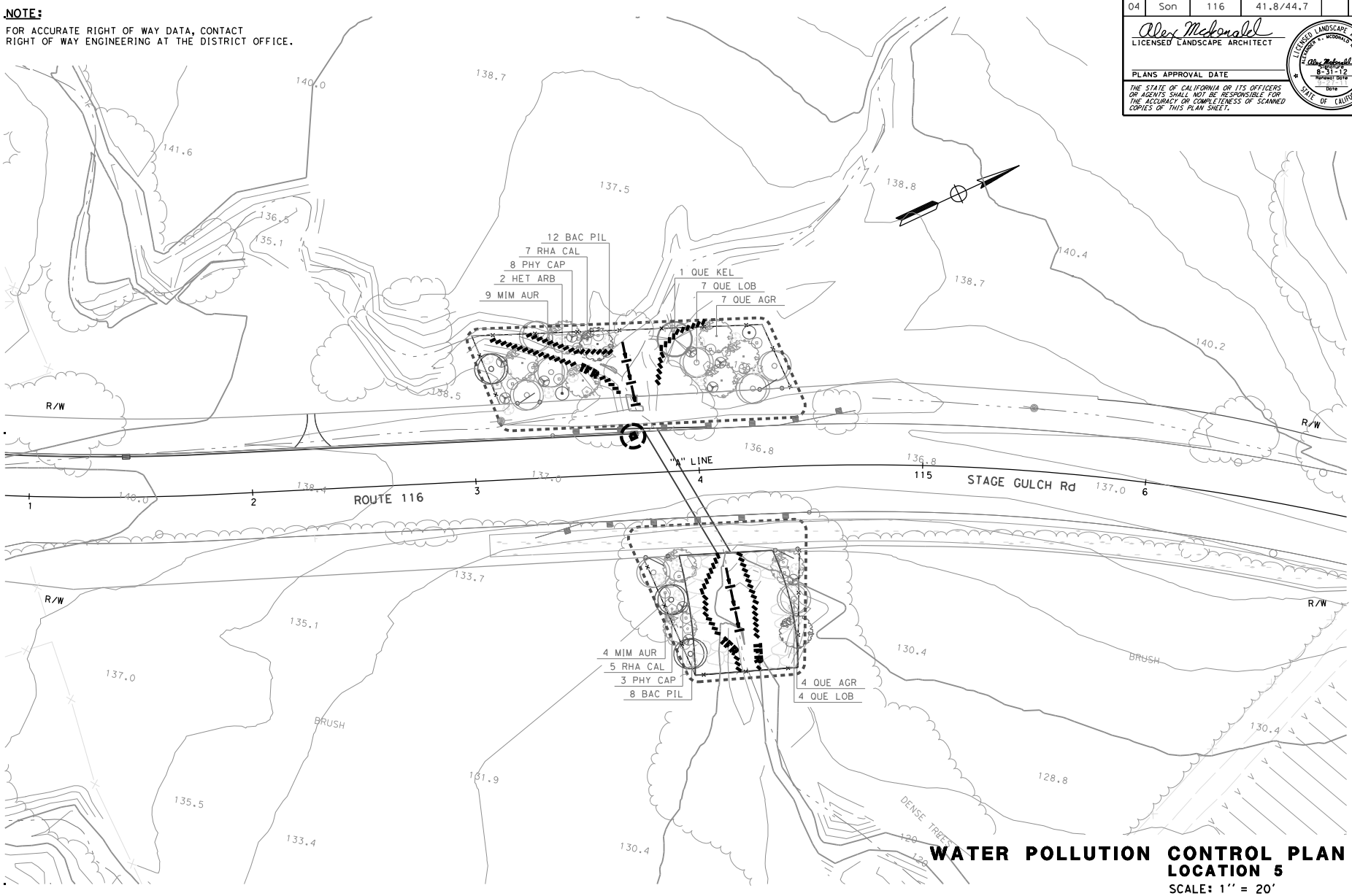
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
ALEXANDER K. MCDONALD No. 3243
Alex McDonald
8-31-12
REGISTRANT'S SEAL
SIGNATURE
DATE
STATE OF CALIFORNIA

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN
LOCATION 5
SCALE: 1" = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

FUNCTIONAL SUPERVISOR: Kamran Nakhjiri
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

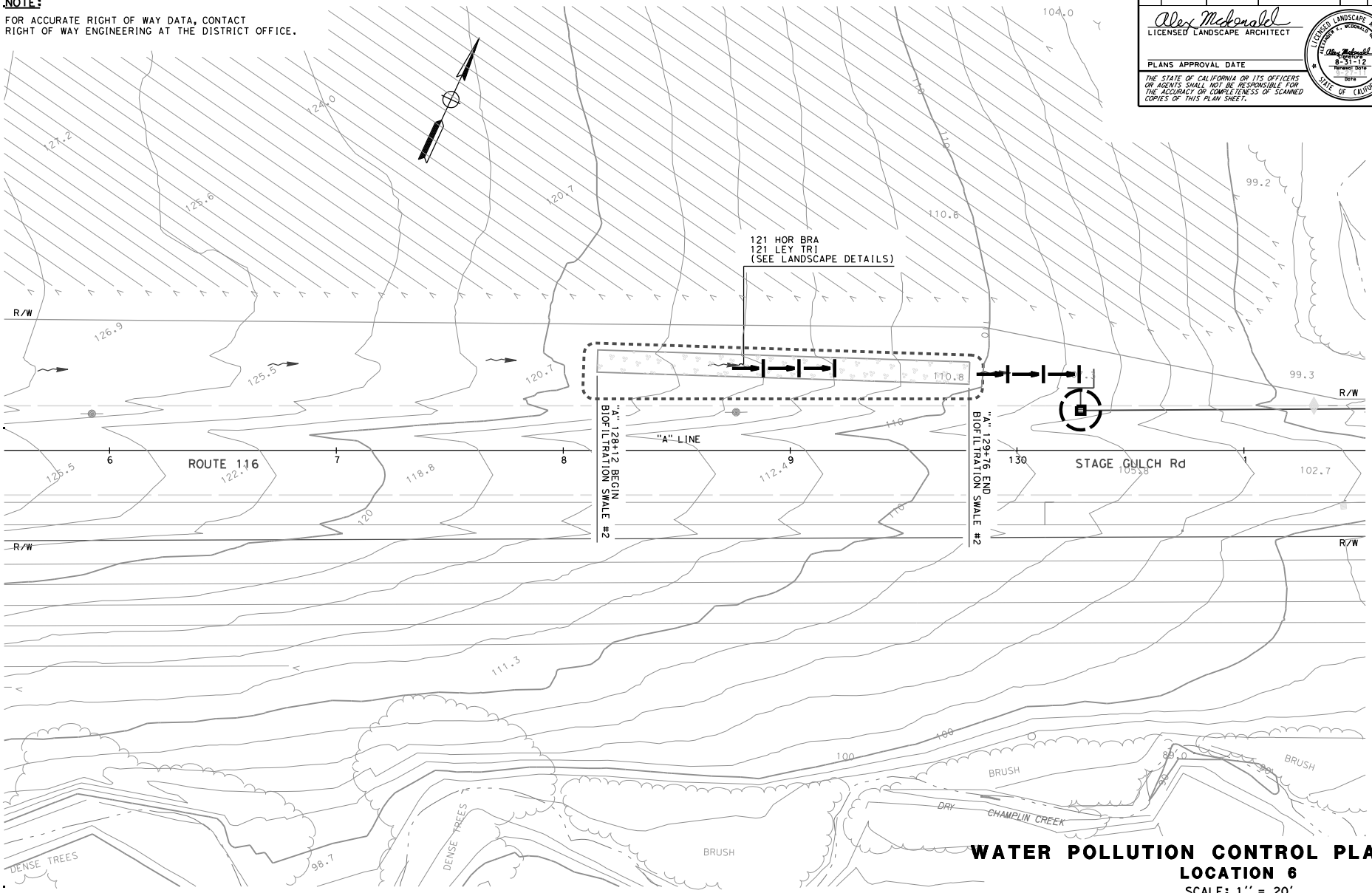
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER T. McDONALD No. 3362 Alex McDonald Signature 8-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN

LOCATION 6

SCALE: 1'' = 20'

WPC-11

CALCULATED-DESIGNED BY	Alex McDonald	REVISED BY	AKM/JC
CHECKED BY	Jennifer Egawa	DATE REVISED	4/13/12

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

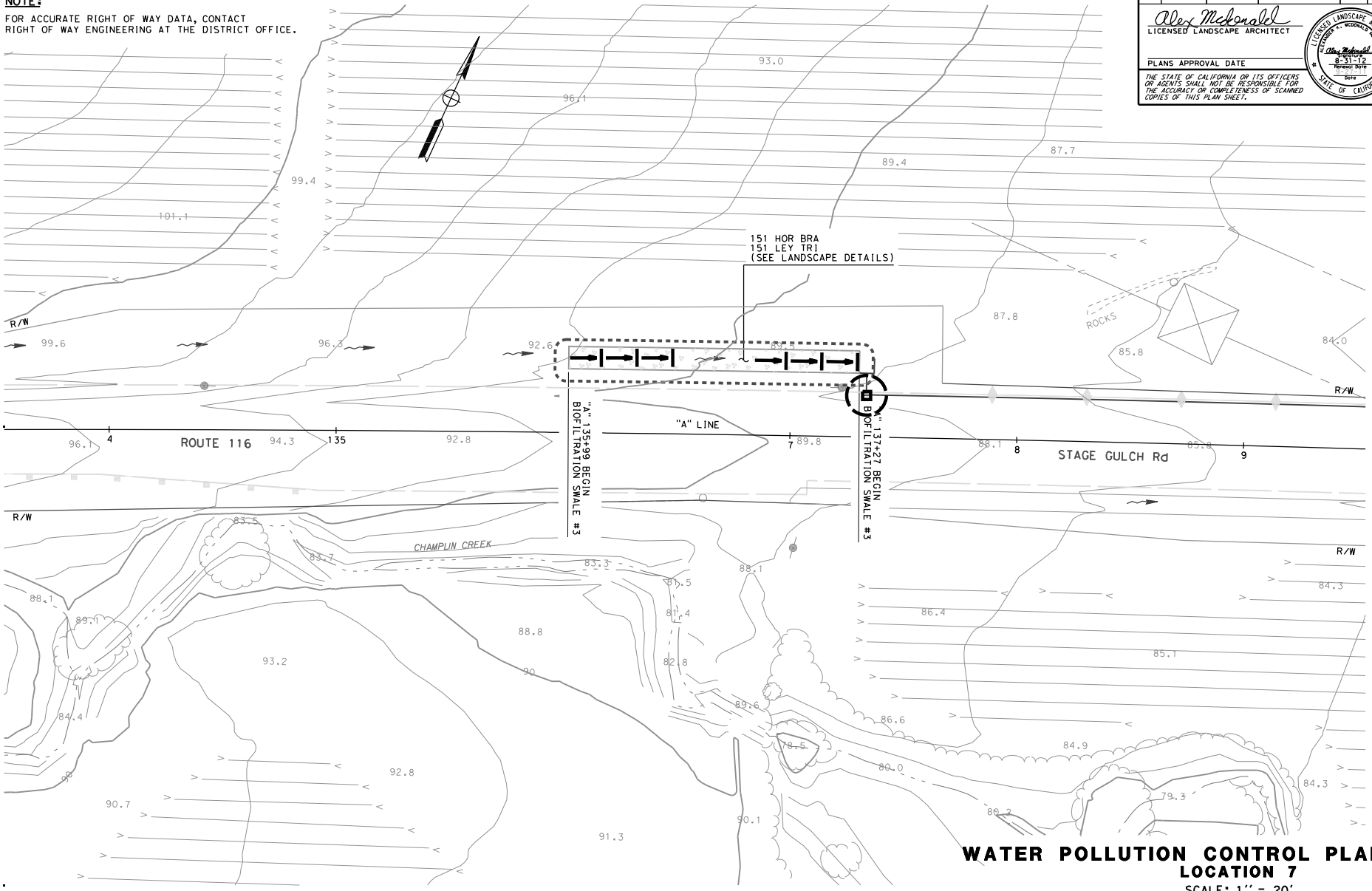
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT ALEXANDER K. MCDONALD No. 3262 STATE OF CALIFORNIA
Alex McDonald
Signature
8-31-12
Renewal Date
Date

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN
LOCATION 7
SCALE: 1" = 20'

WPC-12

APPROVED FOR PLANTING WORK ONLY

REVISED BY	AKM/JC
DATE REVISED	4/13/12
CALCULATED-DESIGNED BY	Jennifer Chen
CHECKED BY	Alex McDonald
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

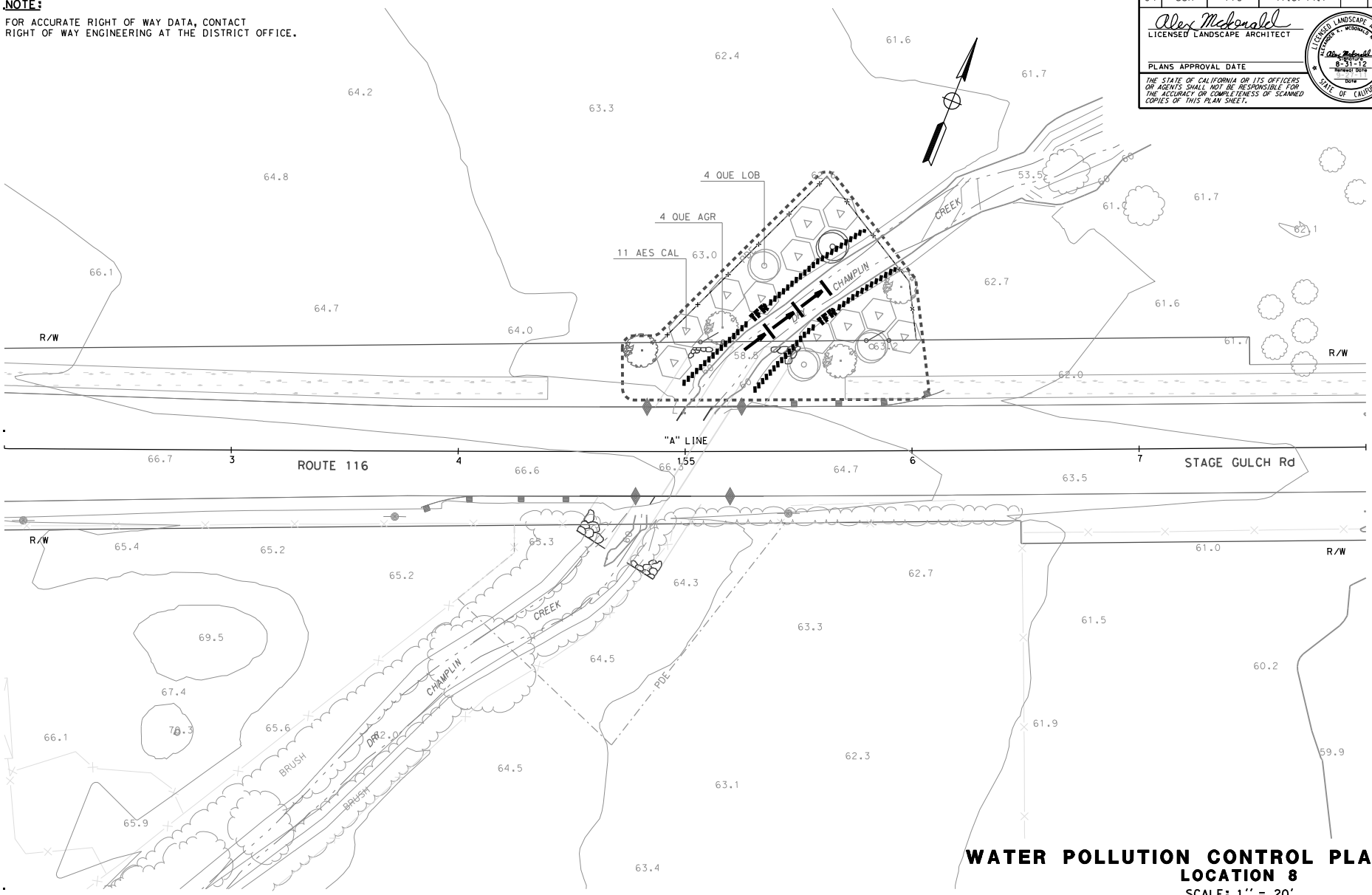
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER T. MCDONALD No. 3267 STATE OF CALIFORNIA
8-31-12
Renewal Date
Date

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN
LOCATION 8
SCALE: 1'' = 20'

