

INFORMATION HANDOUT

AGREEMENTS

**PRESIDIO TRUST, DEPARTMENT OF TRANSPORTATION AND SAN FRANCISCO
COUNTY TRANSPORTAION AUTHORITY
AGREEMENT FOR ENTRY ONTO REAL PROPERTY**

MATERIALS INFORMATION

**CONCEPTUAL STORMWATER POLLUTION PREVENTION PLAN FOR DOYLE DRIVE
REPLACEMENT PROJECT**

ROUTE: 04-SF-101-8.2/9.2

REVISED PER ADDENDUM NO. 2 DATED JANUARY 21, 2010

AGREEMENT AMONG THE PRESIDIO TRUST AND THE STATE OF CALIFORNIA,
DEPARTMENT OF TRANSPORTATION AND THE SAN FRANCISCO COUNTY
TRANSPORTATION AUTHORITY FOR ENTRY ON TO REAL PROPERTY NEEDED
FOR THE CONSTRUCTION OF THE SOUTH ACCESS TO THE GOLDEN GATE
BRIDGE, DOYLE DRIVE REPLACEMENT PROJECT IN SAN FRANCISCO

THIS Agreement, entered into this 16th day of July, 2009, by and among the Presidio Trust, hereinafter referred to as "TRUST," the State of California, acting by and through its Department of Transportation, hereinafter referred to as "STATE," and the San Francisco County Transportation Authority, hereinafter referred to as "SFCTA." Each of STATE and SFCTA is individually and collectively a "PROJECT AGENCY" herein. Each of TRUST, STATE and SFCTA is occasionally hereinafter referred to individually as "party" and collectively as "parties."

RECITALS

WHEREAS, on February 13, 1931, the Secretary of the United States War Department, pursuant to authority in him vested by Section 6 of the Act of Congress approved July 5, 1884 (23 Stat. 103) granted to the Golden Gate Bridge and Highway District, now known as the Golden Gate Bridge, Highway and Transportation District, a right of way for the extension, maintenance and operation of a state road across the Presidio of San Francisco Military Reservation, California, and across the Fort Baker Military Reservation, California, including space for toll booths and facilities for regulating traffic, and including also the right to erect, operate and maintain the ends of the Golden Gate Bridge with cable anchors upon the said military reservations; and,

WHEREAS, during the intervening period of years since February 13, 1931, the said grant of right of way has been amended for various reasons on twenty-one (21) occasions; and,

WHEREAS, on July 27, 1938 the Secretary of the United States War Department pursuant to the authority vested in him by Section 6 of the Act of Congress approved July 5, 1884 (23 Stat. 103) granted to the State of California a right of way for the extension, maintenance and operation of a state road (now known as State Route 1) on the Presidio of San Francisco Military Reservation; and

WHEREAS, by Act of Congress (the Golden Gate National Recreation Area Act, Public Law 92-589, codified at 16 U.S.C. 460bb) the former Presidio of San Francisco Military Reservation became the Presidio of San Francisco ("PRESIDIO"), a part of the Golden Gate National Recreation Area, on October 1, 1994; and

WHEREAS, by further Act of Congress (the Presidio Trust Act, Public Law 104-333, codified at 16 U.S.C. 460bb appendix ("TRUST ACT")), the Presidio Trust was created on November 12, 1996, and

WHEREAS, the TRUST ACT divided the lands of the PRESIDIO into two areas, known and referred to as Area A and Area B; and

WHEREAS, the TRUST ACT granted the TRUST control over Area B; and

WHEREAS, the TRUST is the successor-in-interest to the United States War Department under the 1931 and 1938 permits for lands relevant to the PROJECT (as defined below) in Area B; and

WHEREAS, the parties hereto are entering into this agreement for the purpose of facilitating the construction of the South Access to the Golden Gate Bridge, Doyle Drive Replacement Project ("PROJECT"), on portions of U.S. Route 101 and State Route 1 in Area B; and

WHEREAS, by requisite federal and state legislative action and subsequent quitclaim deeds, STATE has obtained from the Golden Gate Bridge, Highway and Transportation District, any and all rights necessary to perform the PROJECT work herein; and

WHEREAS, STATE has completed, approved and issued a project report dated January 28, 2009 and Final Environmental Impact Statement/Report & Final Section 4(f) Evaluation and Record of Decision dated September 2008 and December 18, 2008 ("ENVIRONMENTAL DOCUMENTS"), respectively, for the PROJECT; and

WHEREAS, on or about September 24, 2008, the STATE, TRUST and other necessary parties entered into a Programmatic Agreement pertaining to the avoidance, mitigation and/or treatment of historical, cultural and archaeological resources within the PROJECT area; and

WHEREAS, the STATE, TRUST and other necessary parties are engaged in ongoing discussions, consultation and coordination regarding development and implementation of historical, cultural and natural resource mitigation measures, plans and agreements pursuant to the governing environmental documents; and

WHEREAS, the PROJECT will be constructed in multiple stages; and

WHEREAS, the parties hereto, for their mutual benefit, wish to cooperate in this undertaking and accomplish construction of the PROJECT in a highly efficient manner with minimal inconvenience; and

WHEREAS, the TRUST ACT requires the TRUST to achieve financial self sufficiency by 2013; and

WHEREAS, The TRUST's real estate operations are a significant component of the TRUST's quest for financial self sufficiency; and

WHEREAS, the TRUST depends on its residential and non-residential tenants for its real estate revenue; and

WHEREAS, the PROJECT is an important public safety improvement with local and regional transportation benefits and time is of the essence as to its construction; and

WHEREAS, due to the complexity of the PROJECT work, many design and construction related issues will from time to time arise and require satisfactory resolution; and,

WHEREAS, the parties hereto intend to use this Agreement as a basis for successful accomplishment of the PROJECT and intend to use the procedures contained in section 33 below for resolution of any and all disputes arising from the activities and obligations set forth herein;

NOW THEREFORE, the parties hereto mutually agree as follows:

I. RIGHT OF ENTRY

1. PROJECT AGENCY and its contractors and agents are hereby given permission to enter onto certain portions of Area B of the PRESIDIO as necessary for the purpose of constructing the PROJECT and for all purposes and activities related thereto, subject to the terms and conditions set forth herein.
2. The property to be used and occupied for the PROJECT is delineated on the map and compact disc attached hereto and made a part hereof and identified as Exhibit A. Such property is hereinafter referred to as the "PREMISES". The parties understand and agree that the required areas may change as necessary for the PROJECT and may be revised or modified by mutual agreement and that such changes will be memorialized by amendments to this agreement and to Exhibit "A". The parties further understand and agree that PROJECT AGENCY and its contractors and agents will require reasonable access across TRUST's other lands for purposes of access to the PROJECT areas and that such access will not be unreasonably denied. Provided, however, that access routes for construction vehicles and equipment to the PREMISES must be given advance written approval by TRUST.

TRUST may also make available additional areas outside the PREMISES for contractor use at contractor's expense.

II. TERMS AND CONDITIONS OF THE RIGHT OF ENTRY

TRUST grants to PROJECT AGENCY the non-exclusive right to enter and use the PREMISES together with the non-exclusive right as limited hereunder of ingress and egress across the property known as Area B of the PRESIDIO for the purpose of constructing the PROJECT and for all purposes and activities related thereto ("RIGHT OF ENTRY") subject to the conditions set forth herein.

1. Term.

This RIGHT OF ENTRY Agreement shall be in effect for the period from the date of execution of this Agreement to December 31, 2015, unless extended by written mutual agreement of the parties. PROJECT AGENCY's legal possession of the PREMISES shall commence on the effective date of the Agreement, with physical possession to thereafter

take place and continue as needed by the PROJECT AGENCY for PROJECT purposes as set forth in section 4.

2. Assignment of RIGHT OF ENTRY.

This RIGHT OF ENTRY shall be neither assignable nor transferable by PROJECT AGENCY. No permanent interest in the real property subject to this RIGHT OF ENTRY shall vest in PROJECT AGENCY by virtue of this RIGHT OF ENTRY. However, the transfer of a permanent highway easement from TRUST to PROJECT AGENCY is contemplated as set forth in section 15, transfer of a utility easement is contemplated as set forth in section 11 and vesting of ownership in monitoring wells shall be as provided in section 30.

3. Termination.

By TRUST: TRUST may terminate this RIGHT OF ENTRY and reenter and take possession of the PREMISES:

- a. If PROJECT AGENCY violates any of the terms of this Agreement and does not cure or otherwise resolve by mutual agreement of the parties any such violations within thirty (30) days of the receipt of written notice of the violations from TRUST delivered in accordance with section 31 or
- b. If any of the information provided to TRUST by PROJECT AGENCY in connection with this RIGHT OF ENTRY or at any time during the course thereof is discovered to be false, fraudulent, or materially incorrect; or

By PROJECT AGENCY: If the PROJECT is completed prior to December 31, 2015, and the PROJECT AGENCY no longer requires use of the PREMISES for PROJECT purposes, PROJECT AGENCY may terminate this RIGHT OF ENTRY by giving thirty (30) days' written notice of termination to TRUST delivered in accordance with section 31.

This RIGHT OF ENTRY may be terminated at any time by the mutual written consent of both parties.

4. PROJECT AGENCY's Physical Possession of PREMISES.

PROJECT AGENCY agrees to delayed physical occupancy of portions of the PREMISES and to early release of portions of the PREMISES to TRUST during the course of the PROJECT as PROJECT AGENCY determines is reasonable and feasible in the context of the PROJECT and the needs thereof. In so doing, PROJECT AGENCY shall consult and coordinate with TRUST so as to allow TRUST use of the PREMISES to the extent reasonable and feasible in the context of the PROJECT and PROJECT schedule. It is

currently anticipated that PROJECT AGENCY of portions of the PREMISES for tree removal be map(s) attached as Exhibit B, and of other areas thereon. PROJECT AGENCY will inform TRUST of dates by which PREMISES at least thirty (30) days prior to the date PROJECT AGENCY has physical possession of any area. PROJECT AGENCY shall not have physical possession for such period of time as said area is held in possession by the PROJECT AGENCY, not to extend beyond the date of early releases of portions of the PREMISES to TRUST by PROJECT AGENCY for the PROJECT, such releases shall be by PROJECT AGENCY of the area and date to the acceptance thereof by TRUST.

5. Permits.

PROJECT AGENCY and/or PROJECT AGENCY shall be responsible for obtaining all applicable required permits or licenses on the PREMISES pursuant to this RIGHT OF EASE.

6. Compliance with Laws.

PROJECT AGENCY, its officers, employees, and the participants in the PROJECT activities shall comply with all applicable local laws or regulations pertaining to any activity.

7. Alteration of Existing Facilities.

- a. Except as required for the construction of existing premises or facilities, or construction of improvements made without the written consent of TRUST.
- b. Notwithstanding the foregoing, alteration or construction of improvements shall be subject to the following:
 - i. Any historic elements shall be treated in accordance with the Historic Preservation Agreement ("HPA") and the built environment pertaining to protection measures for historic elements of the cultural landscape ("ATP") pertaining to protection measures for resources of importance to Indian tribes, as defined and prescribed therein, and to any plans therefor, and
 - ii. The following non-historic elements shall be identified and specified without the TRUST's written consent:

unreasonably withheld, and subject to PROJECT AGENCY's fulfilling its obligations under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended and the Civil Rights Act of 1964.