WPC-13

APPROVED FOR PLANTING WORK ONLY

REVISED BY	AKM/JC
DATE REVISED	4/13/12
CALCULATED-DESIGNED BY	Jennifer Chen
CHECKED BY	Alex McDonald
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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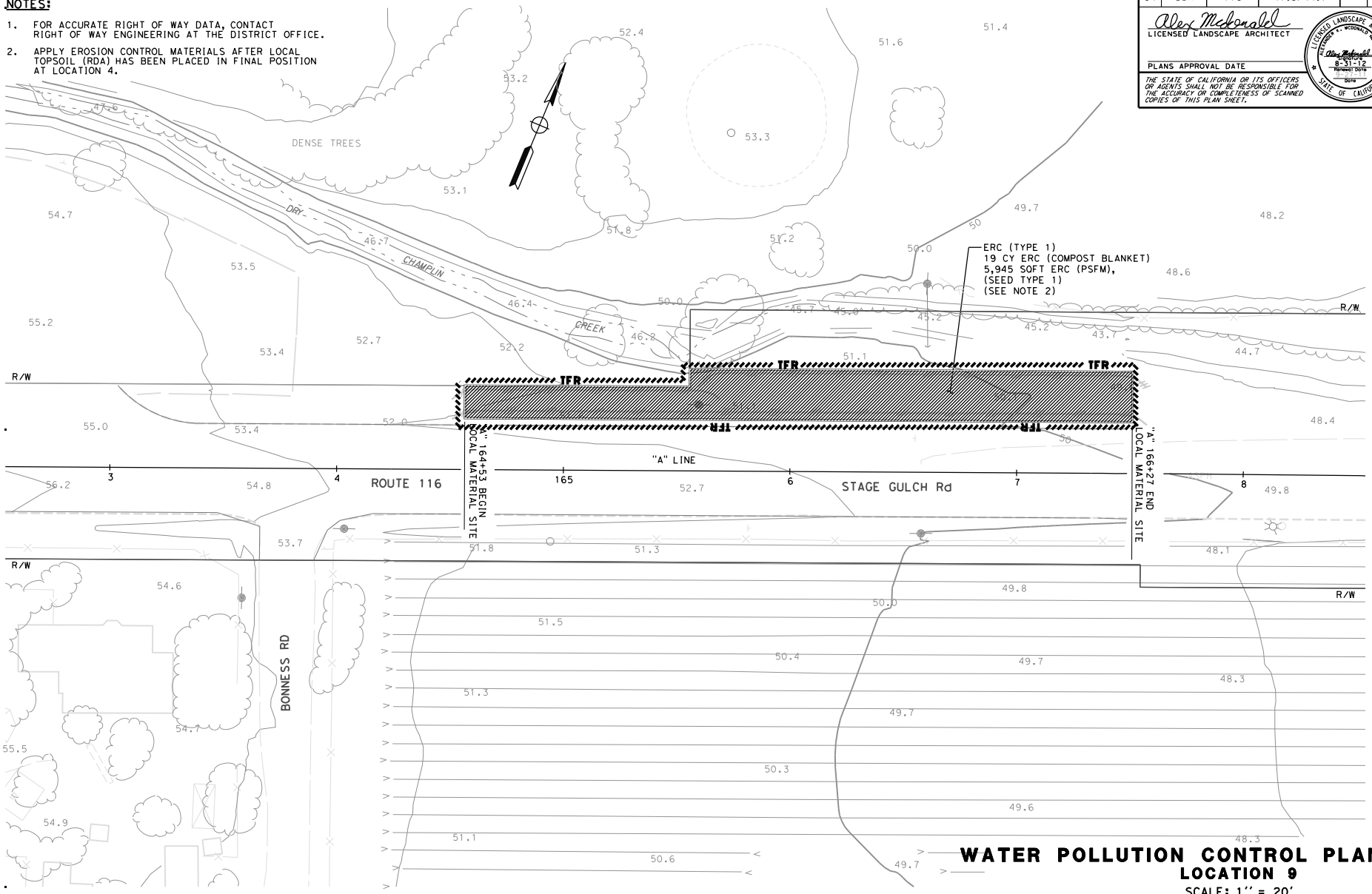
LICENSED LANDSCAPE ARCHITECT ALEXANDER K. MCDONALD NO. 3247 SIGNATURE 8-31-12 REFERENDUM DATE DATE STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. APPLY EROSION CONTROL MATERIALS AFTER LOCAL TOPSOIL (RDA) HAS BEEN PLACED IN FINAL POSITION AT LOCATION 4.



WATER POLLUTION CONTROL PLAN

LOCATION 9

SCALE: 1'' = 20'

WPC-14

APPROVED FOR EROSION CONTROL WORK ONLY

REVISED BY	AKM/JC
DATE REVISED	4/13/12
CALCULATED-DESIGNED BY	Jennifer Chen
CHECKED BY	Alex McDonald
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans WATER QUALITY

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

April 3, 2009
PLANS APPROVAL DATE

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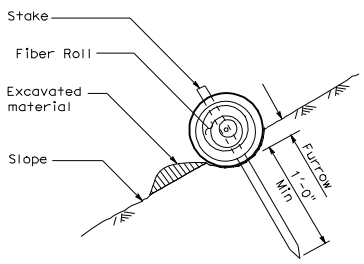
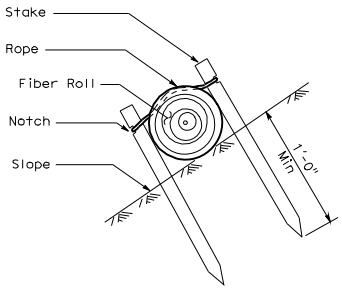
LICENSED LANDSCAPE ARCHITECT Robert B. Schott 3896 Signature 11-30-10 Renewal Date 2-26-09 Date STATE OF CALIFORNIA

To accompany plans dated _____



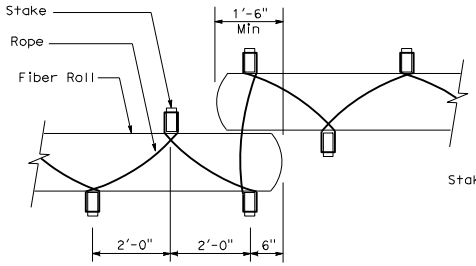
SECTION

TEMPORARY FIBER ROLL (TYPE 1)

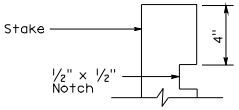


SECTION

TEMPORARY FIBER ROLL (TYPE 2)



PLAN

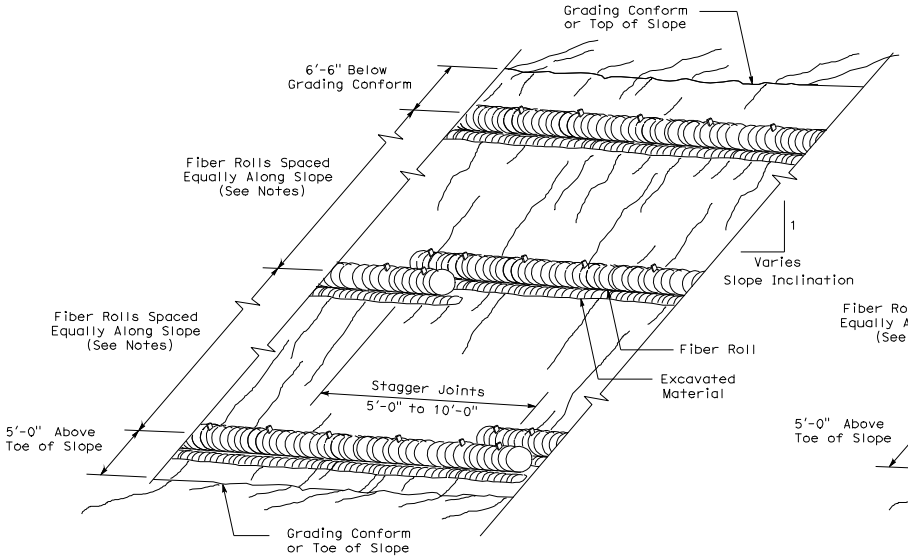


ELEVATION

STAKE NOTCH DETAIL

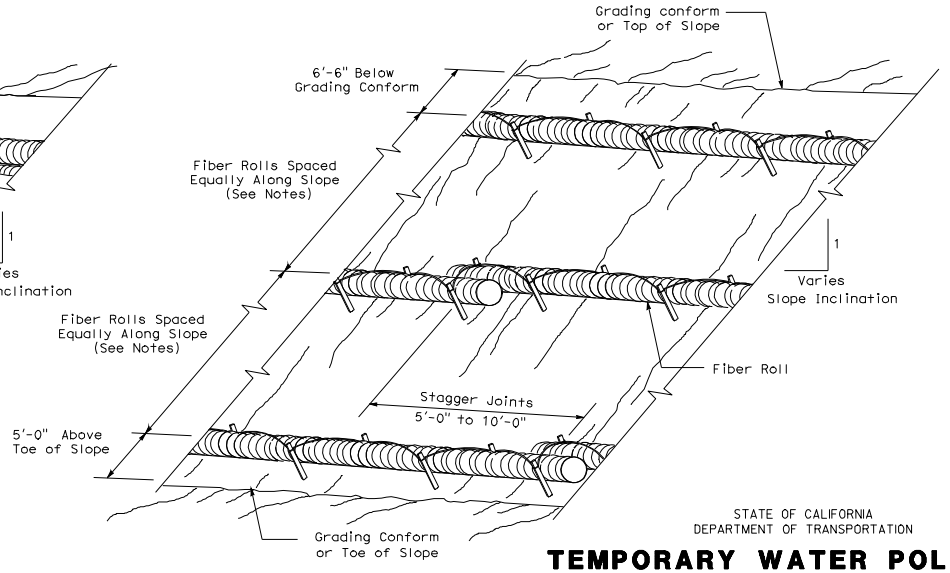
NOTES:

1. Temporary fiber roll spacing varies depending upon slope inclination.
2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)

NO SCALE

RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56
DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T56

2006 REVISED STANDARD PLAN RSP T56

2-23-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

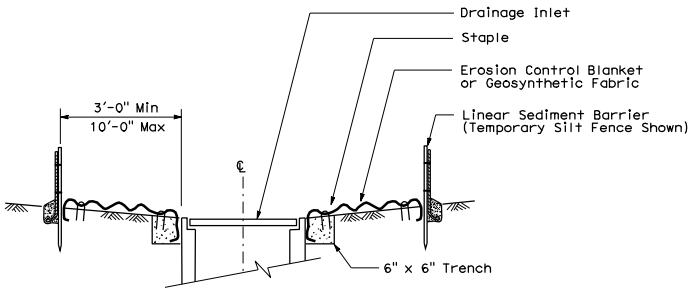
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS Approval DATE

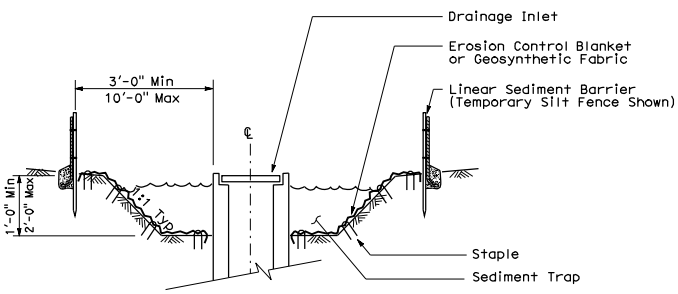
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott — Signature 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

To accompany plans dated _____



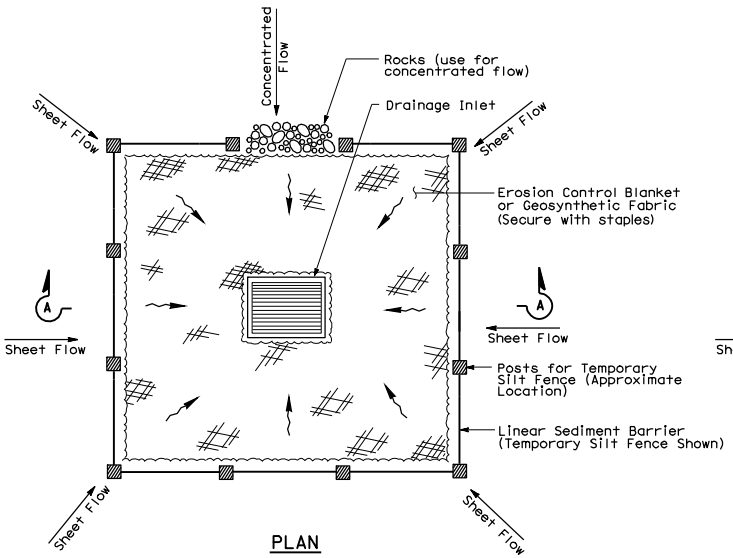
SECTION A-A



SECTION B-B

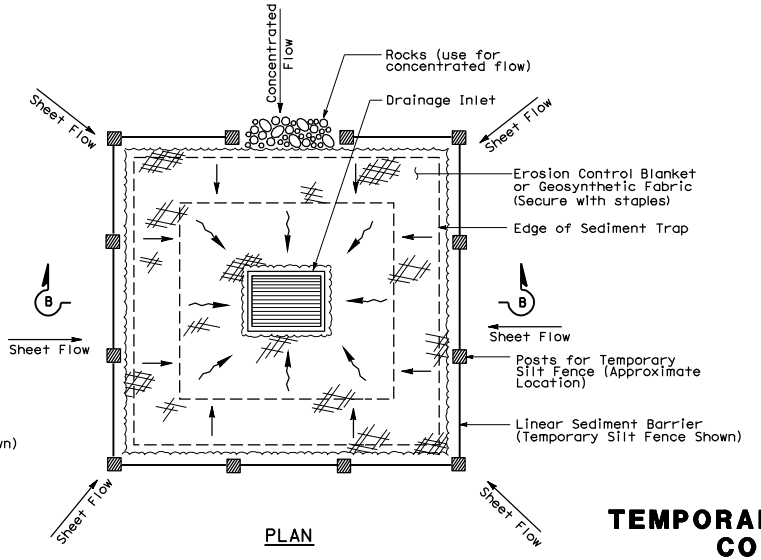
NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.



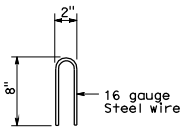
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T61

2006 NEW STANDARD PLAN NSP T61

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

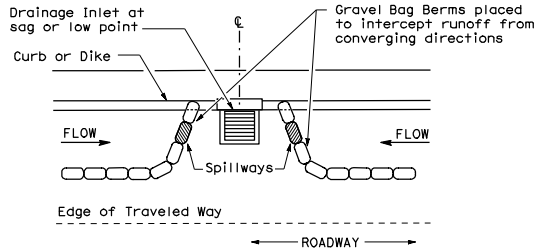
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LICENSED LANDSCAPE ARCHITECT Robert B. Schott 3847 Signature 11-04-08 Renewal date 08-11-08 Date STATE OF CALIFORNIA

To accompany plans dated _____



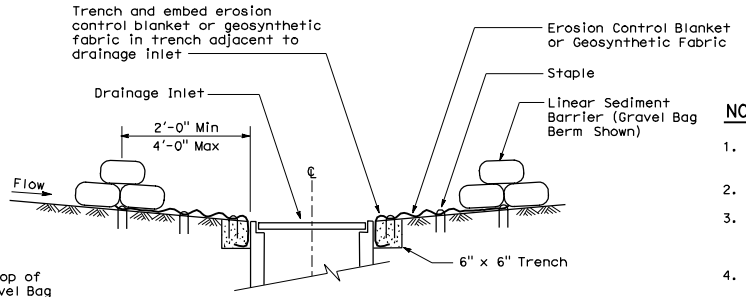
PLAN

CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)

GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100′	75′	50′	25′	12′

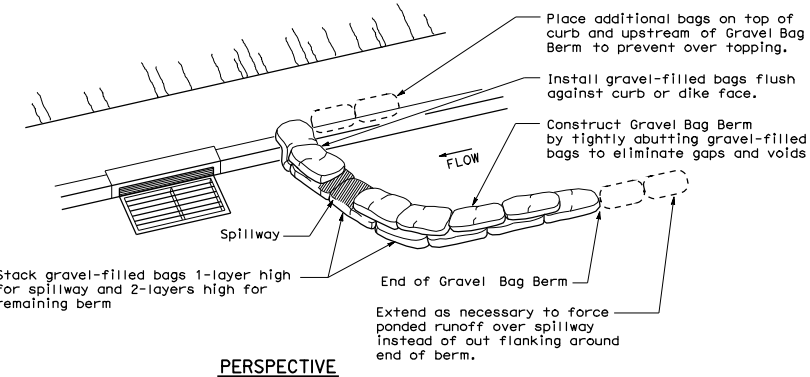
For slope of less than 1%, install barriers only if erosion/sediment is prevalent



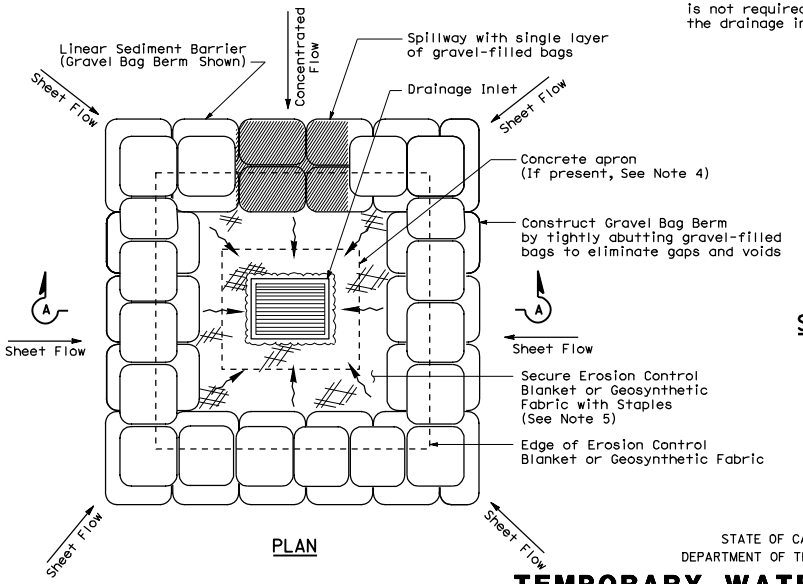
SECTION A-A

NOTES:

1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.

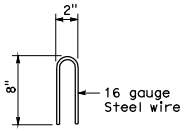


PERSPECTIVE

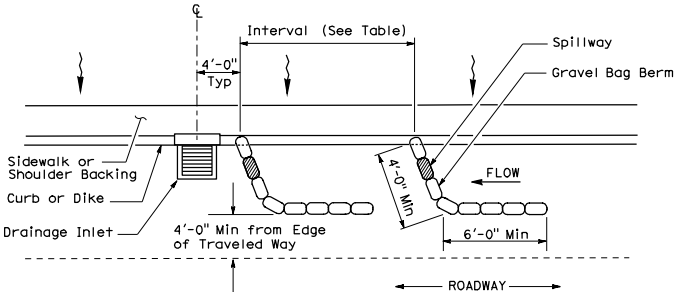


PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T62

2006 NEW STANDARD PLAN NSP T62

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

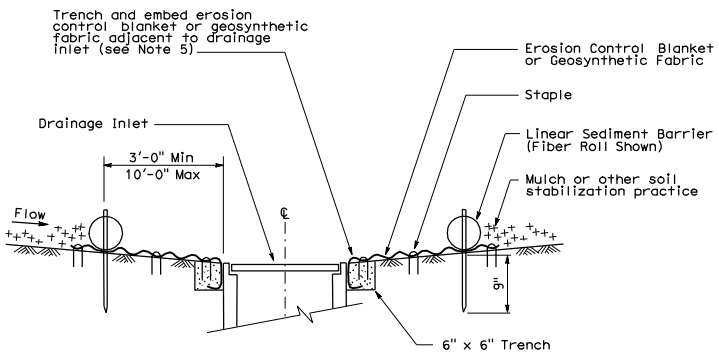
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

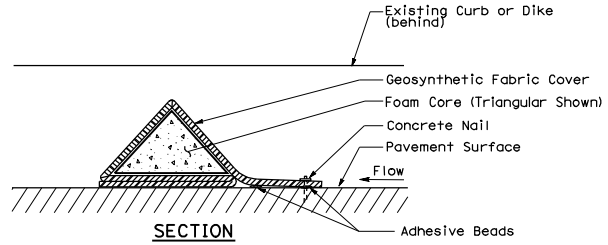
To accompany plans dated _____

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50′	35′	30′	25′	20′
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6′	6′	6′	6′	6′



SECTION A-A

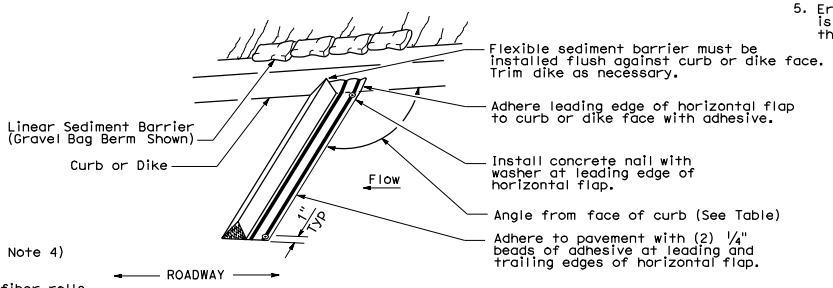


SECTION

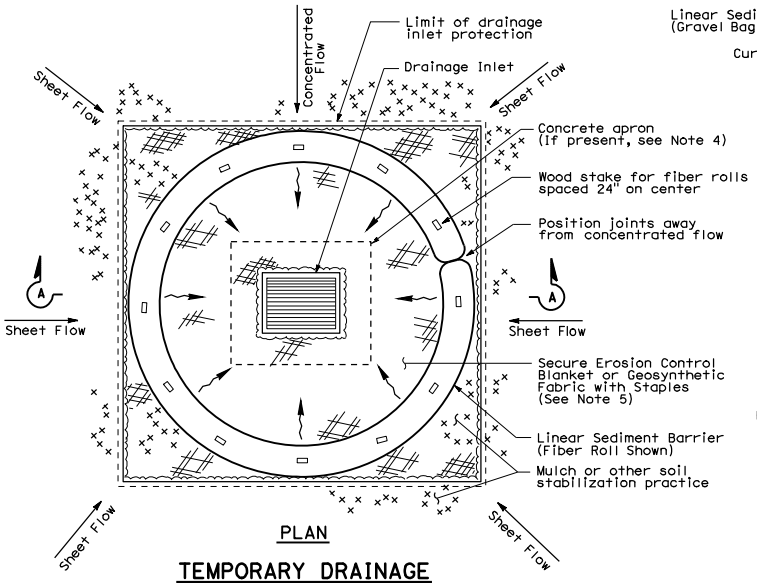
FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.

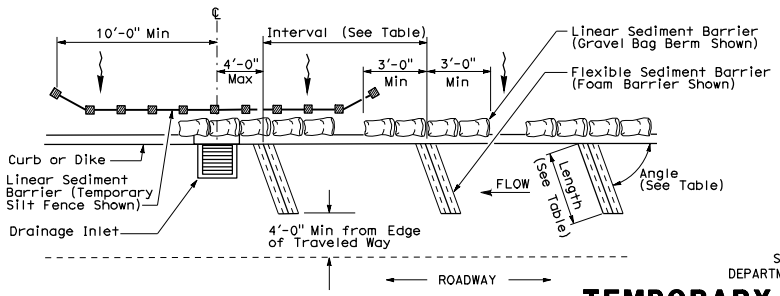


PERSPECTIVE



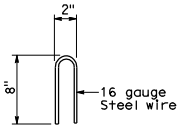
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T63

2006 NEW STANDARD PLAN NSP T63

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

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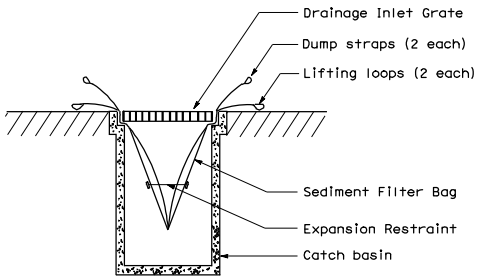
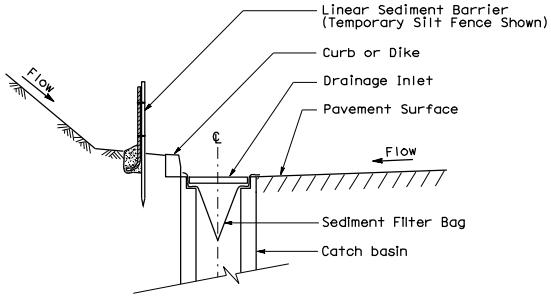
LICENSED LANDSCAPE ARCHITECT Robert B. Schott 3842 Signature 11-04-08 Renewal date 08-11-08 Date STATE OF CALIFORNIA

To accompany plans dated _____

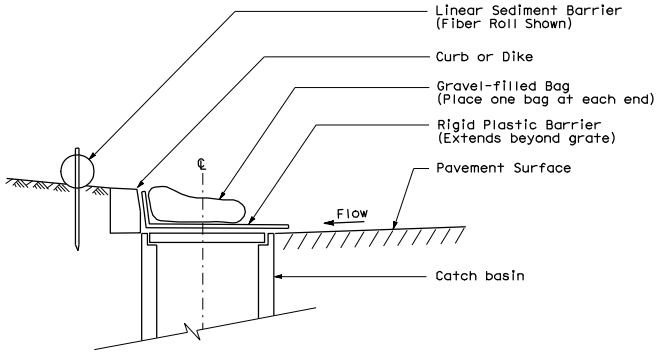


SECTION B-B

SEDIMENT FILTER BAG DETAIL



SECTION A-A

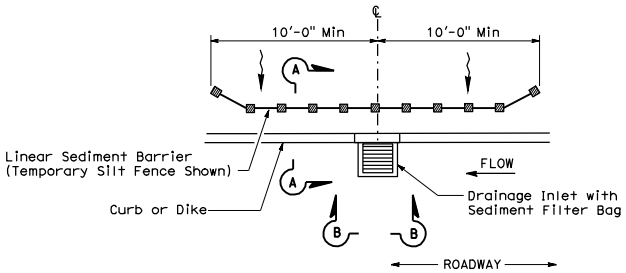


SECTION

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A) (CATCH BASIN WITH GRATE)

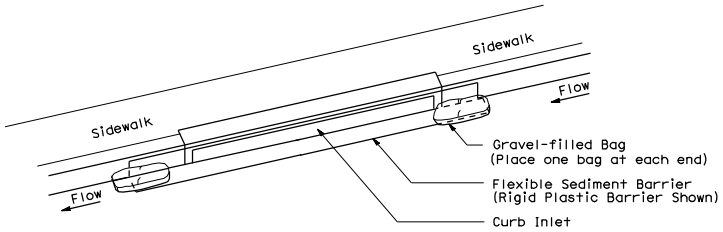
NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 5) (SEDIMENT FILTER BAG)



PERSPECTIVE

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6B) (CURB INLET WITHOUT GRATE)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

May 1, 2006
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT Robert B. Schott No. 3002 Signature 11-30-06 Renewal date 10-31-05 Date STATE OF CALIFORNIA

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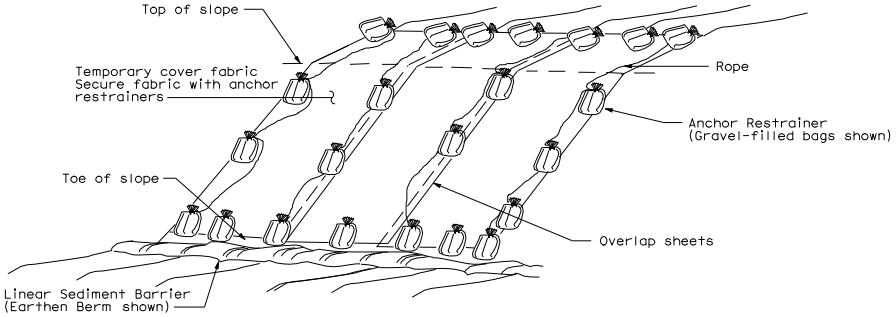
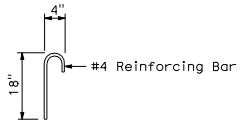
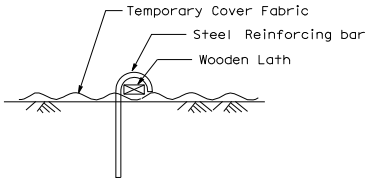


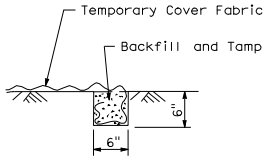
PERSPECTIVE
TEMPORARY COVER ON SLOPE



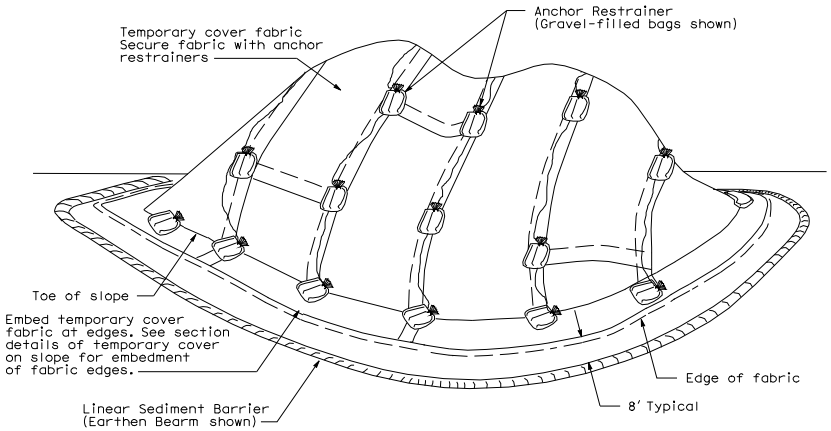
STEEL REINFORCING BAR DETAIL



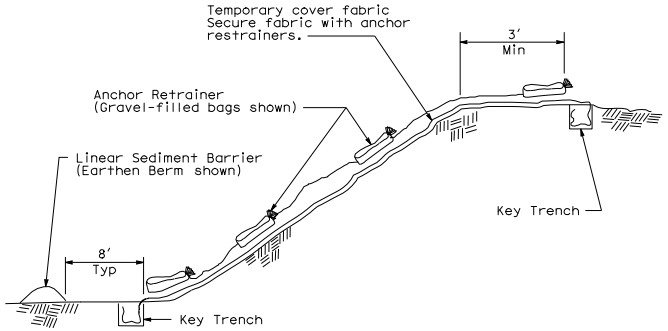
SECTION
ANCHOR RESTRAINER
(Steel bar and wooden lath)



SECTION
KEY TRENCH DETAIL



PERSPECTIVE
TEMPORARY COVER ON STOCKPILE



SECTION
TEMPORARY COVER ON SLOPE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY COVER)

NO SCALE

T53

2006 STANDARD PLAN T53

10-27-05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

May 1, 2006
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT Robert B. Schatt 3867 Signature 11-30-06 Renewal date 10-31-05 Date STATE OF CALIFORNIA

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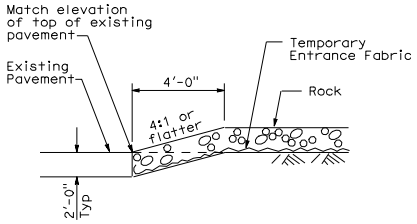
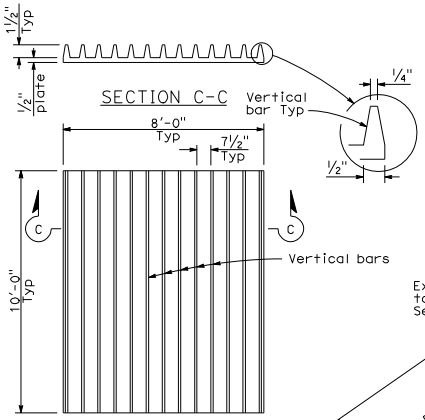
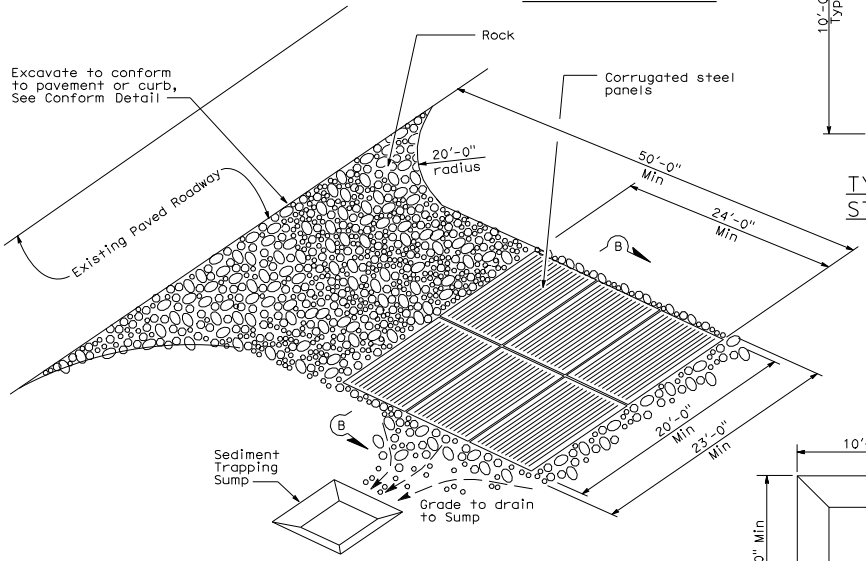


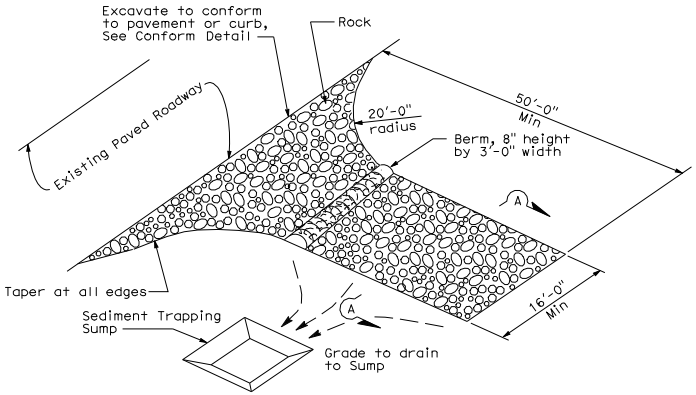
SECTION
CONFORM DETAIL



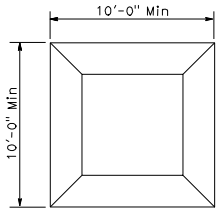
PLAN
TYPICAL CORRUGATED STEEL PANEL DETAIL



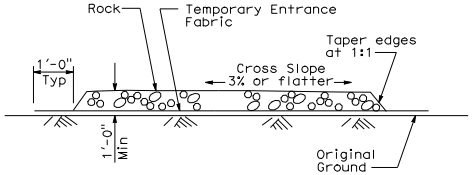
PERSPECTIVE
TEMPORARY CONSTRUCTION ENTRANCE (TYPE 2)