- Building 605/606 and associated parking and access until March 27, 2010. Building 1158 and associated parking and access until July 1, 2010, or sooner if the tenant voluntarily vacates prior to that date.
 - Compressed Natural Gas ("CNG") station and associated access until September 1, 2010, or sooner if the facility is relocated prior to that date.
 - Bus yard located between Buildings 201 and 204 and associated access until September 1, 2010, or sooner if the facility is relocated prior to that date.
 - Cell sites: Cell site off of Halleck (near Crissy Field) until September 1, 2010; cell site near Armistead until December 1, 2010, or sooner if cell site operator voluntarily relocates prior to that date.
- iii. TRUST commits to exercising its relocation or termination rights in its leases as to its tenants in the above-referenced facilities, and/or utilizing any other necessary provision or mechanism so as to deliver the above facilities to PROJECT AGENCY vacant and free and clear of all tenant and occupant interests by the dates indicated and commits to the same as to tenants and occupants of Buildings 201 and 204 by July 1, 2010.
- iv. PROJECT AGENCY will inform TRUST through the regularly scheduled meetings set forth in section 19 of this Agreement of construction activities affecting the following:
- Utility systems and components (*e.g.*, storm drain inlets and associated plumbing, fire hydrants and associated plumbing, street lights and associated wiring) that are not being relocated under the utilities license.
 - Sidewalks and streets, which shall remain open as set forth in the PROJECT plans and as reasonable and feasible in the context of the PROJECT.
 - TRUST's roadway signage and traffic control devices.
- c. Nothing in this section 7 shall be construed as authorizing any alteration of existing premises or facilities or construction of permanent improvements that is otherwise prohibited or restricted by the ENVIRONMENTAL DOCUMENTS, the PA, the BETP, the ATP, and any plans or agreements developed pursuant thereto.

8. Maintenance of PREMISES.

PROJECT AGENCY shall exercise due diligence to maintain the PREMISES in an orderly condition, relative to the PROJECT. Toward this end:

- a. PROJECT AGENCY shall not allow litter or debris to accumulate on the PREMISES, including storm drain grates, trash racks and ditch lines.
- b. Trash and debris from the PREMISES shall be picked up at least once a week.
- c. Solid waste storage and disposal procedures shall be monitored on the PREMISES.
- d. There shall be enough dumpsters of sufficient size on the PREMISES to contain the solid waste generated by the PROJECT. Dumpsters shall be emptied when refuse reaches the fill line and shall be watertight.
- e. Dumpsters shall not be washed out on the PREMISES.
- f. Additional containers and more frequent pick up shall be provided during the demolition phase of the PROJECT.
- g. Solid waste includes: brick, mortar, timber, metal scraps, sawdust, pipe, electrical cuttings, non-hazardous equipment parts, styrofoam and other packaging materials, vegetative material and plant containers from highway planting, and litter and smoking material, including litter generated randomly by the public.
- h. Trash receptacles shall be provided and used on the PREMISES, and areas thereon where workers gather for lunch and breaks.

TRUST shall not be obligated to perform any maintenance, of any kind, nature or description whatsoever of or to the PREMISES, except that TRUST shall be responsible for maintenance of TRUST infrastructure, including TRUST's utility lines located within the PREMISES, and shall promptly repair any damaged TRUST facilities or operations (not caused by PROJECT AGENCY's activities) that interfere with PROJECT AGENCY's PROJECT activities.

9. Restrictions.

Unless specified in this Agreement or otherwise authorized by TRUST, the PROJECT AGENCY shall at no time permit:

- a. Access to any TRUST facilities or equipment not on the PREMISES except as authorized by TRUST.

- b. Access or entry onto Building 605 and 606 prior to March 27, 2010 and Building 1158 prior to July 1, 2010.
- c. Any substantial and unreasonable interference with or restrictions to the use of TRUST's equipment or operations, or TRUST's tenants' operations, equipment or access outside of the PREMISES. If PROJECT AGENCY's equipment at any time substantially and unreasonably interferes with any of TRUST's equipment or operation including interference with any of TRUST's tenants' equipment or operations outside of the PREMISES, it shall be the responsibility of PROJECT AGENCY to correct any such interference. Notwithstanding the above, the parties acknowledge and recognize that the PROJECT entails impacts to TRUST and Tenant facilities and operations within the PREMISES, which impacts shall not be deemed substantial and unreasonable under this section 9.
- d. Removal of any TRUST property of any nature whatsoever, from the PREMISES unless authorized by TRUST, except as required for the construction of the PROJECT, and subject to the ENVIRONMENTAL DOCUMENTS, the PA, the BETP and the ATP, and any plans or agreements developed pursuant thereto and as provided in section 7 herein.
- e. Any activities while on the PREMISES that involve the solicitation of funds for private or commercial interests, including fund raising for nonprofit organizations and causes.
- f. Any controlled substances to be brought unto the PREMISES, nor may any controlled substances be possessed, used, solicited, transferred, or sold on the PREMISES.
- g. Any alcoholic beverages to be brought on to the PREMISES.

This RIGHT OF ENTRY shall not be administered for profit.

10. Compensation.

TRUST shall be compensated in the total amount of
for all PROJECT right of way claims, issues and matters. Said
compensation includes but is not limited to payment for the following:

- a. Functional replacement of Building 201 and the Archeology Lab (Building 230);
- b. Cost of construction of temporary parking with 600 stalls;
- c. Fair Market value of four major Buildings: 1158, 605, 606 & 204;

- d. Relocation of cellular site at Armistead and relocation or removal of cellular site off of Halleck (near Crissy Field);
- e. Fair market value of Building 670;
- f. Relocation of CNG station and bus yard located between Buildings 201 and 204 underneath the structure;
- g. Use of Building 603 (Crissy Field Center) for PROJECT purposes;
- h. Use of Building 211 (Goldman Foundation) for PROJECT purposes;
- i. Damages to/for Gorgas Warehouses;
- j. All easement fees, including those for utility easements.

PROJECT AGENCY shall also fund and implement all items as listed on Exhibit C.

In addition, TRUST shall receive

for the construction of a permanent parking structure for impacts to parking as a result of the PROJECT.

Compensation shall be paid to TRUST in accordance with the following schedule (the "Compensation Schedule"). All parties understand that the PROJECT AGENCY does not have access to funding to make payments to the Trust in advance of the Compensation Schedule.

- on or before November 16, 2009
- on November 16, 2009.
- on September 30, 2010.
- on September 30, 2011.

The compensation set forth herein does not include the Service District Charges for non-TRUST occupied buildings, including but not limited to Buildings 1158, 204, 605, 606, and 670, which charges are agreed to total which sum shall be paid to TRUST in proportionate installments, based on the table attached as Exhibit D, as each building is vacated by tenants and delivered to the possession of the PROJECT AGENCY free and clear of tenant interests on the date specified in this Agreement, or if not specified as mutually agreed upon by the parties.

However, for each building or facility not vacated by tenants and delivered to the possession of the PROJECT AGENCY free and clear of any tenant interests by the dates specified in this Agreement, or if not specified as mutually agreed upon by the parties, PROJECT AGENCY may withhold the full amount of the Service District Charge owing for each such building until such time as the building is vacated and delivered free and clear of all tenant interests to

PROJECT AGENCY. In such circumstance, the Service District Charge owing for each such building may be reduced on a pro rata basis and the amount owing shall be recalculated based upon the table attached at Exhibit D and the actual date the building is delivered to PROJECT AGENCY free and clear of tenant interests. Adjustments to the Service District Charges owing may be credited against the next scheduled compensation payment. With respect to Buildings 605 or 606, PROJECT AGENCY may not withhold the prorated Service District Charge under this paragraph if it fails to pay the termination fee(s) required by the current leases for Building 605 and 606 or if the failure of the tenant to vacate Building 605 or Building 606 is due to breach by PROJECT AGENCY of any agreement between said tenant and the PROJECT AGENCY.

The parties acknowledge that as used in this section, the Service District Charges being withheld for each building or facility is not intended to represent the value of any particular building or facility. Rather, that sum is agreed upon in recognition of the importance to the progress of the PROJECT in having TRUST meet its commitments to deliver buildings and facilities to PROJECT AGENCY vacant and free and clear of any tenant interests by the dates specified in this Agreement, or if not specified as mutually agreed upon by the parties. Nothing in this provision shall be construed to relieve TRUST of such obligations. Notwithstanding the foregoing, if any tenant has not vacated and buildings and facilities are not delivered to PROJECT AGENCY vacant and free and clear of any tenant interests by the dates specified in this Agreement, or if not specified as mutually agreed upon by the parties, any additional payments made to the tenant by the PROJECT AGENCY in order to vacate the building or facility shall be deducted from the compensation owing to the TRUST, provided however, that the amount so deducted shall not exceed in the aggregate, the total amount of . The temporary withholding and adjustment of the Service District Charges and the deduction of an aggregate amount of up to from TRUST's compensation shall be PROJECT AGENCY's sole remedy in connection with TRUST's obligation to deliver buildings or facilities to PROJECT AGENCY under this Agreement.

Full payment of all compensation and Service District Charges owing shall be made to TRUST by September 30, 2011 unless sums are withheld in accordance with the previous paragraph. Where sums are so withheld, they shall be due and payable immediately upon the vacating and delivery free of tenant interests of the building or facility at issue.

Compensation to TRUST as set forth above shall constitute full, final and global resolution of any and all claims by TRUST for all PROJECT and PROJECT-related right of way matters and issues, including but not limited to claims for compensation of any type or nature, past, present and future, known and unknown, arising from, related to or connected with the use and possession of the PREMISES for construction of the PROJECT, all right of way matters and issues set forth in this Agreement, and for the permanent transfer of right of way, easements and other property rights or interests set forth and contemplated herein and as may be needed for the PROJECT.

The parties expressly acknowledge that compensation as set forth in this section 10 shall relieve PROJECT AGENCY from all further monetary obligations or claims of compensation

for all PROJECT right of way claims, issues and matters as set forth above and TRUST hereby surrenders any and all rights to file or pursue any further claims for compensation as to said matters.

Nothing in this section 10, however, shall impact the parties' rights and obligations under the indemnification provisions of this Agreement.

11. Utility Relocations.

If any existing public and/or private utility facilities are discovered during construction that conflict with the construction of the PROJECT, PROJECT AGENCY shall make all necessary arrangements with the owners of such facilities for their (a) protection in place, (b) removal or (c) relocation to a location mutually agreed upon by TRUST and PROJECT AGENCY for those facilities located within the PREMISES, and in accordance with TRUST's policy for those facilities located outside of the PREMISES. The cost of the protection, relocation or removal shall be apportioned between the owners of the public utility facility and PROJECT AGENCY in accordance with PROJECT AGENCY's policy and procedure. In the event TRUST facilities require protection, relocation or removal, the cost shall be borne by the PROJECT. Any relocated or new facilities shall be correctly shown and identified on the As-Built plans referred to in section 22 of this Agreement.

TRUST shall convey a utility easement vested in the name of PG&E for underground electrical lines for the 12kv distribution line for the PROJECT, the details of which shall be determined by the parties.

12. Tenants and Relocation.

Occupants, either tenants or staff, of affected improvements, who are required to vacate and are eligible for relocation assistance as provided in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended and the Civil Rights Act of 1964 shall be relocated in accordance with the same. TRUST shall be the primary contact with its tenants and commits to exercising its relocation or termination rights in its leases as to its tenants and/or utilizing any other necessary provision or mechanism in accordance with section 7 (b) (iii) so as to deliver facilities to PROJECT AGENCY vacant and free and clear of all tenant and occupant interests. TRUST shall make its best efforts to deliver to PROJECT AGENCY quitclaims or other comparable release from all tenancies displaced or terminated by the PROJECT. PROJECT AGENCY shall also relocate, pursuant to the above-referenced Acts, tenants who are required to vacate their units due to (a) fire and safety regulation(s); (b) elimination of access to said units; and (c) elimination of exclusively assigned parking (existing as of the date of this Agreement) for said units as a result of the PROJECT, for which no replacement parking in the vicinity is reasonably available.

PROJECT AGENCY shall coordinate with TRUST to find acceptable locations for the relocation of the existing cellular tower at Armistead and the cellular tower off of Halleck (near Crissy Field), if it is relocated and the CNG station and the bus yard located between Buildings 201 and 204 underneath the structure.

13. Preservation of Historic and non-Historic Resources and Demolition/Deconstruction of Improvements.

At no cost to TRUST:

- a. PROJECT AGENCY shall perform preconstruction assessment and monitoring of TRUST's historic and non-historic resources including but not limited to photographic surveys, vibration studies, including seismic monitoring, and stabilization of historic and non-historic buildings as set forth in the PA, BETP, ATP and any plans or agreements prepared pursuant thereto, and as may otherwise be deemed necessary by PROJECT AGENCY.
- b. Historic properties will be documented, treated, deconstructed or demolished in accordance with the PA, BETP and any plans or agreements prepared pursuant thereto.
- c. Non-historic Buildings 605 and 606 shall be demolished after March 27, 2010. Building 1158 will be demolished after July 1, 2010.

14. Environmental Mitigation and Restoration.

PROJECT AGENCY shall coordinate with TRUST to address mitigation and restoration issues identified in the PROJECT's Final Environmental Impact Statement/Report & Final Section 4(f) Evaluation and Record of Decision as required and/or set forth therein, and in any plans and agreements developed and implemented pursuant thereto. Environmental mitigation and/or minimization measures shall be timely implemented as specified in the governing ENVIRONMENTAL DOCUMENTS, permits, and plans and agreements resulting therefrom.

15. Transfer of Property Rights.

STATE shall prepare a highway easement deed for the transfer of a permanent highway easement for execution by TRUST and will quitclaim any rights of way that STATE occupies under the 1931 Permit and the 1938 Permit that are not necessary for the PROJECT and are within the PREMISES as defined on Exhibit A. Subject to approval of the California Transportation Commission, TRUST's highway easement deed and STATE's quitclaim shall be simultaneously recorded.

The parties acknowledge that nothing contained in this Agreement shall affect the parties' rights and obligations under the 1938 permit for any portion of State Route 1 outside of the PREMISES as defined on Exhibit A.

TRUST interior roads: TRUST agrees to accept ownership of the portions of the new/reconstructed Girard Road, Halleck Street, Lincoln Avenue and Gorgas Road that are not a part of the PROJECT AGENCY's access controlled facility, following inspection and construction of such roads to TRUST's standards and specifications.

PROJECT AGENCY shall conduct land surveys and prepare right of way maps, plats, descriptions and/or other materials necessary to describe STATE's Right of Way within the PREMISES in a legally sufficient manner and to set/document permanent survey monumentation adequate for the retracement thereof, as necessary, and to draft, finalize, and record the STATE Highway Easement deed, at PROJECT AGENCY's expense.

16. Damage to Property.

Except as required for the construction of the PROJECT, and subject to the PA, BETP, ATP, and any plans or agreements prepared pursuant thereto and to the provisions of section 7 herein:

- a. Due care shall be exercised to avoid injury to TRUST property, existing improvements or facilities, including but not limited to, utility facilities, and property adjacent to the PREMISES. PROJECT AGENCY is responsible for any damage to or destruction of any real or personal property belonging to TRUST, its officers, employees, contractors, tenants, agents, or guests which results from PROJECT AGENCY's use of the PREMISES or of its PROJECT activities on adjacent property, regardless of whether such damage results from the acts, omissions, active or passive negligence of PROJECT AGENCY. Consequential damages, if any, arising from PROJECT AGENCY's damage or destruction of property above may be recovered only according to proof and to the extent allowed by governing law.
- b. Subject to the provisions of section 17 below, PROJECT AGENCY shall promptly repair, replace or restore any damaged or destroyed property to its pre-construction condition based on preconstruction photographic and/or videographic surveys/monitoring records, or if no such surveys or records exist, to TRUST's reasonable satisfaction as to the pre-existing condition.
- c. In lieu of repairs or replacement, and by agreement of the parties, PROJECT AGENCY may pay to TRUST money in an amount sufficient to cover the reasonable costs of repairing or replacing any damaged or destroyed property, facility or improvement to its pre-construction condition based on preconstruction photographic and/or videographic surveys/monitoring records, or if no such surveys or records exist, to TRUST's reasonable satisfaction as to the pre-existing condition.
- d. As to historical structures, PROJECT AGENCY shall consult with TRUST, and comply with all applicable building requirements, including, if applicable, the Secretary of Interior Standards for historical properties, in restoring any such

historical structure damaged or destroyed by PROJECT activities to at least its pre-existing condition based on preconstruction photographic and/or videographic surveys/monitoring records, or if no such surveys or records exist, to TRUST's reasonable satisfaction as to the pre-existing condition.

- e. PROJECT AGENCY shall consult with TRUST as to all repair and replacement work performed pursuant to this section 16 and such work shall be done to a level of at least the pre-existing condition of the property being repaired, restored or replaced as depicted in the preconstruction photographic and/or videographic surveys/monitoring records, or if no such surveys or records exist, to TRUST's reasonable satisfaction as to the pre-existing condition, unless the final design plans for the PROJECT show otherwise.

17. Restoration of the PREMISES.

Except as required for the construction of the PROJECT, and subject to the PA, BETP, ATP and any plans or agreements prepared pursuant thereto:

- a. PROJECT AGENCY shall restore the PREMISES to the condition in which it was received except: (1) to the extent that the same is precluded by virtue of construction of the PROJECT; or (2) the final design plans for the PROJECT show restoration of the PREMISES to a different condition. The pre-construction condition shall be that depicted in the preconstruction photographic and/or videographic surveys/monitoring records, or if no such surveys or records exist, to TRUST's reasonable satisfaction as to the pre-existing condition.
- b. PROJECT AGENCY shall clean up and remove all trash and refuse generated by PROJECT AGENCY's use of the PREMISES and shall replace any property that it may have removed during its use of the PREMISES.
- c. If PROJECT AGENCY fails to restore the PREMISES, including the removal of trash and relocation of property, PROJECT AGENCY shall pay actual invoiced costs incurred by TRUST to restore the PREMISES.
- d. PROJECT AGENCY shall, in coordination with and without cost to TRUST, remove all PROJECT related security fencing at the conclusion of the PROJECT and perform a thorough external cleaning of all TRUST structures affected by PROJECT activities.
- e. PROJECT AGENCY shall restore the pavement of specifically designated TRUST roads within the PREMISES and specifically designated haul roads outside of the PREMISES used and damaged during the course of the PROJECT to a condition of at least equal quality as their pre-construction condition based on preconstruction photographic and/or videographic surveys/monitoring records, or if no such surveys or records exist, to TRUST's reasonable satisfaction as to the pre-existing condition.

18. Access to PREMISES.

Construction vehicles and equipment shall enter and exit the PREMISES by routes established in consultation with and agreed to by TRUST's designated principal representative, and shall comply with all posted traffic and parking control signs outside of the PREMISES unless otherwise authorized by TRUST's designated principal representative.

19. Specific Provisions.

PROJECT AGENCY agrees to the following:

- a. To coordinate all work with TRUST's designated principal representative.
- b. To hold regular meetings with TRUST to discuss the PROJECT with TRUST's designated principal representatives and representatives of PROJECT AGENCY and its contractor.
- c. PROJECT AGENCY shall, without cost to TRUST, take all reasonable actions and measures to ensure the safety of all persons and property within the PREMISES at all times while on the PREMISES during the PROJECT construction term. All TRUST personnel or persons authorized by TRUST to be on the PREMISES shall comply with all of PROJECT AGENCY's safety directives and measures while on the PREMISES.
- d. PROJECT AGENCY shall provide and maintain property signs, barriers and/or other means warning the public of PROJECT activities as necessary, including but not limited to providing sufficient warning for motorists and pedestrians (as applicable) of dangers as appropriate during periods of the PROJECT. PROJECT AGENCY agrees to report any Presidio Trust staff or park visitor accidents to TRUST in a timely manner.
- e. As it determines necessary, PROJECT AGENCY will pay for and independently contract with the appropriate provider for police services for traffic management and routing and fire and emergency medical services.
- f. To provide a construction activity schedule a minimum of thirty (30) days in advance of the commencement of construction activities on the PREMISES and provide monthly updates to this schedule as necessary to reflect any changes. PROJECT AGENCY will further provide TRUST with a minimum of fourteen (14) days advance notice of any activities which have a potential to injure, damage, or impact TRUST's personnel, equipment, facilities and/or activities and any plans to address any such impacts.

- g. PROJECT AGENCY is solely responsible for coordinating all PROJECT activities across STATE's multiple contracts.
- h. To provide, without cost to TRUST, all necessary real property descriptions, including metes and bounds legal descriptions and drawings, prepared by a registered land surveyor, for all documents TRUST is required to prepare, if any, as a result of the PROJECT AGENCY's activities upon the PREMISES.
- i. PROJECT AGENCY shall provide TRUST's designated principal representative with drawings, including profile contours and property boundaries for both the temporary and permanent realignments of the PROJECT.
- j. PROJECT AGENCY shall comply with the PA, BETP, ATP and any plans or agreements prepared pursuant thereto.
- k. TRUST property, including the PREMISES, was in the past operated by the U.S. Army as a military facility for many decades. The parties acknowledge the possible existence of subsurface unexploded ordnances ("UXO's"), such as mortar shells or other explosive materials that may be encountered on the PREMISES during construction of the PROJECT. In the event that UXO's are discovered during the course of the PROJECT, work in the affected area shall immediately stop and the TRUST Safety and Occupational Health Manager at (415) 561-4141 (office) or (415) 748-0059 (cell) or in his/her absence, the TRUST Environmental Remediation Department at (415) 561-2711 or other person designated by TRUST in writing shall be contacted and notified of the discovery by telephone. PROJECT work in the affected area may resume upon authorization of the TRUST. Costs, if any, for the removal of UXO's shall be borne by the PROJECT.
- l. PROJECT AGENCY has had an opportunity to investigate the site conditions of the PREMISES and accepts the PREMISES "as-is". TRUST makes no warranties as to the condition of the PREMISES or representations or warranties as to its fitness for the PROJECT.
- m. TRUST has no obligation to provide utilities for use of the PREMISES or for construction of the PROJECT. However, if TRUST does provide utilities, the costs thereof shall be borne by the PROJECT.
- n. TRUST expressly reserves the right to enter upon the PREMISES, except in the case of emergency, upon three (3) days' prior notice to PROJECT AGENCY, or as otherwise coordinated between the parties, to assess whether PROJECT AGENCY is in compliance with the provisions of this Agreement (and if found not to be, the parties may proceed as prescribed in section 3, subject to section 33), or for the purpose of installing, maintaining, repairing or replacing TRUST infrastructure located within the PREMISES. TRUST shall retain maintenance responsibility over such TRUST infrastructure facilities, including TRUST's utility lines located within

the PREMISES, and shall promptly repair any damage to such TRUST facilities or operations (not caused by PROJECT AGENCY activities) that interfere with PROJECT AGENCY's PROJECT activities. PROJECT AGENCY shall, in consultation with TRUST, establish procedures providing emergency access by the TRUST to any secured areas within the PREMISES.