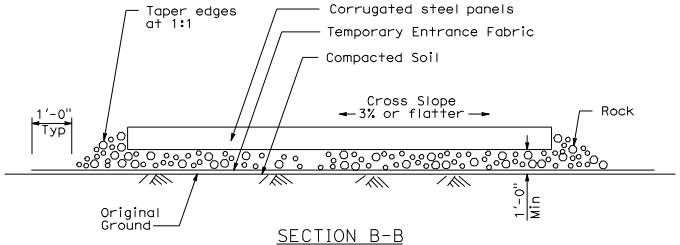
PERSPECTIVE
TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1)



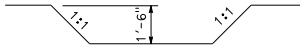
PLAN



SECTION A-A



SECTION B-B



ELEVATION
SEDIMENT TRAPPING SUMP

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CONSTRUCTION ENTRANCE)

NO SCALE

T58

2006 STANDARD PLAN T58

10-20-05

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

May 1, 2006
PLANS APPROVAL DATE

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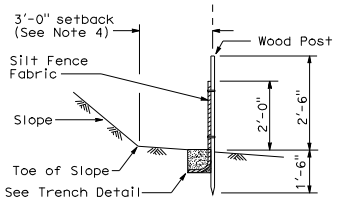
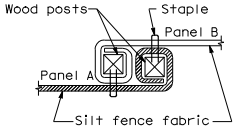
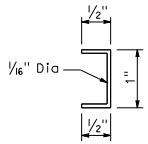


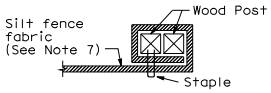
SECTION A-A
TEMPORARY SILT FENCE



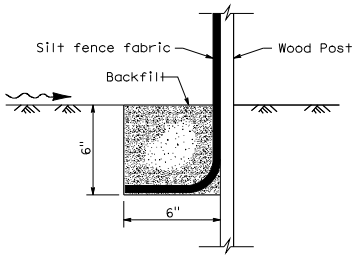
PLAN
POST AT JOINTS



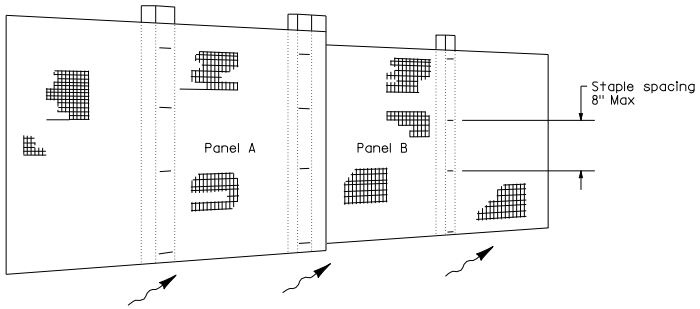
STAPLE DETAIL
(See Note 8)



PLAN
END POST DETAIL



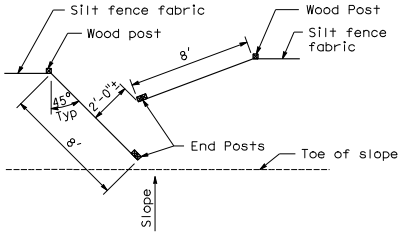
SECTION
TRENCH DETAIL



PERSPECTIVE
SILT FENCE PANELS AT JOINTS

NOTES:

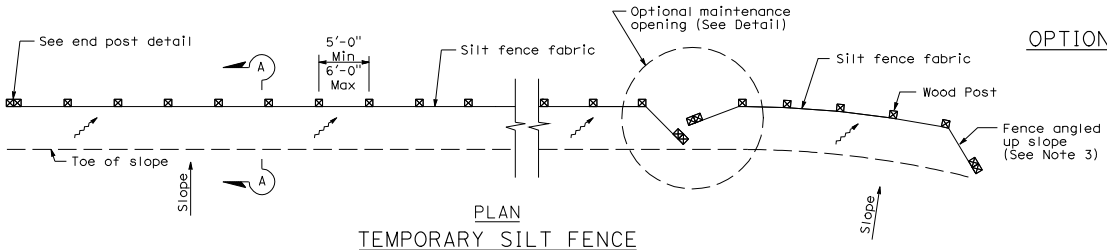
1. Install Temporary Silt Fence by first digging trench, driving posts, placing and securing fabric. Then backfill and tamp.
2. Reach length not to exceed 500 feet.
3. The down stream end of the Temporary Silt Fence shall have the last 8' angled up slope.
4. Setback dimensions may vary to fit field conditions.
5. Posts to overlap and fence fabric to fold around each post one full turn. Secure fabric with 4 staples for each post.
6. Posts shall be driven tightly together to prevent potential flow-through of sediment at the joint. The tops of the posts shall be secured to each other with wire.
7. For each end post, fence fabric shall be folded around two posts one full turn and secured with 4 staples.
8. Minimum of 4 staples shall be installed per post. Dimensions shown are typical.
9. Maintenance openings shall be constructed in a manner to ensure that sediment is retained by the temporary silt fence.
10. Joint sections shall not be placed at sump locations.



PLAN
OPTIONAL MAINTENANCE OPENING DETAIL

LEGEND

- Tamped backfill
- Slope direction
- Direction of flow



PLAN
TEMPORARY SILT FENCE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY SILT FENCE)

NO SCALE

T51

2006 STANDARD PLAN T51

227

10-27-05

Attachment CC

Water Pollution Control Best Management Practices List

ATTACHMENT CC
WATER POLLUTION CONROL
BEST MANAGEMENT PRACTICES LIST

PROJECT NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
Stage Gulch SR 116 Between Old Adobe Rd and Arnold Dr	04-283321
	PROJECT IDENTIFIER NUMBER 0400000772
CONTRACTOR NAME AND SITE ADDRESS	PROJECT SITE RISK LEVEL ☐ Risk Level 1 ☒ Risk Level 2 ☐ Risk Level 3

Water Pollution Control Best Management Practices List (WPCBMPL)

Project Phases included in WPCBMPL	Project Stages included in WPCBMPL
☒ Preliminary Phase	☒ 1 Stage
☒ Grading Phase	☐ 2 Stages
☒ Highway Construction Phase	☐ 3 Stages
☒ Highway Planting / Erosion Control Phase	☐ 4 Stages

Project Required BMP	Best Management Practice (BMP}	BMP ID	Total Quantity Required
	TEMPORARY SOIL STABILZATION		
x	Preservation of Existing Vegetation	SS-02	as needed
x	Hydraulic Mulch	SS-03	10,000 sqyd est
	Hydroseeding	SS-04	
	Soil Binders	SS-05	
	Straw Mulch	SS-06	
x	Geotextiles, Mats, Plastic Covers, and Erosion Control Blankets	SS-07	1,250 sqyd est
	Wood Mulching	SS-08	
	Earth Dikes/Drainage Swales and Lined Ditches	SS-09	
	Outlet Protection/Velocity Dissipation Devices	SS-10	
	Slope Drains	SS-11	
	Streambank Stabilization	SS-12	
x	Move In/Move Out Temporary Erosion Control		2 est
	TEMPORARY SEDIMENT CONTROL		
x	Silt Fence	SC-01	430 lf est
	Sediment/Distilling Basin	SC-02	
	Sediment Trap	SC-03	
x	Check Dams	SC-04	480 lf est
x	Fiber Rolls	SC-05	9,000 lf est
	Gravel Bag Berm	SC-06	
	Sandbag Barrier	SC-07	
	Straw Bale Barrier	SC-09	
x	Storm Drain Inlet Protection	SC-10	19 est

ATTACHMENT CC
WATER POLLUTION CONROL
BEST MANAGEMENT PRACTICES LIST

PROJECT NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
Stage Gulch SR 116 Between Old Adobe Rd and Arnold Dr	04-283821
	PROJECT IDENTIFIER NUMBER 0400000772

Water Pollution Control Best Management Practices List

Project Required BMP	Best Management Practice (BMP)	BMP ID	Total Quantity Required
	WIND EROSION CONTROL		
x	Wind Erosion Control	WE-01	as needed
	TRACKING CONTROLS		
x	Stabilized Construction Entrance/Exit	TC-01	3 est
	Stabilized Construction Roadway	TC-02	
	Entrance/Exit Tire Wash	TC-03	
x	Street Sweeping	SC-07	as needed
	NON-STORMWATER MANAGEMENT		
x	Water Conservation Practices	NS-01	as needed
x	Dewatering Operations	NS-02	as needed
x	Paving and Grinding Operations	NS-03	as needed
	Temporary Stream Crossing	NS-04	
x	Clear Water Diversion	NS-05	as needed
x	Illicit Connection/Illegal Discharge Detection and Reporting	NS-06	as needed
x	Potable Water/Irrigation	NS-07	as needed
x	Vehicle and Equipment Cleaning	NS-08	as needed
x	Vehicle and Equipment Fueling	NS-09	as needed
x	Vehicle and Equipment Maintenance	NS-10	as needed
	Pile driving Operations	NS-11	
x	Concrete Curing	NS-12	as needed
	Material and Equipment Use Over Water	NS-13	
	Concrete Finishing	NS-14	
	Structure Demolition/Removal Over or adjacent to Water	NS-15	
	WASTE MANAGEMENT AND POLLUTION CONTROL		
x	Material Delivery and Storage	WM-01	as needed
x	Material Use	WM-02	as needed
x	Stockpile Management	WM-03	as needed
x	Spill Prevention and Control	WM-04	as needed
x	Solid Waste Management	WM-05	as needed
x	Hazardous Waste Management	WM-06	as needed
	Contaminated Soil Management	WM-07	
x	Concrete Waste Management	WM-08	as needed
x	Sanitary/Septic Waste Management	WM-09	as needed
x	Liquid Waste Management	WM-10	as needed

ATTACHMENT CC
WATER POLLUTION CONTROL
BEST MANAGEMENT PRACTICES LIST

PROJECT NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
Stage Gulch SR 116 Between Old Adobe Rd and Arnold Dr	04-283824
	PROJECT IDENTIFIER NUMBER 0400000772

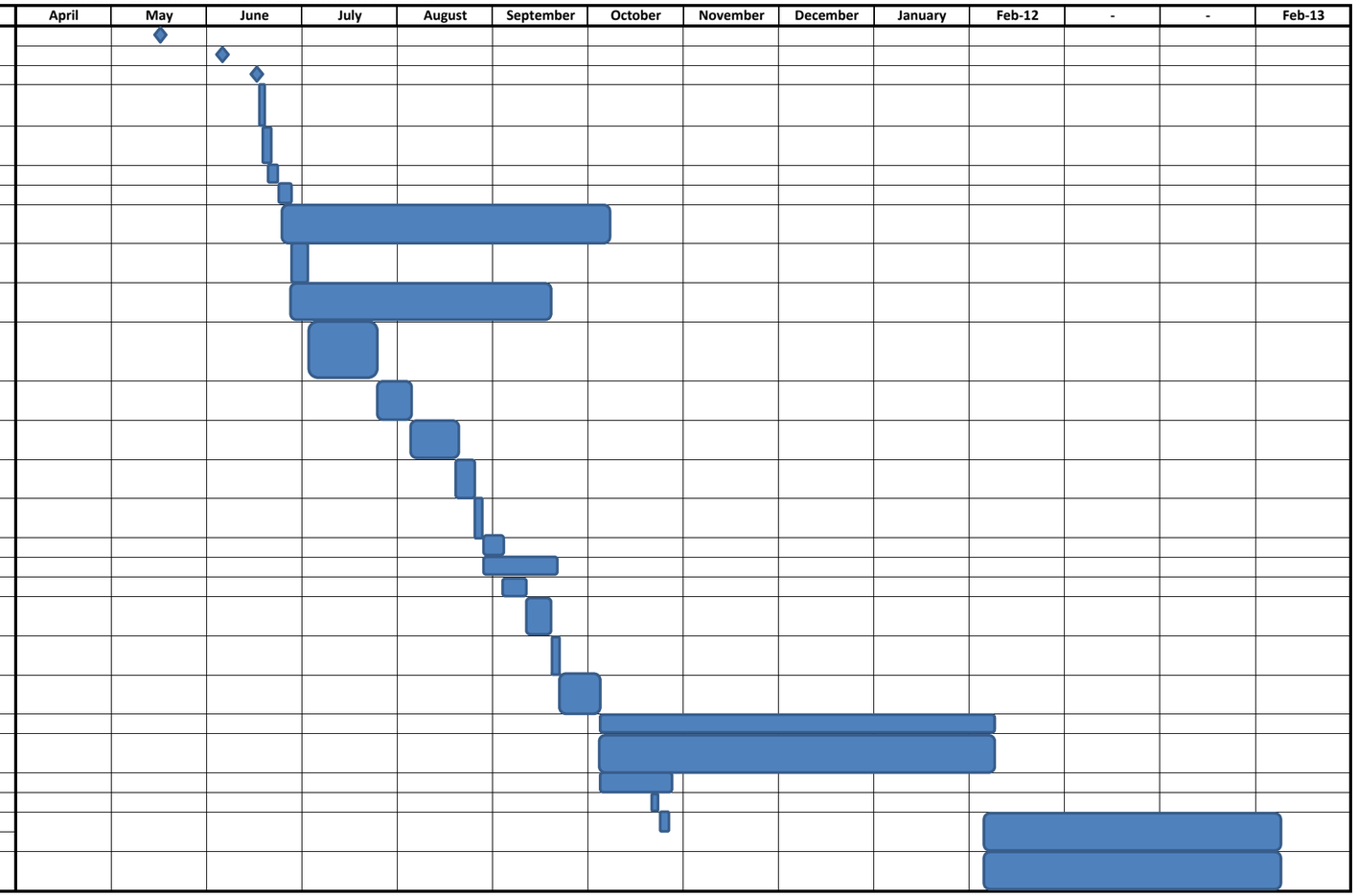
No.	Water Pollution Control Management Practices List			
1	Location: General-Applicable to entire site	Project Phase: Stage: 1	Location shown on WPCD sheet number: All	Disturbed Soil Area : 2.87 acres
	Best Management Practice (BMP)		**BMP ID**	**Quantity Required**
	Temporary Silt Fence		SC-01	430 lf
	Temporary Fiber Roll		SC-05	9,000 lf
	Temporary Check Dam		SC-04	480 lf
	Temporary Cover		SS-07	1,250 sqyd
	Temporary Hydraulic Mulch (BFM)		SS-03	15,490 sqyd
	Temporary Fence (ESA)		SS-02	940 LF
	Temporary Construction Entrance		TC-01	4 EA
	Temporary Concrete Washout (Portable)		WM-08	As needed
	Temporary Drainage Inlet Protection		SC-10	19
	Street Sweeping		SC-07	1
	Wind Erosion Control		WE-1	as needed
	Water Conservation Practices		NS-01	as needed
	Dewatering Operations		NS-02	as needed
	Paving and Grinding Operations		NS-03	as needed
	Clear Water Diversion		NS-05	as needed
	Illicit Connection/Illegal Discharge Detection and Reporting		NS-06	as needed
	Potable Water/Irrigation		NS-07	as needed
	Vehicle and Equipment Cleaning		NS-08	as needed
	Vehicle and Equipment Fueling		NS-09	as needed
	Vehicle and Equipment Maintenance		NS-10	as needed
	Concrete Curing		NS-12	as needed
	Material Delivery and Storage		WM-01	as needed
	Material Use		WM-02	as needed
	Stockpile Management		WM-03	as needed

	Spill Prevention and Control	WM-04	as needed
	Solid Waste Management	WM-05	as needed
	Hazardous Waste Management	WM-06	as needed
	Concrete Waste Management	WM-08	as needed
	Sanitary/Septic Waste Management	WM-09	as needed
	Liquid Waste Management	WM-10	as needed