- o. PROJECT AGENCY agrees to take all reasonable measures to prevent and suppress fires on the PREMISES which might result from PROJECT construction activities.
- p. PROJECT AGENCY shall not make any contract that may create or be the foundation for any lien, mortgage or other encumbrance upon the reversion, fee interest or other estate of TRUST's or of any interest of TRUST's in the PREMISES.
- q. Information regarding PROJECT activities will be provided and made available to tenants through the PROJECT'S Public Information Office ("PIO"). PROJECT'S PIO shall consult and coordinate with TRUST's public information office with respect to communications to be sent to TRUST tenants. Copies of all public information materials distributed to PRESIDIO residents and tenants shall be provided to TRUST.

20. Construction.

- a. The parties acknowledge and understand that construction of the PROJECT will proceed on an expedited schedule and is a calendar-day job.
- b. Normal work hours shall be limited to between 7:00 a.m. and 7:00 p.m., Monday through Friday and 9:00 a.m. to 6:00 p.m. weekends ("Work Hours"), provided however, that subject to (c) below, noise levels for work on Sundays shall not exceed five (5) decibels above ambient, measured at the closest point of the nearest a) occupied residential tenanted building or b) occupied commercial tenanted building in which business activity is occurring. The parties acknowledge and understand that PROJECT work outside of these hours may be required. To the extent that such work will not produce noise levels exceeding five (5) decibels above ambient, measured at the closest point of the nearest a) occupied residential tenanted building or b) occupied commercial tenanted building in which business activity is occurring outside of Work Hours, PROJECT AGENCY shall notify TRUST's designated principal representative at least seven (7) days in advance of commencing such work.
- c. Outside of Work Hours, PROJECT AGENCY shall not allow noise generation to exceed five (5) decibels above ambient, measured at the closest point of the nearest a) occupied residential tenanted building or b) occupied commercial tenanted building in which business activity is occurring outside of Work Hours. The parties acknowledge and understand that certain PROJECT work outside of Work Hours, including but not limited to tree removal, concrete pours, demolition, tunnel

excavation, continuous drilling, weekend closures, and construction operations that once commenced must proceed to conclusion will exceed these criteria. In such instances, the PROJECT AGENCY shall provide two (2) weeks advance notice to TRUST's designated principal representative of such periods of work.

- d. Special events: Specified special event days that may restrict construction activities during the course of construction of the PROJECT are listed in Exhibit E. On such days, PROJECT construction activities shall be suspended unless lesser restrictions on construction activities are agreed upon by the parties, which agreement shall not be unreasonably withheld.
- e. PROJECT AGENCY will perform all work in a good and workmanlike manner in accordance with PROJECT AGENCY standards or as provided in the PROJECT final design plans.
- f. PROJECT AGENCY and PROJECT AGENCY's employees, agents and contractors shall be solely responsible for securing all of their personal property located on the PRESIDIO, and TRUST shall not be liable for any damage thereto or theft or misappropriation thereof.
- g. PROJECT AGENCY has received a copy of TRUST's draft Construction Guidelines, dated May 2009. PROJECT AGENCY in coordination and consultation with TRUST will incorporate to the extent feasible and applicable the substance of said Guidelines into the PROJECT's contract specifications and special provisions.

21. Parking.

- a. PROJECT AGENCY will make its best efforts, as it determines is reasonable and feasible in the context of the PROJECT, to make available for public parking the area on Mason Street, between Marshall and Halleck as generally depicted on Exhibit F.
- b. As to parking outside of the PREMISES, except as to incidental parking, PROJECT AGENCY employees, agents and contractors shall, at their own expense, park only in those locations assigned by the TRUST's designated representative, but only if such parking is requested and agreed upon by PROJECT AGENCY employees, agents and contractors. TRUST shall have no obligation to make parking available to PROJECT AGENCY employees, agents and contractors outside of the PREMISES. Except for incidental parking, personal vehicles of PROJECT AGENCY employees, agents and contractors shall not be parked outside of the PREMISES within the PRESIDIO.

22. Completion of PROJECT.

- a. Upon acceptance of the final contract of the PROJECT, PROJECT AGENCY shall provide TRUST with written notice that the PROJECT is complete.
- b. Within ninety (90) days, PROJECT AGENCY shall provide to TRUST, in PROJECT AGENCY's standard format (microstation electronic files), two complete hard-copy sets of as-built drawings, specifications and operational manuals (including all warranties) pertaining to the PROJECT showing clearly all approved changes, revisions and substitutions made during the PROJECT, including, without limitation, field changes and the final location of all equipment, utility lines and other significant features of the PROJECT.

As-built drawings shall also be provided to the TRUST in both AutoCAD Computer Aided Design ("CAD") format in the version then in use by the TRUST, and Portable Document Format ("PDF"). CAD drawing files shall be "bound" to include all external reference files as part of the document. CAD documents converted from file formats other than AutoCAD "DWG" files shall follow the guidance from Autodesk on formatting to be provided by Trust. Calculations, specifications and operational manuals (including all warranties) shall also be provided in PDF. Electronic files shall be delivered on accurately labeled CD or DVD media.

To assist PROJECT AGENCY in providing the above, TRUST shall provide PROJECT AGENCY with a base map of the PREMISES in AutoCAD format.

23. Termination of PROJECT Prior to Completion.

If PROJECT AGENCY terminates PROJECT prior to completion of the PROJECT, PROJECT AGENCY will, at PROJECT AGENCY's expense, return all affected PREMISES to its original condition or, if that is not possible, to a condition reasonably comparable in use and operation to the preexisting condition, as agreed upon by the parties.

24. Indemnification.

To the fullest extent permitted by law, PROJECT AGENCY shall defend, indemnify and hold harmless the United States, including TRUST, and its directors, officers, employees and agents (each an "Indemnitee" and collectively the "Indemnitees") from and against any and all claims, damages, losses, liabilities and costs (including without limitation reasonable attorneys' fees, court costs, expert witness expenses, litigation costs, and disbursements) arising directly or indirectly, in whole or in part, from any act or omission of PROJECT AGENCY or any act or omission of any of PROJECT AGENCY's employees, agents, consultants, contractors, subcontractors, or anyone for whose acts PROJECT AGENCY may be liable (collectively, "PROJECT AGENCY's Parties") in connection with the activities under this Agreement (including any failure by PROJECT

AGENCY to perform each of its obligations under this Agreement in a timely and proper manner), including, without limitation, for any illness, injury, death or property damage or any other claims, damages, losses, liabilities and costs suffered or alleged by (a) any third party, (b) any person employed by PROJECT AGENCY or any of PROJECT AGENCY's Parties or (c) any party furnishing labor or materials with respect to the Project. The obligations to defend, indemnify and hold harmless shall not apply as to a particular Indemnitee (i) to the extent (but only to the extent) of loss caused by the gross negligence or willful misconduct of that Indemnitee, or (ii) as to Hazardous Materials as set forth in section 29. As to such Hazardous Materials, the rights, responsibilities and indemnity obligations set forth in section 29 shall apply.

TRUST shall promptly notify PROJECT AGENCY in writing of any claim falling within PROJECT AGENCY's indemnity obligations hereunder and its tender of defense thereof. PROJECT AGENCY shall provide a response to such notice and tender within a reasonable period following PROJECT AGENCY's receipt of TRUST's written notice, not to exceed thirty (30) days, and, if applicable, shall promptly assume PROJECT AGENCY's defense and indemnification obligations in accordance with this section. TRUST's delay in notifying PROJECT AGENCY of a claim shall not relieve PROJECT AGENCY of its defense and indemnity obligations, unless, and then only to the extent that, PROJECT AGENCY demonstrates its ability to defend or resolve such claim has been prejudiced by TRUST's delay. TRUST may participate in the defense of such claim at its own expense. TRUST shall, at PROJECT AGENCY's expense, reasonably cooperate in PROJECT AGENCY's defense of any claims tendered and accepted hereunder, and shall timely provide information and make witnesses available as requested by PROJECT AGENCY in the course of defending against such claims. If and to the extent monetary sanctions or costs are imposed or incurred by PROJECT AGENCY as a direct result of TRUST's failure to timely comply or respond to PROJECT AGENCY's requests for information or production of witnesses, they shall be the responsibility of TRUST. PROJECT AGENCY shall keep TRUST timely apprised of the status of any claim tendered and accepted hereunder and shall not settle any claim, nor agree to any entry of judgment, without first meaningfully consulting with TRUST.

In connection with the obligations herein, if: (1) PROJECT AGENCY fails to respond to TRUST's request for indemnification within thirty (30) days after written notice from TRUST; or (2) TRUST has reasonably determined, based upon PROJECT AGENCY's counsel's written advice, that having common counsel with PROJECT AGENCY would present such counsel with a conflict of interest, then TRUST, at PROJECT AGENCY's expense, may take over the defense and handling of the third party claim. If TRUST takes over such third party claim, PROJECT AGENCY may participate in the defense of such claim at its own expense. TRUST shall keep PROJECT AGENCY timely apprised of the status of such third party claim, and TRUST shall not settle any third party claim, nor consent to any entry of any judgment, without PROJECT AGENCY's prior written consent, which consent shall not be unreasonably withheld.

Each PROJECT AGENCY (on behalf of itself and of PROJECT AGENCY's Parties) agrees that the Indemnitees shall not be liable for, and each PROJECT AGENCY (on behalf of itself and PROJECT AGENCY's Parties) expressly assumes the risk of, and waives, releases and discharges the Indemnitees from, all matters subject to the above indemnity.

The indemnity obligations of this section 24 shall survive the expiration or earlier termination of this Agreement but only as to covered claims arising from the activities, including but not limited to design and construction activities, conducted under and during the term of this Agreement. The obligation to defend, indemnify and hold harmless set forth in this Agreement shall not extend to any claim, including but not limited to claims for inverse condemnation or tort claims, arising from the design, construction, maintenance, and operation of the completed PROJECT. Such rights, responsibilities and obligations shall be addressed in connection with the contemplated future transfer of property rights, if applicable in that context, or as otherwise mutually agreed upon by the parties. The defense and indemnity obligations in this Agreement shall not be: (A) construed to negate, abridge or otherwise reduce any right of defense or indemnity which is otherwise available to any Indemnitee or any party to this Agreement; or (B) limited by any insurance coverage, or otherwise affected by any limitation on amount or type of damages payable by or for PROJECT AGENCY or any of PROJECT AGENCY's Parties, under any workers' compensation, disability benefits or other employee benefits or similar laws.

25. Insurance.

PROJECT AGENCY is a self insured entity. STATE has provided a letter of self-insurance, attached as Exhibit G.

STATE shall require its contractor to carry an "Owner Controlled Insurance Program (OCIP)" in accordance with the specified PROJECT construction contract Special Provisions set forth in Exhibit H.

26. Non-Discrimination.

PROJECT AGENCY, for itself, its personal representatives, officers, employees, contractors, agents, successors in interest (if applicable) and assignees (if applicable) as a part of the consideration hereof, and as a term and condition of this RIGHT OF ENTRY, does hereby covenant and agree that:

- a. No individual on the grounds of race, sex, color, religion, age, marital status or national origin shall be excluded from participation in, denied the benefits of, or otherwise discriminated against in the use of said PREMISES;
- b. No individual on the grounds of race, sex, color, religion, age, marital status or national origin shall be excluded from participation in, denied the benefits of, or be

otherwise subjected to discrimination in the construction of any improvements on, over, or under said PREMISES or in the furnishing of services in connection with the use of the PREMISES by PROJECT AGENCY.

- c. PROJECT AGENCY shall use the PREMISES and the operation of the completed PROJECT in compliance with all other requirements imposed by or pursuant to applicable laws.

27. Architectural Barriers Act responsibilities.

PROJECT AGENCY hereby accepts any and all responsibilities under the Architectural Barriers Act of 1968, as amended, 42 U.S.C. 4151 *et seq.*, and section 504 of the Rehabilitation Act that result from the PROJECT activities herein. Accessibility of sidewalks and other pedestrian ways and crossings shall be maintained during the PROJECT.

It is understood and agreed that structures and sites directly associated with the actual processes of construction, including but not limited to, scaffolding, bridging, materials hoists, materials storage, and construction trailers shall not be required to comply with the above requirements or to be on an accessible route. Portable toilet units provided for use exclusively by construction personnel on a construction site shall not be required to comply with the above or to be on an accessible route.

28. Environmental Issues, Documentation and Protection.

- a. PROJECT AGENCY shall comply with all environmental mitigation, minimization and avoidance measures set forth in the PROJECT's FEIR/EIS and Final Section 4(f) Evaluation, Record of Determination, September 2008 Programmatic Agreement and any and all other ancillary agreements, plans or measures resulting or developed therefrom. PROJECT AGENCY will confer and consult with TRUST as to such mitigation, minimization and avoidance measures/methods as and to the extent required in the environmental documents, agreements and governing law.
- b. PROJECT AGENCY shall cooperate with TRUST in developing contract special provisions regarding additional environmental, historical and natural resource protection and avoidance measures and plans beyond those prescribed in the PROJECT ENVIRONMENTAL DOCUMENTS and plans and agreements resulting therefrom to the extent such provisions are reasonable and feasible in the context of the PROJECT. Any special provisions so developed shall be included as part of the construction contract(s) for the PROJECT.
- c. PROJECT AGENCY shall, without cost to TRUST, prevent surface water runoff from within the PREMISES from carrying sediment into San Francisco Bay. PROJECT AGENCY and TRUST will concurrently review copies of each Storm Water Pollution Prevention Plan ("SWPPP") prepared by its contractors for the

PREMISES. PROJECT AGENCY is responsible for coordinating its SWPPPs with TRUST's SWPPP. In order to avoid delays to the PROJECT, said review period shall not exceed ten (10) days.

- d. PROJECT AGENCY shall consult and coordinate with TRUST regarding application of TRUST's Roads and Grounds IPM Program and Weed Management Guidelines to the use of pesticides, fungicides, herbicides, and/or any other chemical or biological means of plant or pest control within the PREMISES for construction of the PROJECT. Such Program and Guidelines shall apply as agreed to by the parties.
- e. PROJECT AGENCY shall restore displaced vegetation to the PREMISES at the conclusion of contracts 3 and 4 to the extent such revegetation is reasonable and feasible in the context of the PROJECT and remaining construction activities contemplated on the PREMISES.

29. Hazardous Materials.

- a. Subject to the provisions of this section 29, PROJECT AGENCY shall not and PROJECT AGENCY shall ensure that PROJECT AGENCY's agents shall not, treat, sell, discharge, or release, any Hazardous Material upon, about, beneath or from the Presidio. PROJECT AGENCY shall not dispose of any Hazardous Materials within the Presidio, nor shall PROJECT AGENCY invoke the California DTSC lead variance with respect to any location within the Presidio. PROJECT AGENCY may not permit Hazardous Materials to be commingled with the Hazardous Material of the TRUST. For purposes of this provision, "Hazardous Material" refers to a hazardous substance pursuant to CERCLA (42 U.S.C. sec. 9601(14)) and hazardous waste under RCRA (42 U.S.C. sec. 6903). PROJECT AGENCY shall inform PROJECT AGENCY's contractors that PROJECT work hereunder may involve hazardous or contaminated soil or material. Nothing in this provision or in this Agreement shall preclude PROJECT AGENCY's re-use of soil that meets the TRUST's soil re-use criteria.
- b. Except as directly related to authorized activities for the PROJECT, PROJECT AGENCY shall not, and PROJECT AGENCY shall ensure that PROJECT AGENCY's agents shall not, bring, generate or otherwise use, store, or handle any Hazardous Material upon, about, beneath or from the PREMISES. PROJECT AGENCY shall be permitted to bring into the PREMISES necessary amounts of fuel and other fluids as required for the power and proper functioning of PROJECT AGENCY's vehicles and equipment. All Hazardous Materials-related activities undertaken by PROJECT AGENCY or PROJECT AGENCY's agents pursuant to this Agreement must comply with all applicable laws. PROJECT AGENCY agrees to be responsible for timely acquisition of any permit(s) required for its Hazardous Materials-related activities related to the PROJECT and shall provide to the TRUST upon request, inventories of all such Hazardous Materials and any supporting

documentation, including but not limited to material safety data sheets, uniform waste manifest forms, and/or any other pertinent permits.

- c. If PROJECT AGENCY shall become aware of or receive notice or other communication from a regulatory agency with applicable jurisdiction concerning any actual, alleged, suspected or threatened violation of any applicable law by PROJECT AGENCY or PROJECT AGENCY's agents or from past or present activities of any person in connection with the use of the PREMISES or of any liability of PROJECT AGENCY or PROJECT AGENCY's agents for environmental damage in connection with the use of the PREMISES, then PROJECT AGENCY shall deliver to TRUST, immediately upon receipt of such notice or communication by PROJECT AGENCY, a written description of such alleged violation, liability, correction information, or actual or threatened event or condition, together with copies of any documents evidencing same. Receipt of such notice shall not be deemed to create any obligation on the part of the TRUST to defend or otherwise respond to any such notification.
- d. PROJECT AGENCY shall at its sole cost and expense, promptly take all actions required of it under applicable laws by any regulatory agency with applicable jurisdiction to remedy damage to the PREMISES, or other areas of the PRESIDIO which arises directly from the presence or suspected presence (as determined by a regulatory agency with applicable jurisdiction), or release or suspected release (as determined by a regulatory agency with applicable jurisdiction), of any Hazardous Material introduced in or into the air, soil, surface water or ground water as a result of or in connection with PROJECT AGENCY's or PROJECT AGENCY's agents use of the PREMISES. Such actions may include but are not limited to the investigation of the environmental condition of the areas adversely affected ("Affected Property") by PROJECT AGENCY or PROJECT AGENCY's agents' breach of any of the provisions of this Agreement, as well as the preparation and performance of any required cleanup, remediation, containment, operation, maintenance, monitoring or restoration work, whether on or off of the Affected Property. PROJECT AGENCY shall take all actions required under applicable law and shall restore the Affected Property to a condition substantially equal to that existing prior to the damage to such property, in accordance with the standard of remediation imposed by applicable law. Those portions of any Affected Property that cannot be restored substantially to the pre-existing condition shall be restored in accordance with any additional standards or requirements imposed by a regulatory agency with applicable jurisdiction as appropriate under applicable law. PROJECT AGENCY shall proceed continuously and diligently with such investigatory and remedial actions and these actions shall be performed in accordance with applicable law in a good, safe and workmanlike manner by one or more licensed and reputable contractors experienced in the conduct of remedial actions in areas containing significant natural and cultural resources or comparable experience. PROJECT AGENCY shall pay all costs and expenses in connection with such investigatory and remedial activities chargeable to PROJECT AGENCY, including but not limited to the charges of such contractor(s),

all power and utility costs, any and all taxes or fees that may be applicable to such activities and required by the regulatory agency(ies) with applicable jurisdiction. PROJECT AGENCY shall promptly provide to the TRUST copies of testing results and reports generated in connection with the above-mentioned activities. Promptly upon completion of such investigation and remediation, PROJECT AGENCY shall remove all associated personal property, debris, materials and the like, to the satisfaction of the TRUST.

- e. In the event of a notice or requirement by a regulatory agency with applicable jurisdiction to PROJECT AGENCY under (c) or (d) above, TRUST shall have the right, but not the duty, at all reasonable times and, except in the case of emergency, following at least three (3) days' advance notice to PROJECT AGENCY, and in consultation and coordination with the PROJECT AGENCY's activities, to enter and to permit any agency, public or private utilities and other entities and persons to enter upon the portion of the PREMISES used for the PROJECT, as may be necessary as determined by the TRUST in its sole discretion, and at its own cost, to conduct inspections of the portion of the PREMISES used for the PROJECT, including invasive tests, to determine for itself the extent and nature of PROJECT AGENCY's activities in response to such a notice or requirement. The TRUST shall have the right, but not the duty, to retain independent professional consultants at its own cost to conduct such inspections and to review any report prepared by or for PROJECT AGENCY concerning such notice or requirement by a regulatory agency. Upon PROJECT AGENCY's request, TRUST will make available to PROJECT AGENCY copies of all final reports and written data obtained by the TRUST from such tests and investigations. PROJECT AGENCY shall have no claim for inconvenience to or interference with PROJECT AGENCY's use of the PREMISES occasioned by TRUST inspections under this section, provided that TRUST has provided the PROJECT AGENCY with the requisite notice and has consulted with PROJECT AGENCY and coordinated such inspections with PROJECT AGENCY's activities on the PREMISES as prescribed herein.
- f. In addition to all other indemnity requirements set forth in this Agreement and subject to paragraphs (g), (h) and (k) below, PROJECT AGENCY expressly agrees to indemnify, reimburse, defend, save and hold harmless TRUST and TRUST's agents for and from any and all environmental damage claims caused by or arising out of PROJECT AGENCY or PROJECT AGENCY's agents' use of the PREMISES under this Agreement, whether or not the alleged environmental damages were caused by the negligence or lack of diligence of the PROJECT AGENCY and regardless of whether the same is occasioned by the active or passive negligence of the PROJECT AGENCY and regardless of whether liability without fault is imposed on the PROJECT AGENCY, except to the extent (but only to the extent) such claims are caused by the gross negligence or willful misconduct of the Trust. As used herein "Environmental Damage Claims" shall mean any claim arising under any applicable local, state, or federal law or regulation enacted or otherwise adopted for the protection of the environment.