Attachment DD
Water Pollution Control Schedule

WATER POLLUTION CONTROL IMPLEMENTATION SCHEDULE

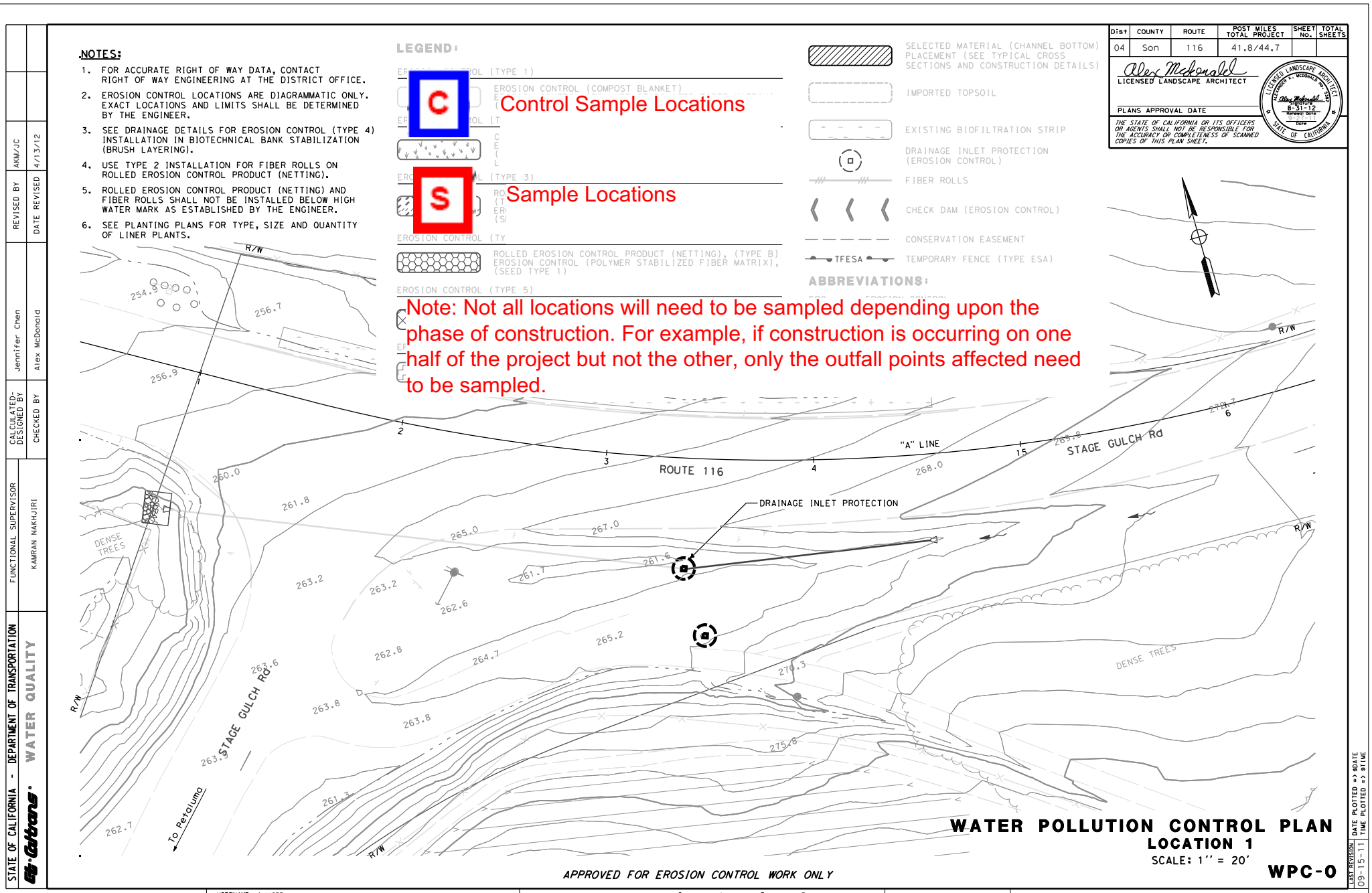
ID	Task Name	Starting Date	Completion Date
1	Bid opening	5/15/2012	
2	Award (historically takes 3 weeks Min)	6/5/2012	
3	Begin Cons. (15 day per CSWPPP)	6/19/2012	
4	Construction of temporary railing and crash cushion, and temporary fence for ESA. (1 day)	6/19/2012	6/19/2012
5	Construction of temporary creek diversion system, and installation of dewatering features, as necessary (1 day)	6/20/2012	6/20/2012
6	Clearing and grubbing (3 days)	6/21/2012	6/25/2012
7	Staking (3 days)	6/26/2012	6/28/1012
8	Install temporary erosion and sediment control measures and practice Construction Site Management (Location 3)	6/26/2012	10/1/2012
9	Excavation of native material from creek bed and placement of this material in stockpile (5 days)	6/29/2012	7/5/2012
10	Install temporary covers and temporary sediment control measures for the stockpiles (Location 3)	6/29/2012	9/17/2012
11	Excavation of area between creek and SR116 down to form refugia and dispersal areas (RDAs) (15 days, due to access constraint, exclusion zones, large excavation volume)	7/6/2012	7/26/2012
12	Removal and replacement of MBGR and dikes, replacement/installation of new roadway drainage system features (6 days)	7/27/2012	8/5/2012
13	Excavation of new channel alignment reaches (10 days) (access constraint due to exclusion zones)	8/6/2012	8/19/2012
14	Biotechnical bank stabilization (brush layering) of new creek channel reaches with (5 days)	8/20/2012	8/26/2012
15	Placement of stockpiled native material in new creek channel reaches (2 days)	8/27/2012	8/28/2012
16	Construction of RDA spillways (4 days)	8/29/2012	9/3/2012
17	Install Temporary Concrete Washouts (portable)	8/29/2012	9/17/2012
18	Removal of existing box culverts (5 days)	9/4/2012	9/10/2012
19	Biotechnical bank stabilization (brush layering) where box culverts removed (5 days)	9/11/2012	9/16/2012
20	Placement of stockpiled native material at removed box culvert locations (1 day)	9/17/2012	9/17/2012
21	Excavation of area between creek and westerly State right-of-way boundary (10 days)	9/18/2012	10/1/2012
22	Site planting (All Locations) (90 days)	10/2/2012	2/6/2013
23	Install temporary erosion and sediment control measures and practice Construction Site Management (All Locations)	10/2/2012	2/6/2013
24	Install Permanent Erosion Control and final stabilization (Location 3)	10/2/2012	10/25/2012
25	Reconstruct fence (1 days)	10/23/12012	10/23/2012
26	De-installation of dewatering facilities (2 days)	10/24/2012	10/25/2012
27	Plant Establishment Work (All Locations) (1,250 days)	2/6/2013	2/6/2018
28	Practice Construction Site Management and install erosion and sediment control measures as needed (All Locations)	2/6/2013	2/6/2018



Revision Date: 4/20/2012

All "Days" = Working Days

Conceptual Sampling Locations



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER A. McDONALD No. 3367 STATE OF CALIFORNIA
Alex McDonald
Expiration 8-31-12
Renewal Date
Date

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CONTRACTOR TO PROTECT ALL INLETS WITHIN VICINITY OF WORK.

BMPS SHALL BE ADJUSTED OR ADDED IN THE FIELD AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER

ALL DISTURBED SOIL AREA SHALL BE COVERED OR ADEQUATELY PROTECTED PRIOR TO RAIN OR PERIODS OF INACTIVITIES OVER 14 DAYS

WATER POLLUTION CONTROL LEGEND:

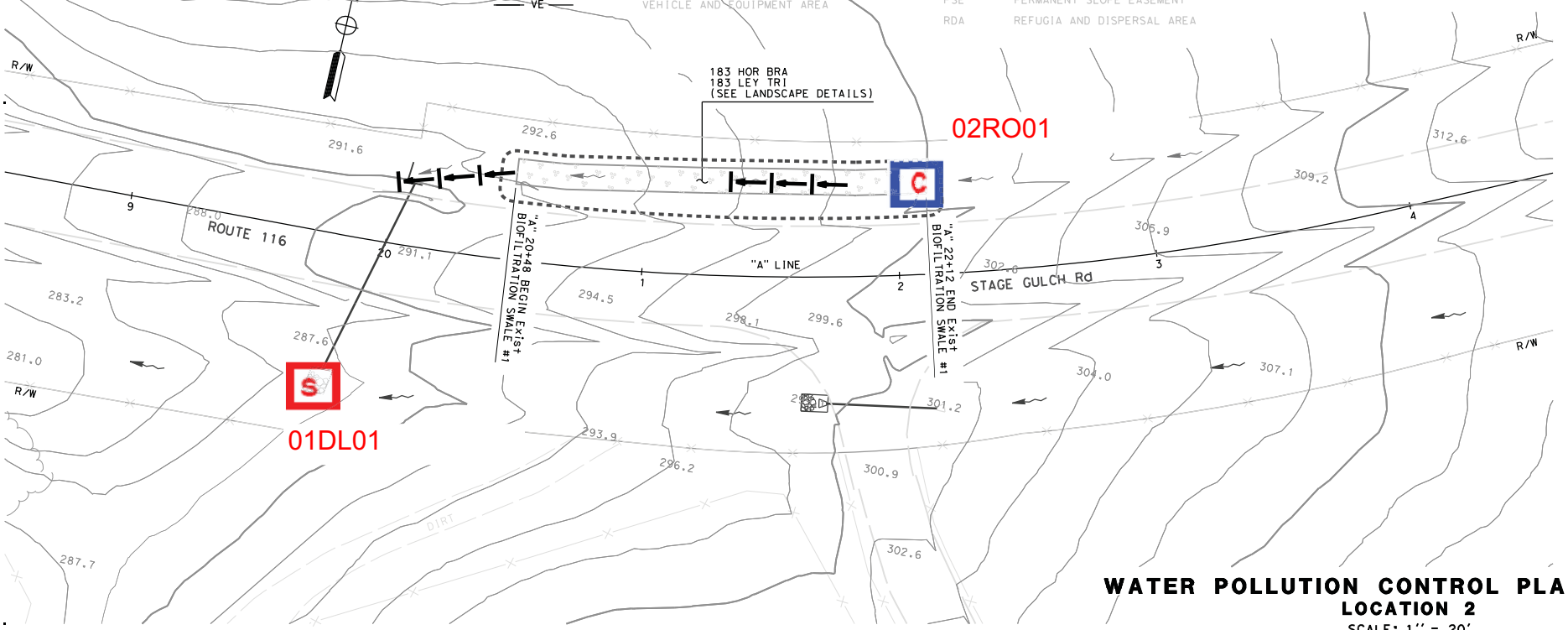
- TEMPORARY HYDRAULIC MULCH (BFM)
- TEMPORARY FIBER ROLL
- TSF — TEMPORARY SILT FENCE
- TEMPORARY DRAINAGE INLET PROTECTION
- TEMPORARY CHECK DAM
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY COVER
- CWM — TEMPORARY COVER
- TSD — TEMPORARY SLOPE DRAIN
- TCD — TEMPORARY CREEK DIVERSION
- VE — VEHICLE AND EQUIPMENT AREA

LEGEND:

- LIMIT OF ROADSIDE CLEARING
- EXISTING BIOFILTRATION STRIP
- EROSION CONTROL (TYPE 2) (SEE EROSION CONTROL SHEETS)
- MAINTAIN EXISTING PLANTED AREAS
- TEMPORARY FENCE (TYPE BW)
- 4' TEMPORARY GATEWAY
- Std Plan No. DETAIL
- TFESA — TEMPORARY FENCE (TYPE ESA)
- CONSERVATION EASEMENT
- PERMANENT DRAINAGE EASEMENT

ABBREVIATIONS:

ESA	ENVIRONMENTALLY SENSITIVE AREA
PDE	PERMANENT DRAINAGE EASEMENT
PSE	PERMANENT SLOPE EASEMENT
RDA	REFUGIA AND DISPERSAL AREA



WATER POLLUTION CONTROL PLAN
LOCATION 2
SCALE: 1" = 20'

WPC-1

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
WATER QUALITY	Kamran Nakhjiri	Jennifer Chen	Alex McDonald	AKM/JC	4/13/12

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

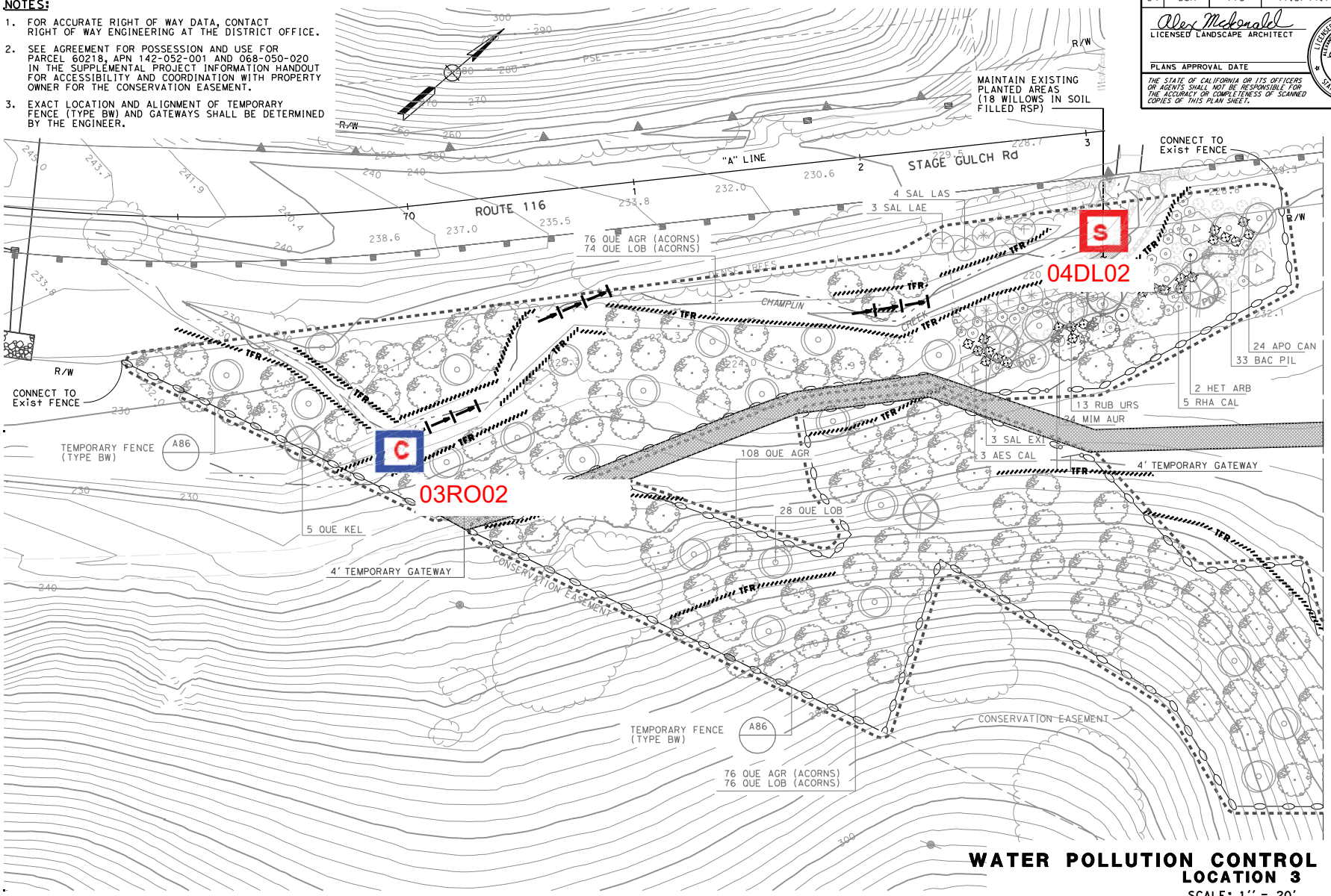
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER K. McDONALD NO. 3343 Signature 8-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
3. EXACT LOCATION AND ALIGNMENT OF TEMPORARY FENCE (TYPE BW) AND GATEWAYS SHALL BE DETERMINED BY THE ENGINEER.



WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11 DATE PLOTTED => \$DATE TIME PLOTTED => \$TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => \$USER DGN FILE => \$REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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LICENSED LANDSCAPE ARCHITECT ALEXANDER K. McDONALD No. 3343 Signature 5-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
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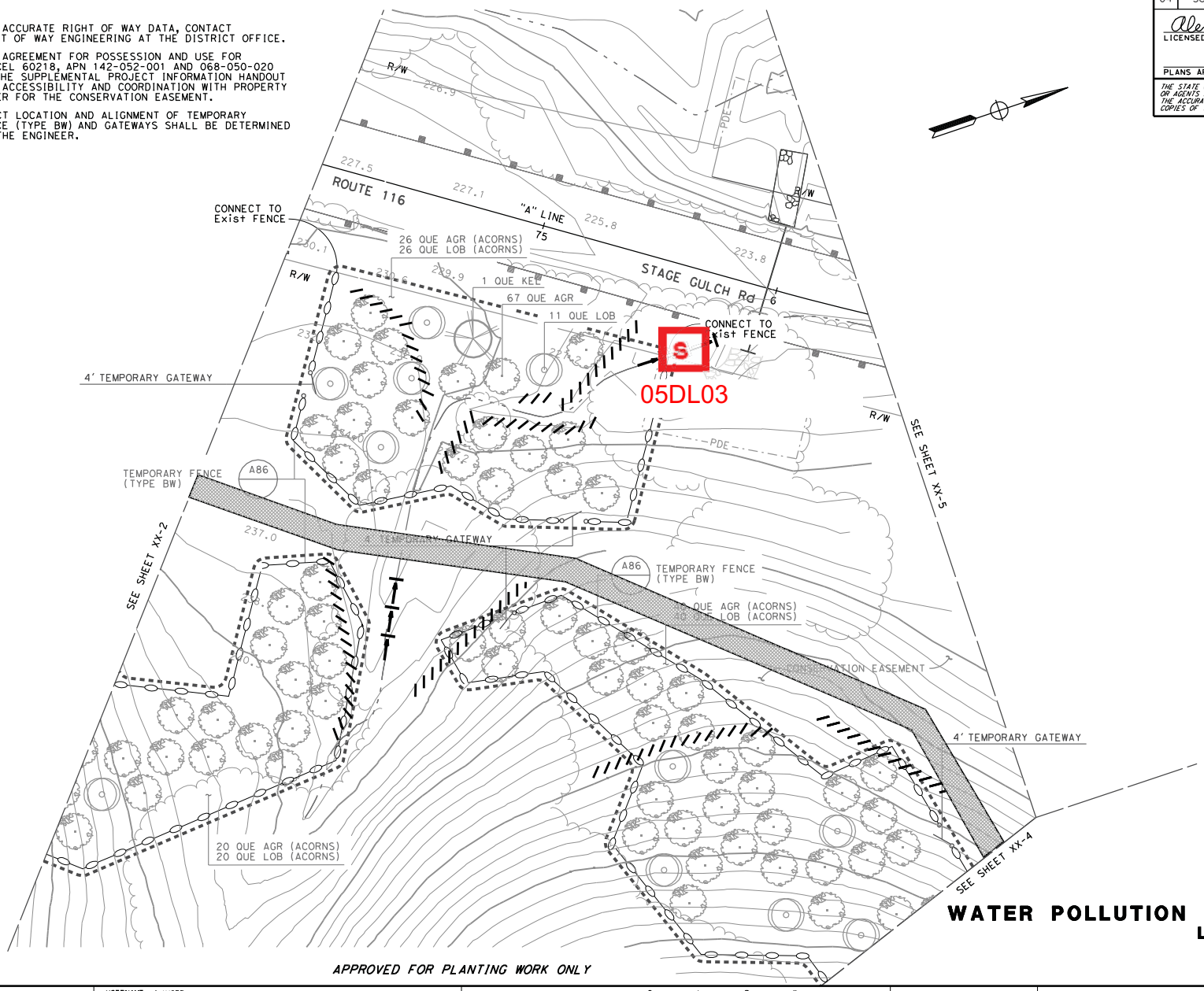

APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

WPC-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0792
PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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LICENSED LANDSCAPE ARCHITECT — ALEXANDER K. MCDONALD — No. 5543 — Expiration 6-31-12 — Renewal Date — Date — STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
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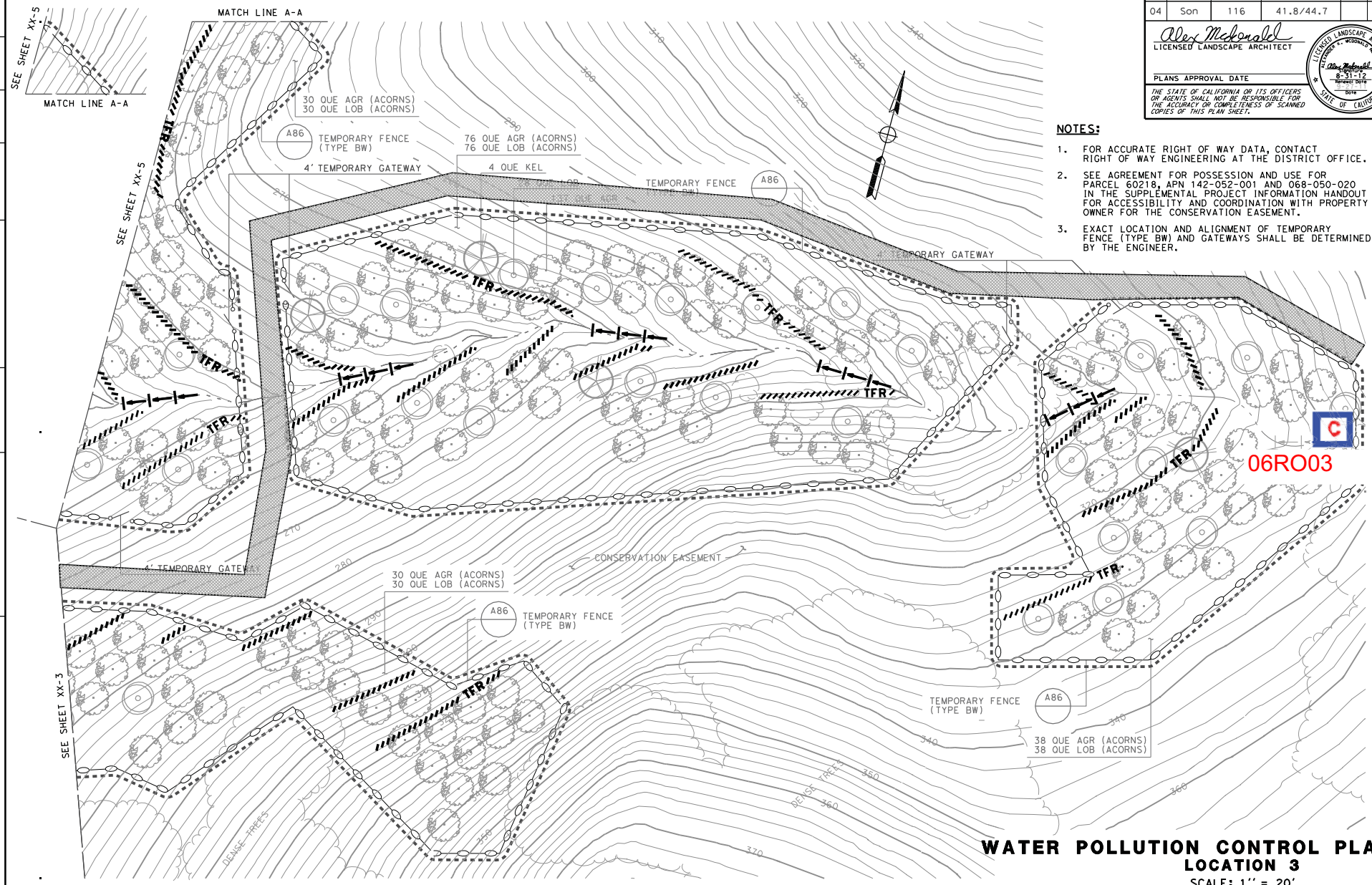

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	Jennifer Chen
Caltrans WATER QUALITY	KAMRAN NAKHJIRI	CHECKED BY	Alex McDonald
		REVISED BY	AKM/JC
		DATE REVISED	4/13/12

LAST REVISION 09-15-11 — DATE PLOTTED => $DATE — TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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LICENSED LANDSCAPE ARCHITECT ALEXANDER K. MCDONALD 5247 8-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NO STATE NEGOTIATED VEHICULAR ACCESS WEST OF "C" LINE ACROSS CHAMPLIN CREEK ALLOWED.
3. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET
4. SEE AGREEMENT FOR POSSESSION AND USE FOR PARCEL 60218, APN 142-052-001 AND 068-050-020 IN THE SUPPLEMENTAL PROJECT INFORMATION HANDOUT FOR ACCESSIBILITY AND COORDINATION WITH PROPERTY OWNER FOR THE CONSERVATION EASEMENT.
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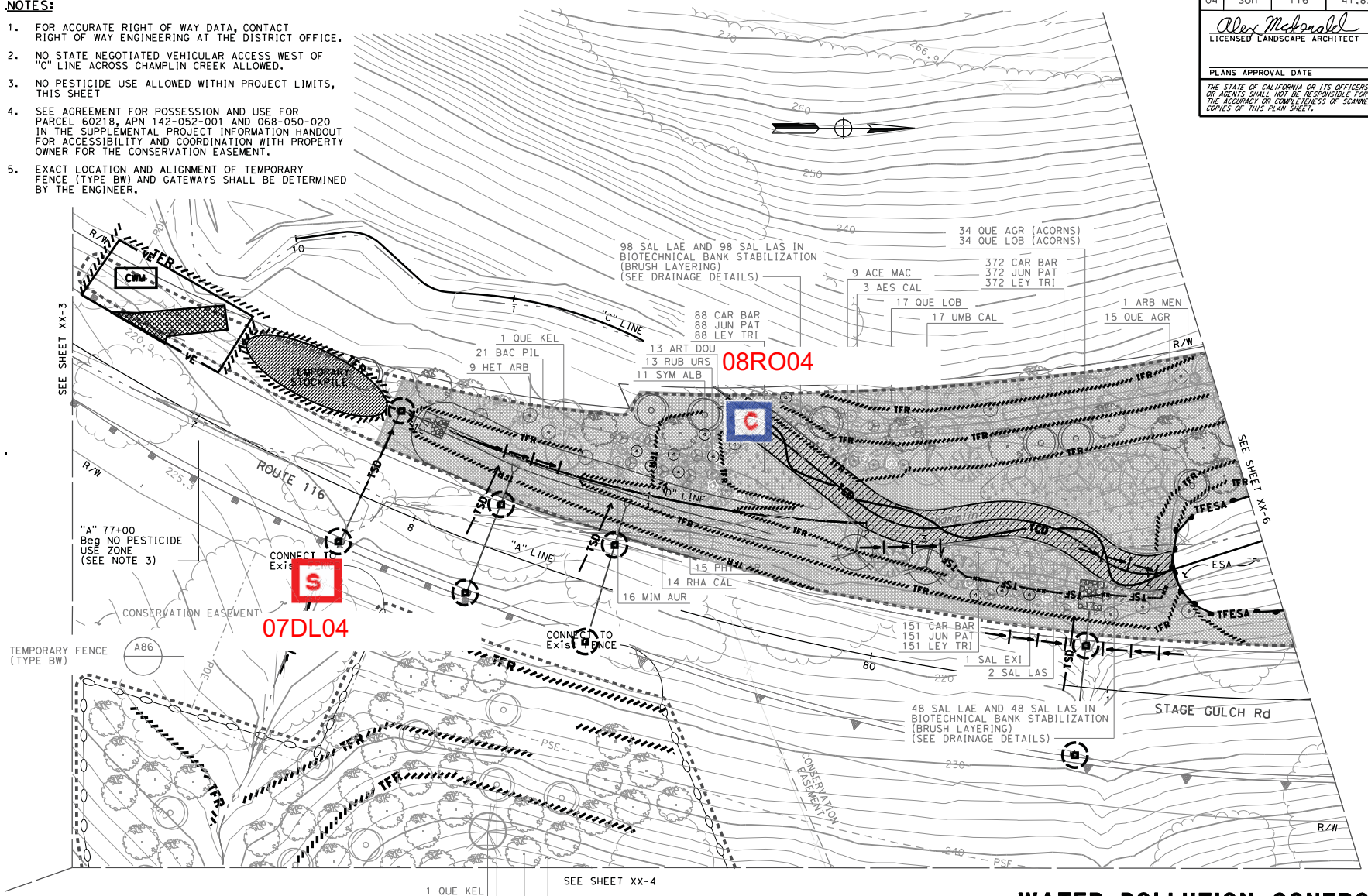

WATER POLLUTION CONTROL PLAN

LOCATION 3

SCALE: 1" = 20'

WPC-5

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans · WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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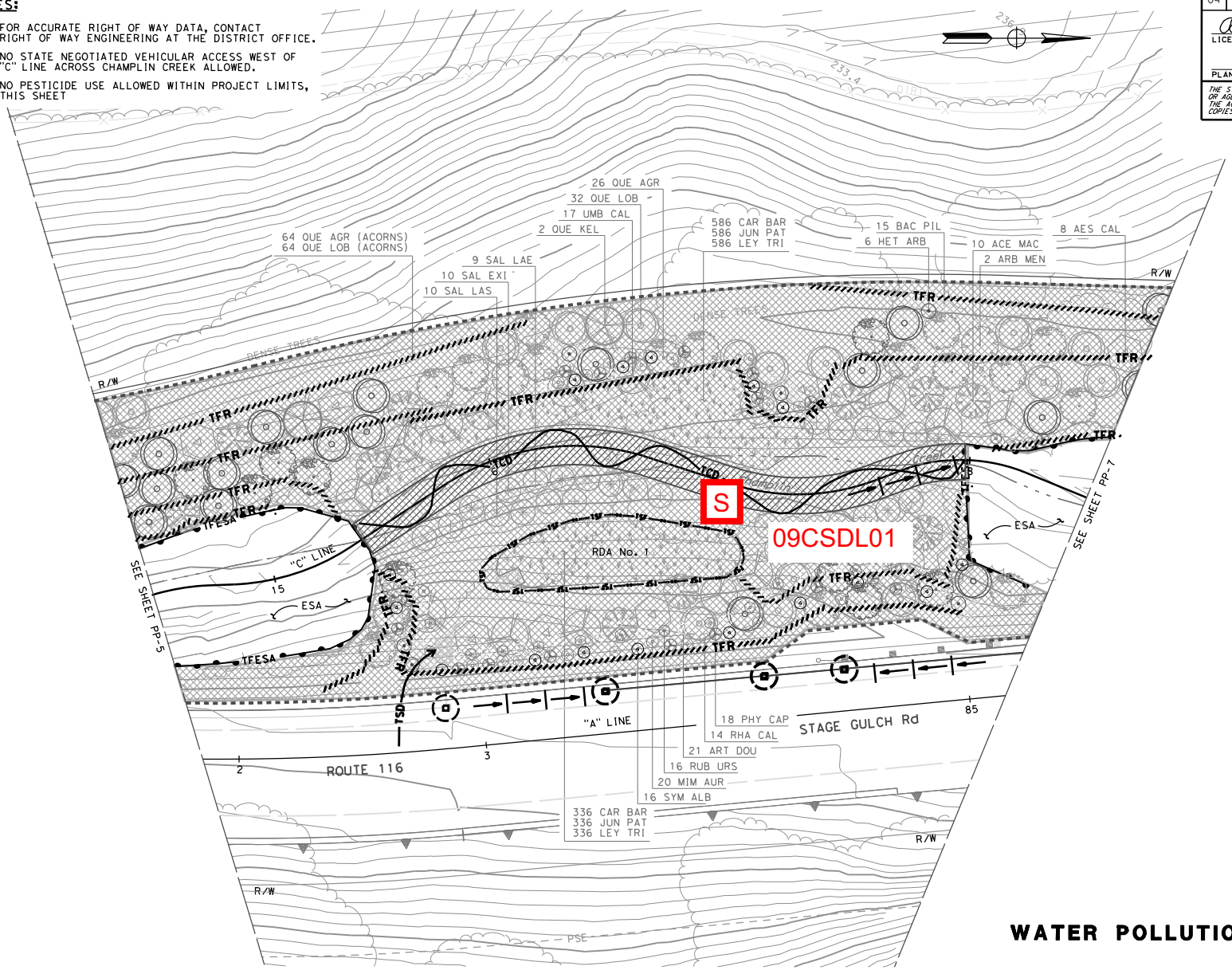
LICENSED LANDSCAPE ARCHITECT ALEXANDER K. MCDONALD No. 2132 — Alex McDonald — 8-31-12 — Renewal Date — 3-31-13 — Date — STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NO STATE NEGOTIATED VEHICULAR ACCESS WEST OF "C" LINE ACROSS CHAMPLIN CREEK ALLOWED.
3. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET



APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

WPC-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0792
PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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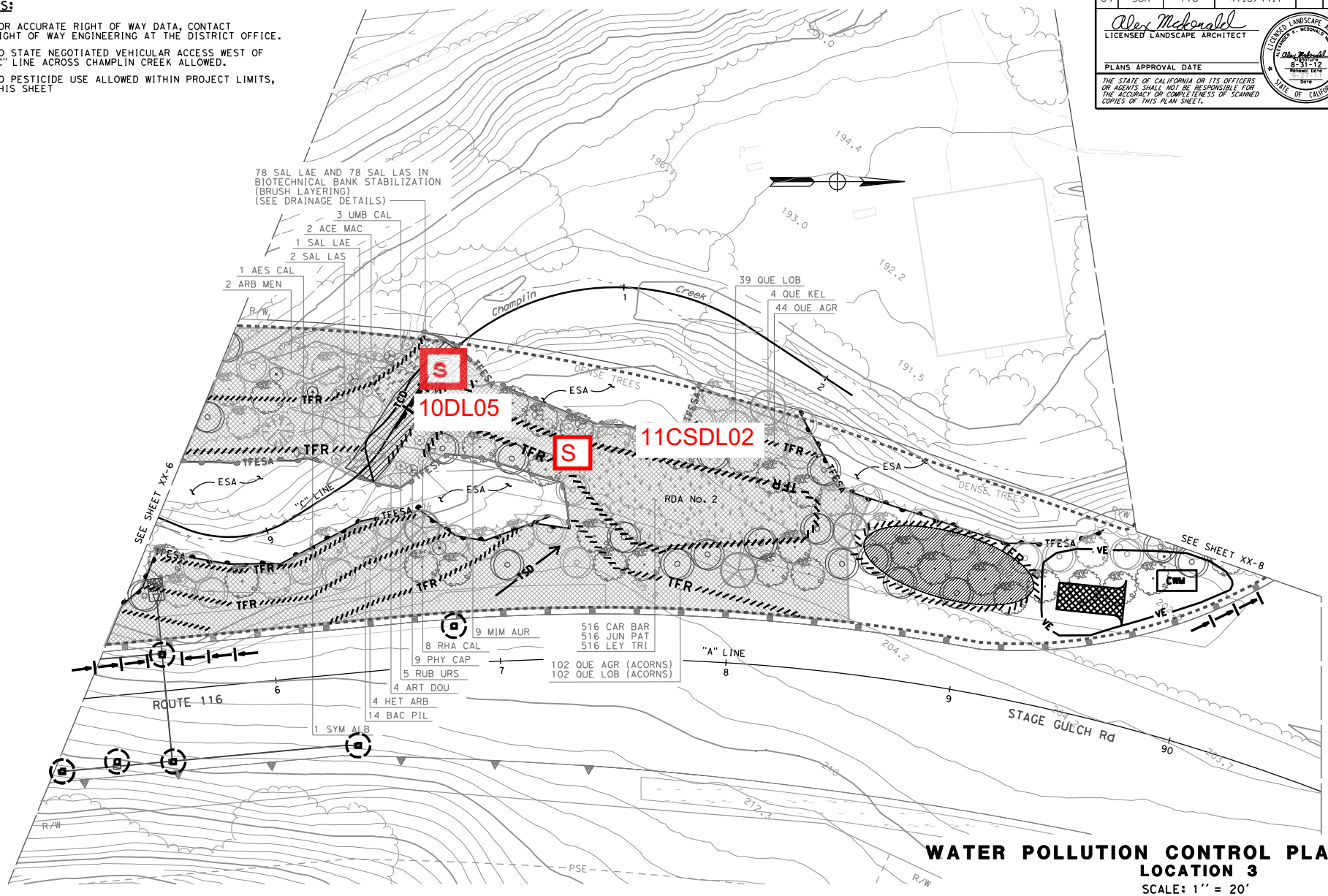
LICENSED LANDSCAPE ARCHITECT
ALEXANDER T. McDONALD No. 3343
Alex McDonald
Signature
8-31-12
Renewal Date
Date
STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NO STATE NEGOTIATED VEHICULAR ACCESS WEST OF "C" LINE ACROSS CHAMPLIN CREEK ALLOWED.
3. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET



WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1'' = 20'

WPC-7

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRANA NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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LICENSED LANDSCAPE ARCHITECT ALEXANDER A. McDONALD No. 3343 Alex McDonald Expiration 8-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTES:

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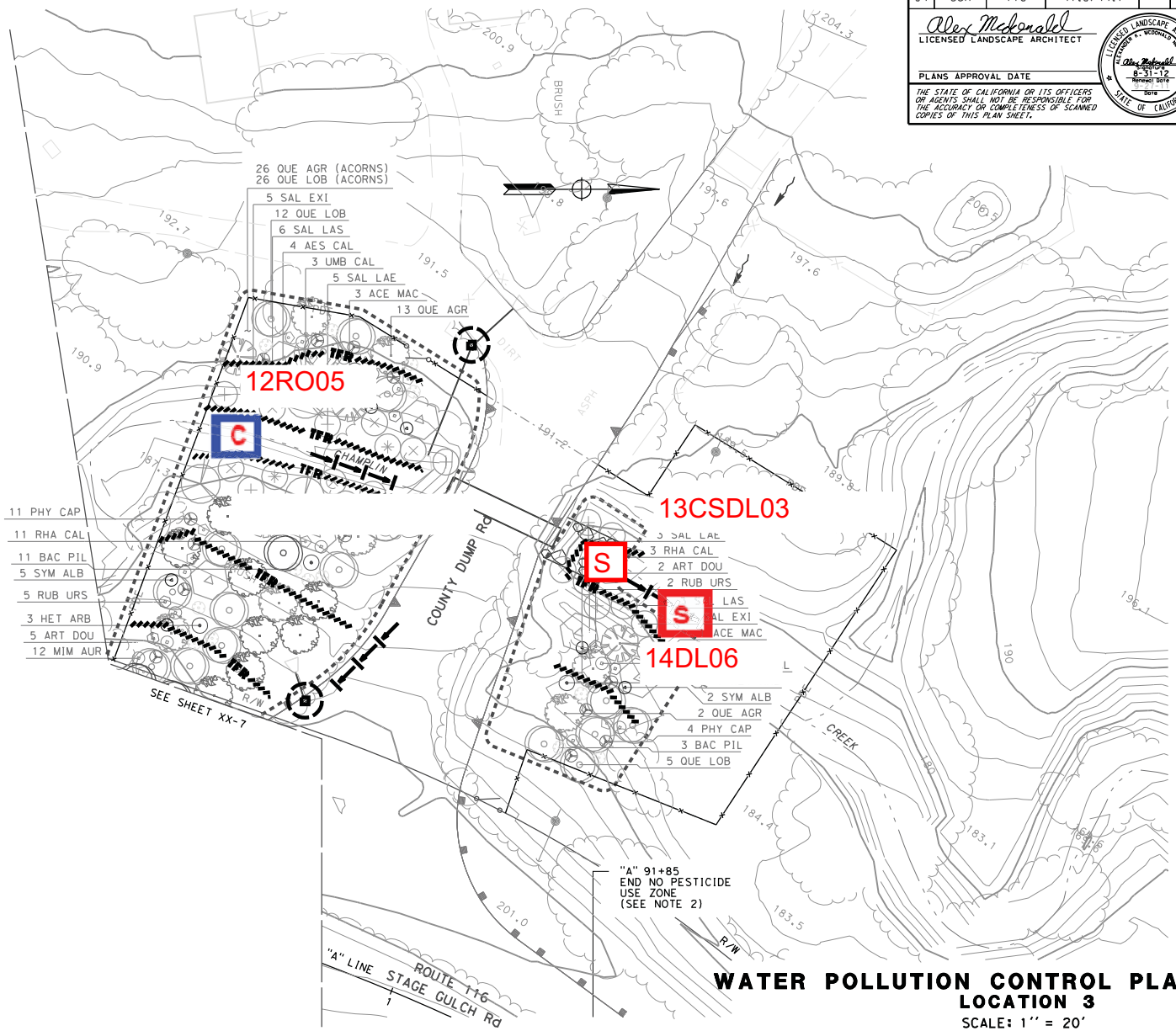
2. NO PESTICIDE USE ALLOWED WITHIN PROJECT LIMITS, THIS SHEET



APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN
LOCATION 3
SCALE: 1" = 20'

WPC-8

CALCULATED-DESIGNED BY	Jennifer Chen	REVISED BY	AKM/JC
CHECKED BY	Alex McDonald	DATE REVISED	4/13/12

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

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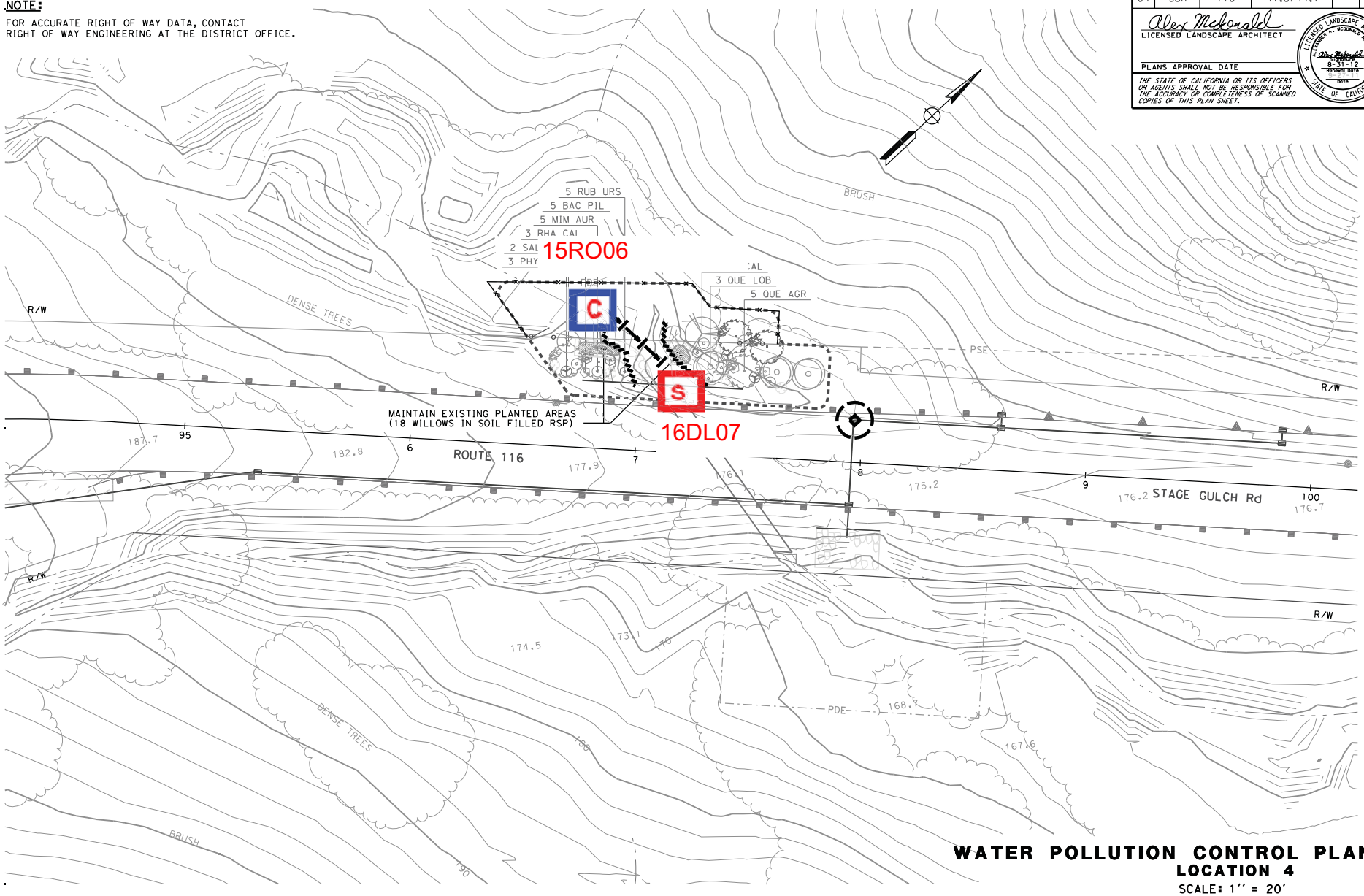
LICENSED LANDSCAPE ARCHITECT ALEXANDER K. MCDONALD No. 5347 Alex McDonald Signature 8-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN
LOCATION 4
SCALE: 1'' = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
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DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0792
PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

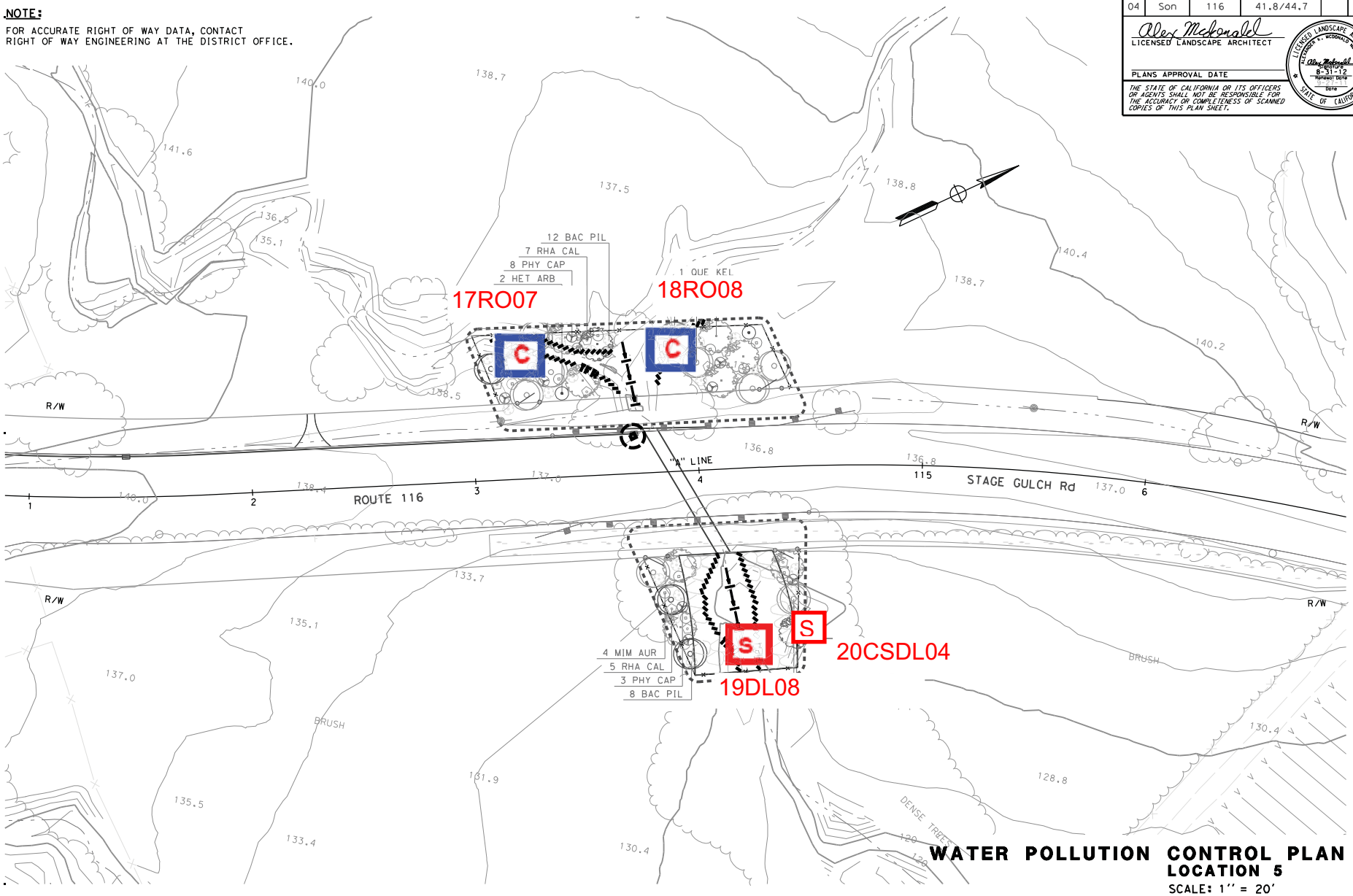
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER K. MCDONALD No. 5243 STATE OF CALIFORNIA
Alex McDonald
8-31-12
REGISTRANT'S DATE
Date

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



APPROVED FOR PLANTING WORK ONLY

WATER POLLUTION CONTROL PLAN
LOCATION 5
SCALE: 1" = 20'

WPC-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

FUNCTIONAL SUPERVISOR: Kamran Nakhjiri
CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald
REVISED BY: AKM/JC
DATE REVISED: 4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0792
PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

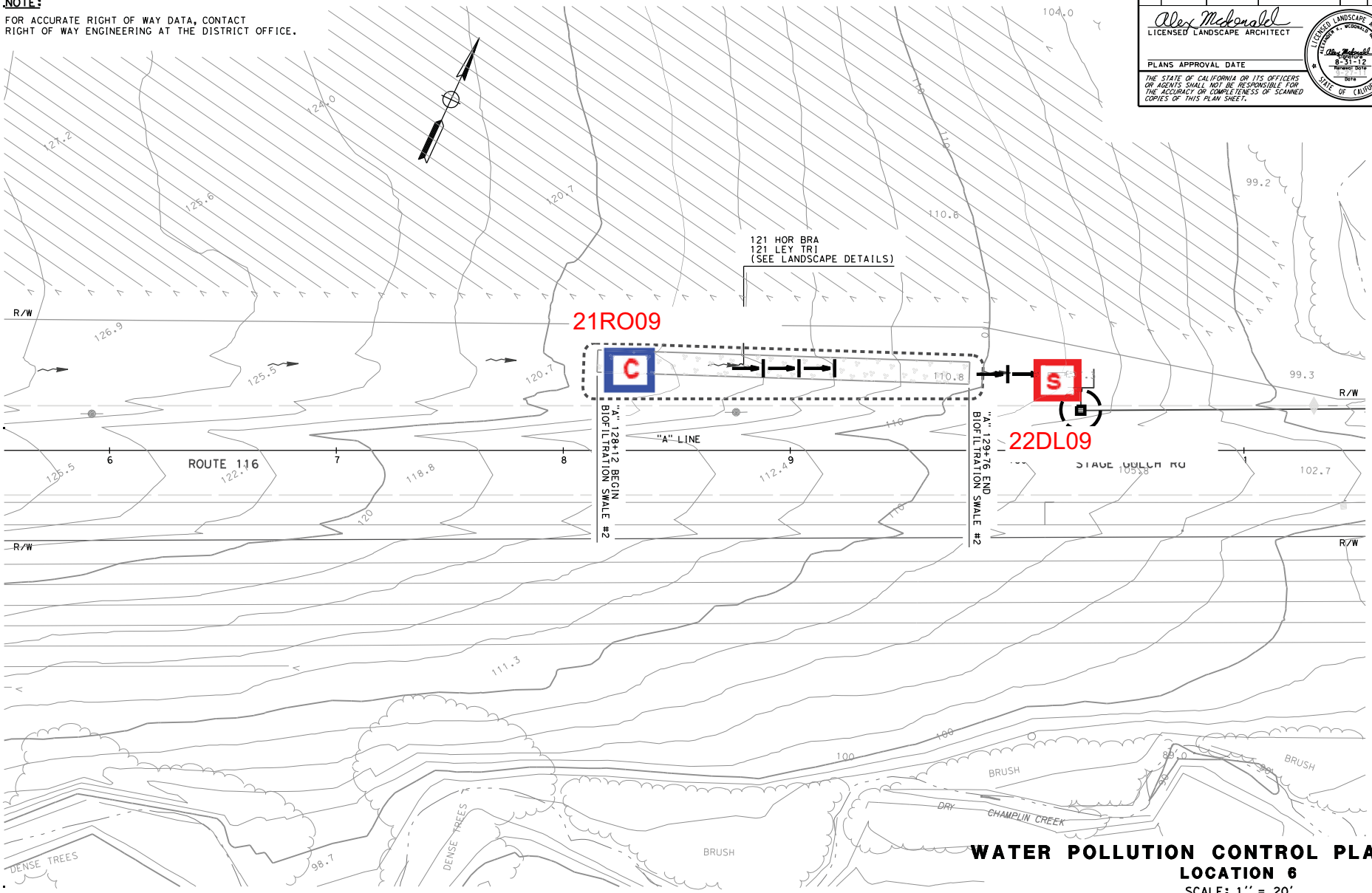
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER T. McDONALD No. 3362 STATE OF CALIFORNIA
Alex McDonald
Signature
8-31-12
Renewal Date
Date