- g. The indemnity obligations of this section 29 shall survive the expiration or earlier termination of this Agreement but only as to covered claims arising from the activities, including but not limited to design and construction activities, conducted under and during the term of this Agreement. The obligation to defend, indemnify and hold harmless set forth in this Agreement shall not extend to any claim, including but not limited to claims for inverse condemnation or tort claims, arising from the design, construction, maintenance, and operation of the completed PROJECT. Such rights, responsibilities and obligations shall be addressed in connection with the contemplated future transfer of property rights, if applicable in that context, or as otherwise mutually agreed upon by the parties. The defense and indemnity obligations in this Agreement shall not be: (A) construed to negate, abridge or otherwise reduce any right of defense or indemnity which is otherwise available to any Indemnitee or any party to this Agreement; or (B) limited by any insurance coverage, or otherwise affected by any limitation on amount or type of damages payable by or for PROJECT AGENCY or any of PROJECT AGENCY's Parties, under any workers' compensation, disability benefits or other employee benefits or similar laws.
- h. This Agreement is not intended to create a separate obligation on the part of the PROJECT AGENCY and in favor of the TRUST to remediate pre-existing Hazardous Materials, nor does it limit or expand the rights or defenses of the TRUST with respect to such pre-existing Hazardous Materials. Consequently, the provisions of paragraphs (d) and (f) of this provision shall not apply to pre-existing Hazardous Materials except to the extent: (i) PROJECT AGENCY or PROJECT AGENCY's agents' activities cause an exacerbation or migration of such pre-existing Hazardous Materials, and then only as to the exacerbation or migration caused by PROJECT AGENCY to the extent required by law or by a regulatory agency with appropriate jurisdiction or to the extent that it is inconsistent with TRUST soil re-use criteria; or (ii) PROJECT AGENCY or PROJECT AGENCY's agents cause additional damage to the environment beyond such pre-existing Hazardous Materials due to a violation of any applicable law regarding such pre-existing Hazardous Materials. This provision does not relieve PROJECT AGENCY of any obligation it might have with regard to third parties or any governmental entity by operation of applicable laws, including but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act.
- i. PROJECT AGENCY understands and acknowledges that the PREMISES may contain lead-based paint. Therefore, PROJECT AGENCY hereby agrees that, during the term of this Agreement, any necessary costs of removal or remediation with respect to lead-based paint in the PREMISES shall be borne solely by PROJECT AGENCY. Whenever PROJECT AGENCY performs construction, maintenance, and/or alterations on the PREMISES, PROJECT AGENCY shall comply with all applicable laws related to the removal or remediation of lead-based

paint. Nothing in this Agreement shall be construed to require PROJECT AGENCY to remove lead-based paint unless applicable laws require such removal.

- j. PROJECT AGENCY shall develop and implement management and remediation plans for lead-based paint during any construction activities. PROJECT AGENCY shall furnish copies of such plans to TRUST before construction and/or alterations to the PREMISES.
- k. PROJECT AGENCY shall not and PROJECT AGENCY shall ensure that PROJECT AGENCY's agents shall not undertake any activities in the PREMISES where Land Use Controls, as defined below, are part of the approved remedy or in areas scheduled for environmental remediation or in other areas designated by TRUST as areas of likely or anticipated remediation unless it has received prior written approval from the TRUST, which may involve prior approval from CAL-EPA (California Department of Toxic Substances Control), and the Regional Water Quality Control Board. PROJECT AGENCY shall not invoke the California DTSC's "Area of Contamination" policy in any of the foregoing areas. However, it is understood that in areas other than those articulated in the first sentence of this paragraph, PROJECT AGENCY may replace excavated trench spoils back into the trench they were removed from as part of the PROJECT. Information regarding the environmental condition of such areas, including the presence or suspected presence of hazardous materials or contaminants, shall be provided by TRUST to PROJECT AGENCY to the extent such information is known, documented or otherwise available to TRUST. To the extent the activities of PROJECT AGENCY or PROJECT AGENCY's agents under this Agreement may interfere with or adversely affect areas of the TRUST undergoing environmental cleanup actions, PROJECT AGENCY shall cooperate with any involved agency to coordinate or modify the work under this Agreement as necessary to permit such cleanup actions to proceed to timely completion. An identification of areas where Land Use Controls are part of the approved remedy, are scheduled for environmental remediation, or have been designated by TRUST as areas of likely or anticipated remediation is attached hereto as Exhibit I (Presidio Land Use Controls). Any changes or modifications to the areas identified in Exhibit I shall be made immediately known to PROJECT AGENCY by TRUST.

Notwithstanding the above, TRUST and PROJECT AGENCY acknowledge that PROJECT construction activities are planned in areas TRUST has completed, commenced or is planning environmental remediation, including but not limited to areas where Land Use Controls apply. PROJECT AGENCY and TRUST are and will continue to confer and consult regarding coordination of PROJECT AGENCY's PROJECT work and TRUST's environmental remediation activities in these areas. Final coordination of such work and remediation, and final apportionment of costs thereof and responsibilities therefor shall be as mutually agreed upon by the PROJECT AGENCY and TRUST. Upon such agreement, the terms thereof shall govern said activities and responsibilities.

The respective hazardous materials treatment and remediation responsibilities of PROJECT AGENCY and TRUST as set forth in this section 29 include without limitation any necessary manifest requirements and designation of disposal facility.

If the PROJECT AGENCY encounters Unknown Contamination, herein defined as contamination outside of known remediation sites, contamination at known remediation sites involving previously unknown contaminants, or contamination not identified in previous investigations, PROJECT AGENCY will notify the Trust Remediation Department by telephone at (415) 561-2711 as soon as possible, but under no circumstances later than the end of the day during which the Unknown Contamination is first discovered. In such a circumstance, work shall immediately cease at locations where Unknown Contamination is encountered until after consultation with the Trust Remediation Department. Unknown Contamination shall be treated in compliance with law and as to responsibilities between PROJECT AGENCY and TRUST, in accordance with the provisions of this Agreement.

- l. Should PROJECT AGENCY fail to perform or observe any of its obligations or agreements pertaining to Hazardous Materials or applicable laws for a period of thirty (30) days (or such longer period of time as is reasonably required) after notice from the regulatory agency with applicable jurisdiction, then TRUST shall have the right, but not the duty, without limitation of any other rights of the TRUST under this Agreement to enter the PREMISES and perform the same. PROJECT AGENCY agrees to reimburse TRUST for the costs thereof and to indemnify TRUST for liabilities therefrom as set forth in this Agreement.
- m. PROJECT AGENCY expressly agrees that TRUST and TRUST's agents shall not be liable for any costs or injuries, including but not limited to any costs associated with interference with PROJECT AGENCY's use of the PREMISES, incurred by PROJECT AGENCY's agents resulting from contamination caused by the Department of the Army, the Golden Gate Bridge Highway and Transportation District, PROJECT AGENCY, or any other permittee, lessee, cooperator, concessioner, or other TRUST occupant.
- n. With respect to pre-existing Hazardous Materials discovered in, on, or under the PREMISES or other TRUST property, PROJECT AGENCY shall have all of the benefits to which it is entitled, if any, deriving from that certain indemnification with respect to environmental restoration provided by the United States Department of the Army, as set forth in Section 330 of Public Law 102-484, as amended.
- o. To the extent applicable, the provisions of this section 29 shall survive any termination of this Agreement.

30. Removal of Monitoring Wells and Groundwater Extraction Systems.

Upon completion of all work under this Agreement and upon transfer of title as specified in section 15 of this Agreement and as except for as otherwise provided for in the Freeway Maintenance Agreement specified in section 32 of this Agreement, if any, ownership and title to materials, equipment and appurtenances installed within the STATE's ultimate highway easement area will be automatically vested in PROJECT AGENCY, and materials, equipment and appurtenances installed outside of the easement area will automatically be vested in TRUST. No further agreement, except as provided in this section will be necessary to transfer ownership as hereinabove stated.

Notwithstanding the foregoing, any monitoring wells, groundwater extraction and treatment systems and appurtenant structures installed to complete the PROJECT will remain the property of the party responsible for installing them. If, however, any such monitoring wells, groundwater extraction and treatment systems and appurtenant structures remaining the property of TRUST are located within the ultimate highway easement area, TRUST shall obtain an encroachment permit from PROJECT AGENCY for such facilities. TRUST shall provide comparable permission to PROJECT AGENCY for the monitoring, maintenance and ultimate removal of monitoring wells, groundwater extraction and treatment systems and appurtenant structures that remain the property of PROJECT AGENCY but are located outside of its highway easement area.

As to PROJECT AGENCY wells outside of STATE's ultimate highway easement area, STATE shall perform the proper procedures for abandoning wells and shall comply with the Presidio Trust Standard Operating Procedure (SOP) No. 006 "Well Maintenance and Abandonment." Such wells shall be destroyed by removing the wellbox and overdrilling to remove the PVC casing and annular materials in accordance with State of California Well Standards and Presidio Trust SOP No. 006.

In landscaped areas outside of STATE's ultimate highway easement area, depending on the exact location of each boring, and as determined by the TRUST on a site-by-site basis, TRUST may require abandonment of well boreholes by placing bentonite chips from total depth to ground surface, instead of neat cement as indicated in the TRUST SOP No. 006. As to such areas outside of STATE's ultimate highway easement area and as determined by TRUST on a site-by-site basis, boreholes may not require finishing with a concrete surface plug, as described in TRUST SOP No. 006, to allow for grass covering in lawn areas. Locations in paved areas outside of the of STATE's ultimate highway easement area shall be surface dressed with a compacted asphalt cold patch.

31. Designation of Principal Representatives and Giving of Notice.

- a. Supervising Right of Way Agent Mark Shindler is designated as the principal representative of the STATE for purposes of this Agreement and may be contacted at telephone/fax number (510) 286-5403/(510) 286-5482, California Department of Transportation, 111 Grand Ave., P.O. Box 23440, Oakland, CA 94623-0440; Email address: Mark.Shindler@dot.ca.gov.

- b. Mark Helmbrecht is designated as the TRUST's principal representative for purposes of this Agreement. The principal representative may be contacted at telephone/fax number (415) 561-5435/(415) 561-2790, Presidio Trust, 34 Graham Street, P.O. Box 29052, San Francisco, CA 94129-0052; Email address: mhelmbrecht@presidiotrust.gov.
- c. Lee Saage is designated as the SFCTA's principal representative for purposes of this Agreement. The principal representative may be contacted at telephone/fax number (415) 522-4812/(415) 522-4812, San Francisco County Transportation Authority, 100 Van Ness Avenue, 26th Floor, San Francisco, CA 94102; Email address: lee.saage@sfcta.org.
- d. Unless otherwise specified, all notices required under this Agreement shall be given in writing to the individuals named in this section 31 by both certified mail and email.