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN

LOCATION 6

SCALE: 1'' = 20'

APPROVED FOR PLANTING WORK ONLY

WPC-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	Caltrans
WATER QUALITY	
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI
CALCULATED-DESIGNED BY	Alex McDonald
CHECKED BY	Jennifer Egawa
REVISED BY	AKM/JC
DATE REVISED	4/13/12

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

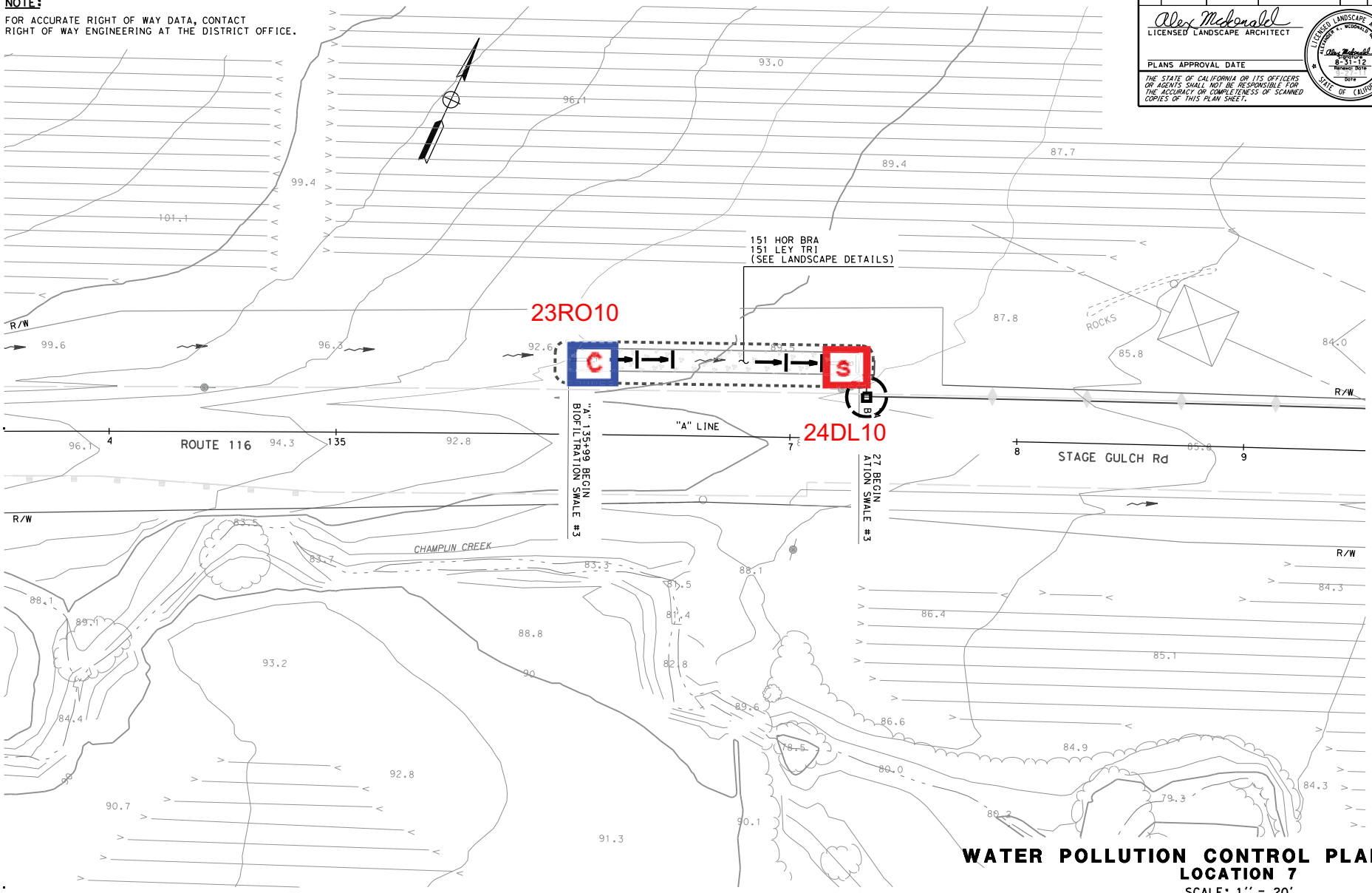
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
ALEXANDER K. MCDONALD No. 3262
Alex McDonald
Signature
8-31-12
Renewal Date
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN
LOCATION 7
SCALE: 1" = 20'

WPC-12

APPROVED FOR PLANTING WORK ONLY

REVISED BY	DATE REVISED
AKM/JC	4/13/12

CALCULATED-DESIGNED BY	CHECKED BY
Jennifer Chen	Alex McDonald

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

Alex McDonald
LICENSED LANDSCAPE ARCHITECT

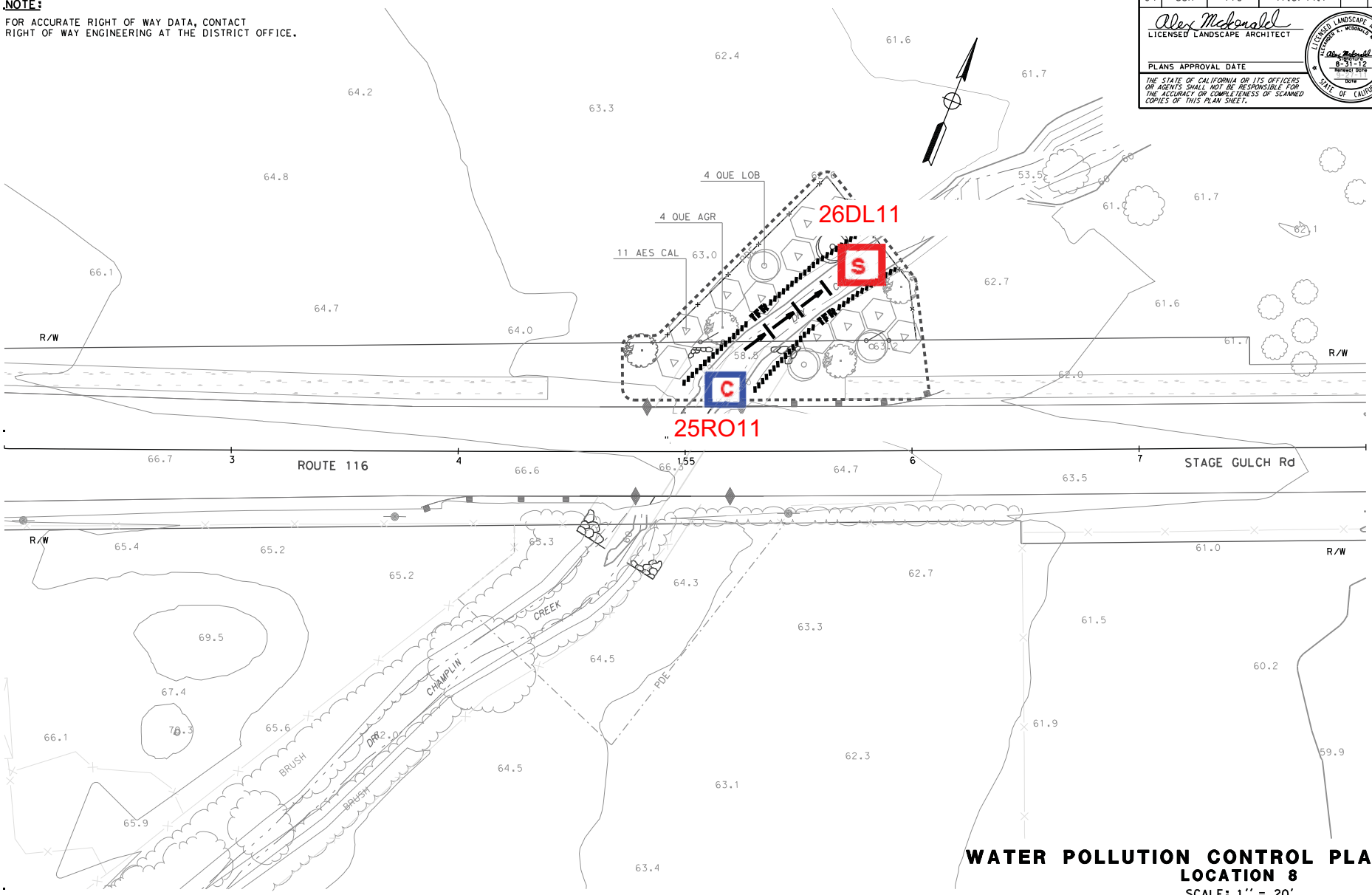
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER T. McDONALD 8-31-12 Renewal Date Date STATE OF CALIFORNIA

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



WATER POLLUTION CONTROL PLAN
LOCATION 8
SCALE: 1'' = 20'

WPC-13

APPROVED FOR PLANTING WORK ONLY

REVISED BY	AKM/JC
DATE REVISED	4/13/12
CALCULATED-DESIGNED BY	Jennifer Chen
CHECKED BY	Alex McDonald
FUNCTIONAL SUPERVISOR	KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	116	41.8/44.7		

LICENSED LANDSCAPE ARCHITECT

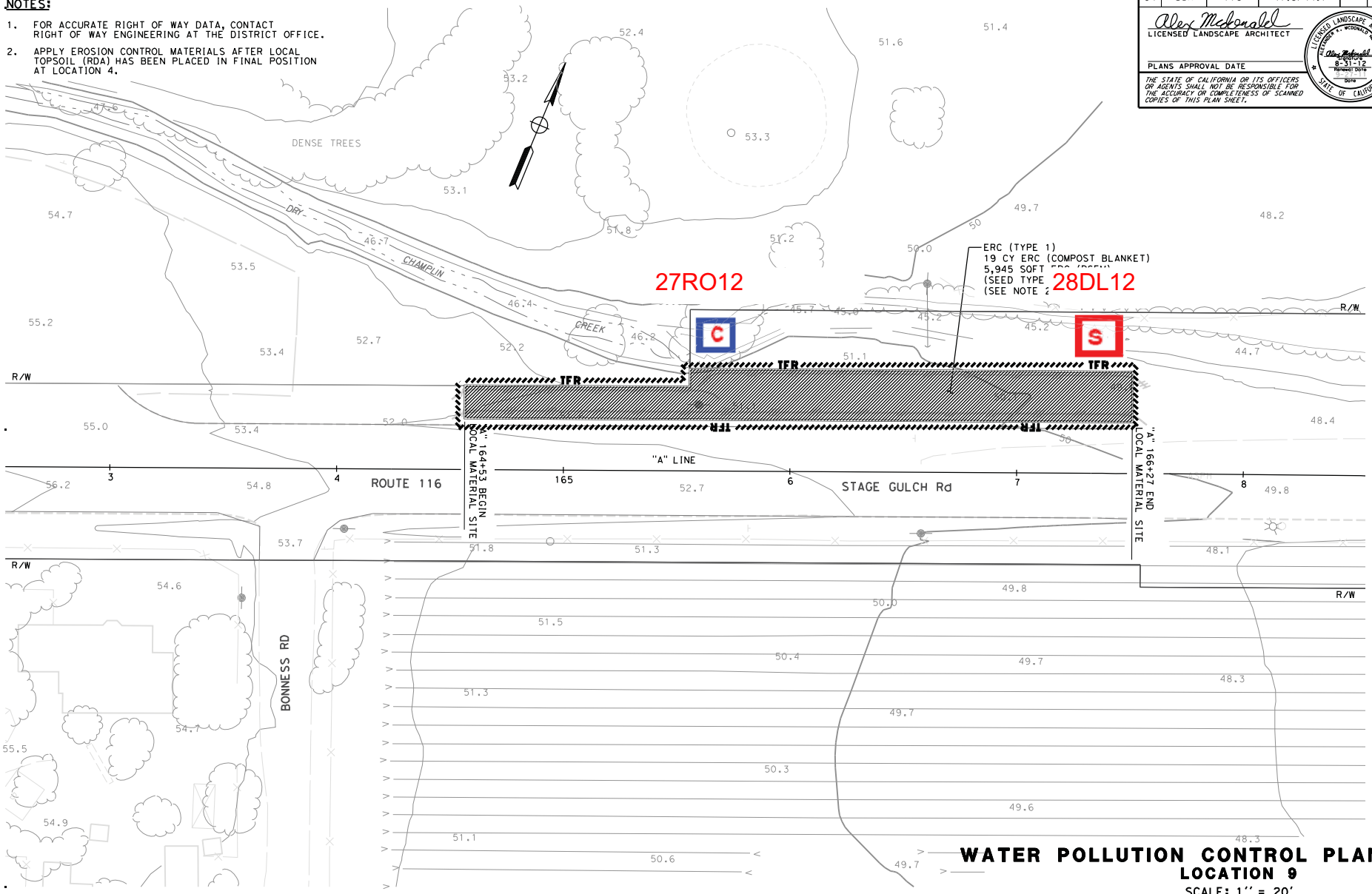
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT ALEXANDER K. MCDONALD NO. 3247 SIGNATURE 8-31-12 REFERENCE DATE DATE STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. APPLY EROSION CONTROL MATERIALS AFTER LOCAL TOPSOIL (RDA) HAS BEEN PLACED IN FINAL POSITION AT LOCATION 4.



WATER POLLUTION CONTROL PLAN

LOCATION 9

SCALE: 1'' = 20'

APPROVED FOR EROSION CONTROL WORK ONLY

WPC-14

REVISED BY	DATE REVISED
AKM/JC	4/13/12

CALCULATED-DESIGNED BY: Jennifer Chen
CHECKED BY: Alex McDonald

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJIRI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
WATER QUALITY

LAST REVISION 09-15-11 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0792 | PROJECT NUMBER & PHASE 04000007721

Attachment EE

Potential Stormwater Sampling Locations

LIST OF SAMPLING LOCATIONS

Sampling ID	Description of the Samplying Locations	Type of Sampling
01DL01	Downstream of Location #2 (Biofiltration Swale #1).	Discharge Location
04DL02	Location #3 Conservation Easement, Champlin Creek at DS #12.	Discharge Location
05DL03	Location #3 Conservation Easement, tributary to Champlin Creek at DS #14	Discharge Location
07DL04	Location #3 Conservation Easement, tributary to Champlin Creek at DS #15	Discharge Location
10DL05	Location #3 at Champlin Creek and State right of way.	Discharge Location
14DL06	Location #3 downstream of County Dump Road at Champlin Creek..	Discharge Location
16DL07	Downstream of Location #4 at Champlin Creek.	Discharge Location
19DL08	Downstream of Location #5 at Champlin Creek.	Discharge Location
22DL09	Downstream of Location #6 (Biofiltration Swale #2).	Discharge Location
24DL10	Downstream of Location #7 (Biofiltration Swale #3).	Discharge Location
26DL11	Downstream of Location #8 at Champlin Creek.	Discharge Location
28DL12	Downstream of Location #9 at Champlin Creek.	Discharge Location
02RO01	SR 116 A Line Station 22+30 Earthen Swale flow line (Location 2)	Ron-on Sampling
03RO02	SR 116 A Line Station 69+50 Champlin Creek flow line(Location 3 Conservation Easement)	Ron-on Sampling
06RO03	SR 116 A Line Station 77+80 Earthen Drainage flow line (Location 3 Conservation Easement - top of site)	Ron-on Sampling
08RO04	SR 116 A Line 79+10 Champlin Creek flow line (Location 3)	Ron-on Sampling
12RO05	SR 116 A Line 90+00 Champlin Creek flow line (Location 3)	Ron-on Sampling
15RO06	SR 116 A Line 96+90 Champlin Creek flow line (Location 4)	Ron-on Sampling
17RO07	SR 116 A Line 113+10 Tributary to Champlin Creek flow line (Location 5)	Ron-on Sampling
18RO08	SR 116 A Line 113+95 Tributary to Champlin Creek flow line (Location 5)	Ron-on Sampling
21RO09	SR 116 A Line 128+00 Earthen Swale flow line (Location 6)	Ron-on Sampling
23RO10	SR 116 A Line 135+75 Earthen Swale flow line (Location 7)	Ron-on Sampling
25RO11	SR 116 A Line 155+05 Champlin Creek flow line at Box Culvert Outlet (Location 8)	Ron-on Sampling
27RO12	SR 116 A Line 165+75 Champlin Creek flow line (Location 9)	Ron-on Sampling
09CSDL01	Refugia and Dispersal Area No. 1 (Location of Construction #3)	Discharge Location
11CSDL02	Refugia and Dispersal Area No. 2 (Location of Construction #3)	Discharge Location
13CSDL03	Rock Slope Protection Stilling Basin - Location 3, Down Stream from Co. Dump Rd.(DS #21) (Location of Construction #3)	Discharge Location
20CSDL04	Rock Slope Protection Stilling Basin - Location 5, Down Stream from SR 116 (DS #26) (Locations of Construction #5)	Discharge Location