32. Freeway Maintenance Agreement.

At or before the conclusion of the PROJECT, which shall be marked by PROJECT AGENCY's acceptance of the last contract of the PROJECT, the parties will execute a Freeway Maintenance Agreement.

33. Dispute Resolution.

- a. The parties agree to implement and construe the terms of this Agreement in good faith consistent with its intended purposes and to work cooperatively and expeditiously in its implementation. The parties recognize and acknowledge that for reasons of public safety time is of the essence in constructing the PROJECT. Accordingly, in the event that a dispute or conflict arises regarding the terms and conditions of the Right of Entry herein, it is the mutual intent of the parties that such disputes and conflicts be resolved as quickly as possible and at the lowest possible level.
- b. PROJECT AGENCY staff, the contractor and TRUST staff shall make every effort to resolve disputes and conflicts as quickly as possible if and as they arise during the course of the PROJECT activities. PROJECT AGENCY staff, TRUST staff and/or the contractor shall meet and confer as necessary to address disputes as they arise. If a dispute arises, the parties shall meet as soon as possible, preferably within twenty-four (24) hours, and in no event later than forty-eight (48) hours, after it arises to attempt to resolve it.
- c. If a dispute cannot be resolved by PROJECT AGENCY staff, TRUST staff and/or the contractor within three (3) days after it arises, the dispute shall be forwarded to a Senior Management Committee, which shall be comprised of a senior-level staff

representative from the TRUST and each PROJECT AGENCY. The Senior Management Committee shall meet and attempt to resolve the dispute within forty-eight (48) hours after the dispute is forwarded to it.

- d. If the dispute cannot be resolved within three (3) working days by the Senior Management Committee, then it shall be forwarded to an Executive Committee, comprised of the chief executives of STATE's District 04, TRUST, SFCTA and/or their designees for final decision by consensus.
- e. If any party believes the resolution of a significant dispute is time sensitive or otherwise warrants immediate or expedited final decision, then it may designate the issue to be a significant matter, whereby: (a) the time frames for dispute resolution set forth in steps b and c shall be shortened to 48 hours, or (b) any party may immediately elevate the dispute for final resolution to the Executive Committee.

34. Exhibits.

The following exhibits are attached hereto and made a part hereof:

- a. Exhibit A - drawing and CD depicting the PREMISES in yellow
- b. Exhibit B - tree removal map
- c. Exhibit C – project funded element list
- c. Exhibit D – service district charges chart
- d. Exhibit E – special events schedule
- e. Exhibit F – public parking area
- f. Exhibit G – letter of self-insurance
- g. Exhibit H –owner controlled insurance program (OCIP) special provisions.
- h. Exhibit I – Presidio land use controls.

35. Notification of RIGHT OF ENTRY Conditions.

PROJECT AGENCY shall notify all of its officers, employees, contractors, agents, or guests who will use the PREMISES of the terms of this RIGHT OF ENTRY and that they are required to comply with all applicable terms of this RIGHT OF ENTRY if they enter the PREMISES.

36. Entire Agreement.

This Agreement, including its exhibit(s), constitutes the only agreement between TRUST and PROJECT AGENCY with respect to the RIGHT OF ENTRY granted herein.

37. Amendments or Modifications.

Any amendments or modifications to this Agreement must be in writing and signed by the parties.

38. Governing Law.

Jurisdiction and venue for adjudication of legal disputes between the TRUST and the PROJECT AGENCY arising from this Agreement shall be as provided by applicable law, including the TRUST ACT. Governing law as to such legal disputes shall be as determined by the court.

39. Construction of Terms.

The language in all parts of this Agreement shall in all cases be construed as a whole. This Agreement was negotiated, drafted and entered into jointly by the parties with the assistance and guidance of their respective counsel and the rule of construction that any ambiguities are to be resolved against the party drafting the agreement shall not be employed or applied in the interpretation of this Agreement.

40. No Rights Created in Third Parties.

The parties do not intend benefits of this Agreement to inure to any third party. This Agreement is entered into for the sole protection and benefit of the parties herein. No other person or entity shall be a direct or indirect beneficiary of, or shall have any direct or indirect cause of action or claim in connection with this Agreement.

41. Survivability of Certain Provisions.

The provisions of this Agreement concerning or relating to indemnification shall survive the termination, expiration and/or revocation of this Agreement but only as expressly specified in the indemnification provisions herein. The provisions of this Agreement concerning or relating to liability for damages to property of TRUST, and to restoration of the TRUST's resources, shall remain in effect until all of the PROJECT AGENCY's obligations under such provisions have been satisfied.

42. Severability.

If any provision of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of the Agreement shall continue in full force and

effect and shall in no way be impaired or invalidated, and the parties agree to substitute for the invalid or unenforceable provision a valid and enforceable provision that most closely approximates the intent and economic effect of the invalid or unenforceable provision.

43. Recording.

The parties agree that this Agreement shall not be recorded.

44. Subject to Existing Property Interests.

The RIGHT OF ENTRY granted herein is expressly subject to all existing easements, licenses, and rights-of-way including, but not limited to, rights of way for the installation, maintenance, replacement, repair, or relocation of utilities, as well as established access routes for roadways or other infrastructure located on the PREMISES.

45. Binding on Successors.

This Agreement is binding upon and will inure to the benefit of the Parties and their respective heirs, trustees, executors, administrators, successors and assigns.

46. Captions and Interpretations.

Paragraph and section titles, headings, or captions contained in this Agreement are inserted as a matter of convenience and for reference, and in no way limit or extend the scope of the Agreement or any of its provisions.

47. Facsimile Signatures.

This document and modifications hereto will be considered signed by that party when the signature of that party is delivered by facsimile transmission to the other parties. Such facsimile signature shall be treated in all respects as having the same effect as an original signature. Signatures shall be transmitted to the following numbers:

To the TRUST: (415) 561-2790, Attention: Mark Helmbrecht.

To the STATE: (510) 286-5482, Attention: Mark Shindler.

To the SFCTA: (415) 522-4829, Attention: Lee Saage.

48. Counterparts.

This Agreement may be executed in two or more counterparts, each of which may be executed by fewer than all the parties hereto, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. The signature of any party to any counterpart shall be deemed a signature to, and may be appended to, any other counterpart. The exchange of copies of this Agreement and of signature pages by

facsimile or scanned e-mail transmission shall constitute effective execution and delivery of this Agreement as to the exchanging parties and may be used in lieu of the original Agreement for all purposes. Signatures of the parties transmitted by facsimile or scanned e-mail shall be deemed to be their original signatures for all purposes.

49. Joint and Several Liability.

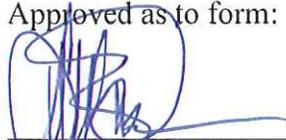
Notwithstanding anything to the contrary set forth in this Agreement, the obligations and liability of PROJECT AGENCY under this Agreement shall be joint and several obligations of STATE and SFCTA.

[SIGNATURES ON PAGE FOLLOWING]

AGREEMENT AMONG THE PRESIDIO TRUST AND THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION AND THE SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY FOR ENTRY ON TO REAL PROPERTY NEEDED FOR THE CONSTRUCTION OF THE SOUTH ACCESS TO THE GOLDEN GATE BRIDGE, DOYLE DRIVE REPLACEMENT PROJECT IN SAN FRANCISCO

THE UNDERSIGNED HAVE READ AND EXPRESSLY AGREE TO ALL OF THE TERMS OF THIS RIGHT OF ENTRY AGREEMENT

Approved as to form:



Lucille Y. Baca
Assistant Chief Counsel
Department of Transportation
Legal Division

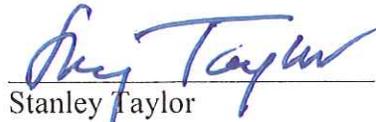
STATE OF CALIFORNIA
Department of Transportation



BIJAN SARTIPI
District Director
Caltrans District 4

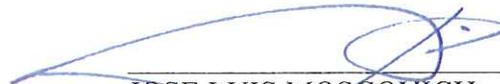
Dated 7-16-09

Approved as to form:



Stanley Taylor
Counsel

SAN FRANCISCO COUNTY
TRANSPORTATION AUTHORITY

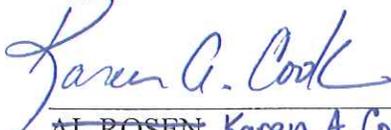


JOSE-LUIS MOSCOVICH
Executive Director

Dated 7/16/09

RIGHT OF ENTRY GRANTED BY THE PRESIDIO TRUST

Approved as to form:



~~AL ROSEN~~ Karen A. Cook
Deputy General Counsel



CRAIG MIDDLETON
Executive Director

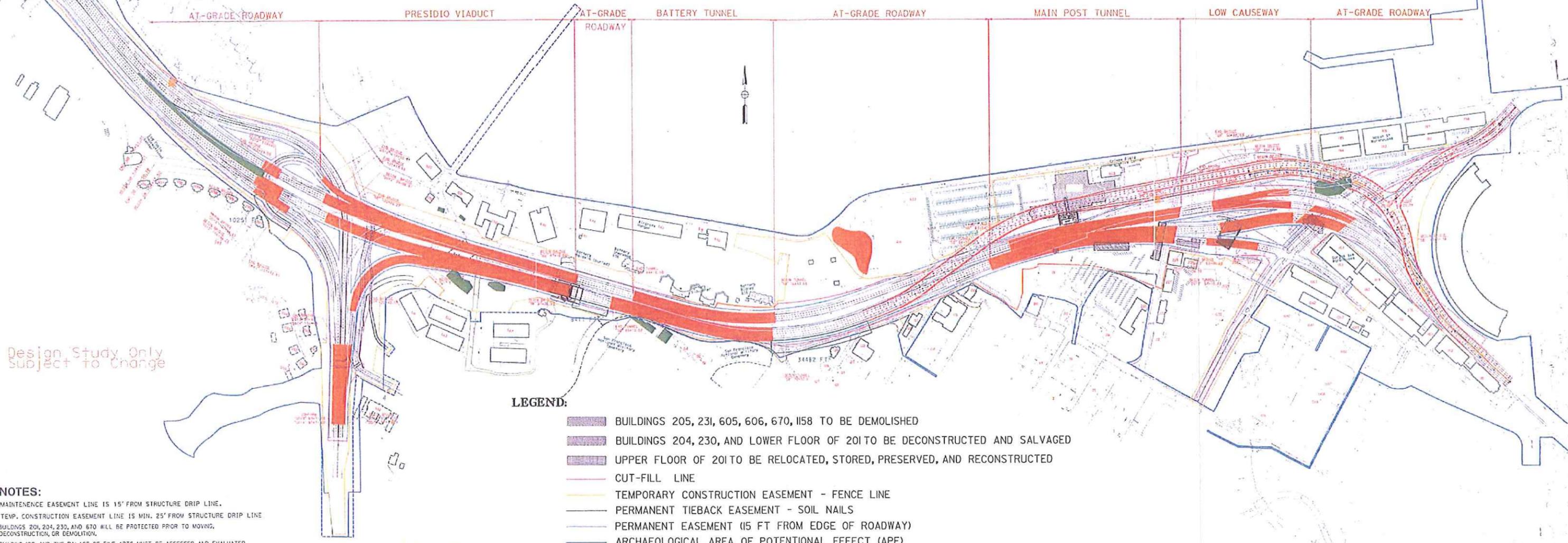
Dated 7/16/09

EXHIBIT A

BS CRM
LH

DOYLE DRIVE PREFERRED ALTERNATIVE

Design Study Only
Subject to Change



Design Study Only
Subject to Change

LEGEND:

- BUILDINGS 205, 231, 605, 606, 670, 1158 TO BE DEMOLISHED
- BUILDINGS 204, 230, AND LOWER FLOOR OF 201 TO BE DECONSTRUCTED AND SALVAGED
- UPPER FLOOR OF 201 TO BE RELOCATED, STORED, PRESERVED, AND RECONSTRUCTED
- CUT-FILL LINE
- TEMPORARY CONSTRUCTION EASEMENT - FENCE LINE
- PERMANENT TIEBACK EASEMENT - SOIL NAILS
- PERMANENT EASEMENT (15 FT FROM EDGE OF ROADWAY)
- ARCHAEOLOGICAL AREA OF POTENTIAL EFFECT (APE)
- APE PROPOSED AMMENDMENT
- CELL TOWER
- PREVIOUSLY RECORDED PREHISTORIC SITE (CA-SFR-6/26)

NOTES:

1. MAINTENANCE EASEMENT LINE IS 15' FROM STRUCTURE DRIP LINE.
TEMP. CONSTRUCTION EASEMENT LINE IS MIN. 25' FROM STRUCTURE DRIP LINE
BUILDINGS 201, 204, 230, AND 670 WILL BE PROTECTED PRIOR TO MOVING, DECONSTRUCTION, OR DEMOLITION.
4. BUILDING 106 AND THE PALACE OF FINE ARTS MUST BE ASSESSED AND EVALUATED DUE TO POTENTIAL FOR CONSTRUCTION VIBRATION TO AFFECT THESE PROPERTIES.
5. BUILDING 201 WILL BE PROTECTED IN PLACE UNTIL ITS UPPER STORY IS TEMPORARILY RELOCATED AND ITS LOWER STORY IS DECONSTRUCTED.
6. BUILDING 230 MEASURES WILL INCLUDE SECURING THE BUILDING AFTER IT IS VACATED AND PROVIDING SECURITY THROUGHOUT THE PERIOD OF VACANCY PRIOR TO DECONSTRUCTION.
8. BUILDING 106 WILL BE TEMPORARILY VACATED FOR APPROXIMATELY 18 MONTHS DURING THE CONSTRUCTION PERIOD.

EXISTING EASEMENT=26.92 ACRES
PERMANENT TIEBACK=1.22 ACRES

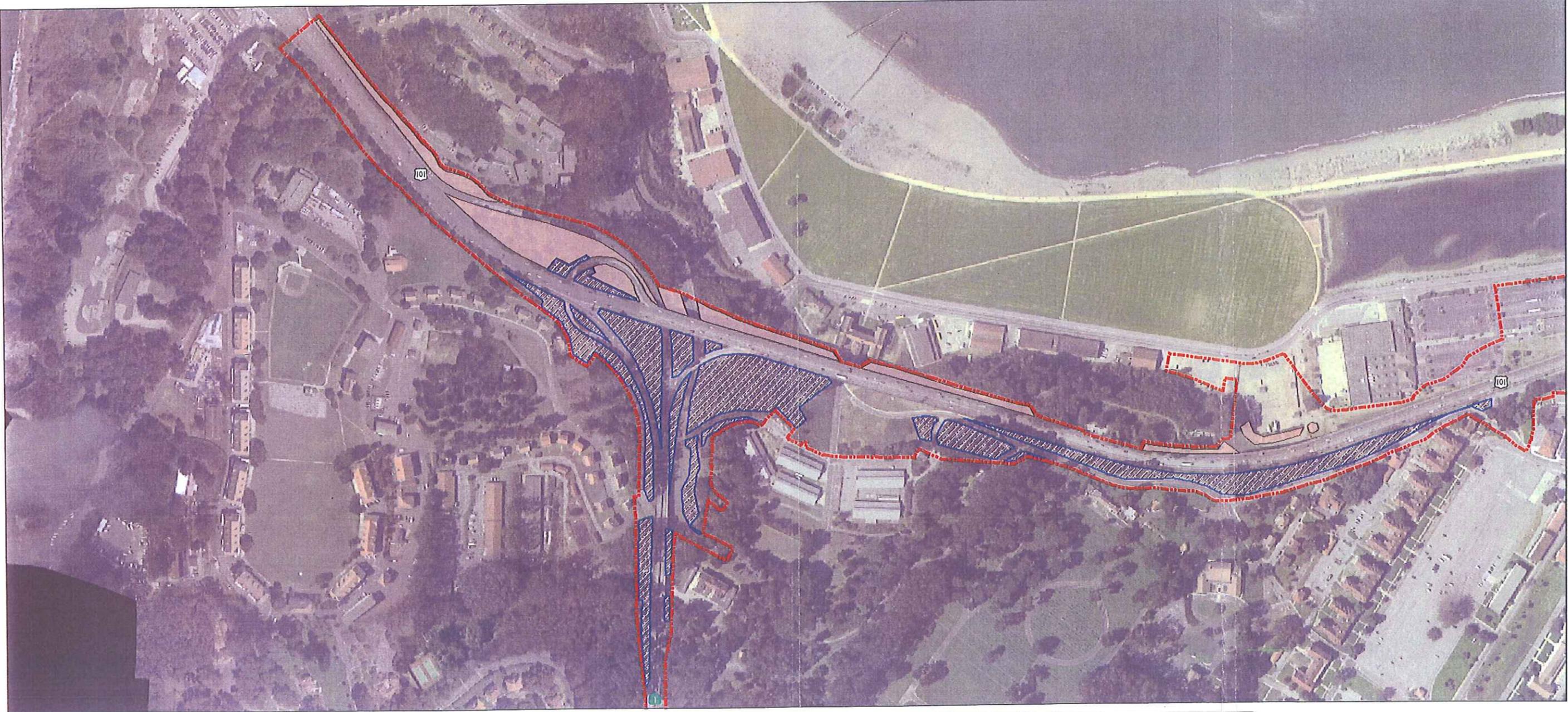
SF 101, PM 8.0-9.8

SF 001, PM 6.8-7.1

Draft Tree Management Plan - Doyle Drive

BS CRM
LL

Exhibit B



Legend

- Temporary Construction Easement (TCE)
- Tree Removal Area (Aug 2010 Proposed)
- Tree Removal Area (Aug 2009)

0 100 200 400 600 800 Feet
1 inch equals 200 feet

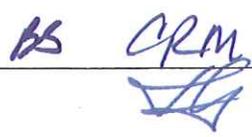
BS CRM


EXHIBIT C

#	PROJECT FUNDED ELEMENTS	IMPLEMENTATION RESPONSIBILITY
DESIGN FEATURES		
1	Construct extension of Girard Road and tie into local street network	Caltrans
2	Implement landscape/hardscape designs per final landscape/hardscape design developed in consultation with Presidio Trust	Caltrans
3	Excavation for Trust's Quartermaster Reach Wetlands Restoration Project in conjunction with excavation for PROJECT, provided that timing and area of excavation for both projects coincide.	Caltrans
4	Restoration of ADA and emergency vehicle access to all existing buildings at conclusion of PROJECT, if impacted by the PROJECT	Caltrans
5	Extend stormwater outfalls A(1) and IJKL(2)	Caltrans
MITIGATIONS		
6	Complete Presidio Promenade multi-use trail over new tunnel tops and where disrupted by project activities	Caltrans
7	Construction of parking lot(s) in the area east of Quartermaster reach, south of Mason Street and the warehouses, and north of Girard Road and the Doyle Drive northbound on-ramp. Design to be coordinated with the Presidio Trust.	Caltrans
8	Relocation of Building 201 back to historic location on Halleck Street	Caltrans
9	Wetlands Mitigations per South Access to the Golden Gate Bridge Doyle Drive Project FEIS and ROD only; (does not include wetlands or other mitigation in the Presidio for project(s) by Trust or third parties).	Caltrans Presidio Trust
10	Post-construction restoration of TCE per ROE	Caltrans
REAL ESTATE		
11	Payment of the Public Storage lease termination fee to Public Storage	Caltrans
12	Utility relocations as needed to connect to existing utility network	Caltrans
13	Relocation of Building 106 tenant(s) per RAP if applicable	Caltrans
14	Relocation of Bldg 1158 tenant(s) per RAP; Trust to deliver vacant per ROE	Caltrans
15	Stabilization of historic structures and features in and near the TCE to prevent damage, including Bldgs. 228, 650 and 651	Caltrans

EXHIBIT D
SERVICE DISTRICT CHARGES

BS CRM


Taking of Building	Total SDC	Per Day of Delay Penalty
204	\$ 873,797	\$ 119.70
605	\$ 3,195,661	\$ 437.76
606	\$ 672,571	\$ 92.13
1158	\$ 310,796	\$ 42.57
	<u>\$ 5,052,825</u>	

Note: Building 670 is also a taking of the Project, but is very small, unoccupied, and no SDC value is attributable to it.

Presidio Trust Special Event Days - No Work Performed by Contractor
Based on 7 Day Construction Workday Calendar
EXHIBIT E

BS CRM
[Signature]

2009		
Date	Event	Construction Day
March 15, 2009	Emerald Nuts Across the Bay 12k 6a-11a	823 *
May 9, 2009	Girl Scout Golden Gate Bridging Ceremony All Day	878 *
May 25, 2009	Annual Memorial Day Observance All Day	894 *
June 14, 2009	Escape from Alcatraz Triathlon 6a-1p	914 *
July 11-12, 2009	Avon 2 Day Walk All Day	941-942 *
July 26, 2009	San Francisco Marathon midnight-11a	956 *
August 1-2, 2009	Aloha Festival Event All Day	962-963 *
September 13, 2009	Alcatraz Triathlon	
September 26, 2009	Film in the Fog 5p-Midnight	18 *
October 2-4, 2009	Susan G. Komen 3-Day Breast Cancer Walk All Day	24-26 *
October 4, 2009	KNBR Bridge to Bridge Run 6a-Noon	26 *
October 10-11, 2009	Fleet Week/Blue Angels Performances All Day	32-33 *
October 18, 2009	Nike Marathon 4a-Noon	40 *
1st or 2nd Sun/June	Anchorman Escape from San Francisco	
3rd or 4th Sun/June	Golden Gate Triathlon	
2nd or 3rd Sun/Nov	U.S. 1/2 Marathon	

2010		
Date	Event	Construction Day
March 14, 2010	Emerald Nuts Across the Bay 12k	187 *
May 8, 2010	Girl Scout Golden Gate Bridging Ceremony	242 *
May 31, 2010	Annual Memorial Day Observance	265 *
June 13, 2010	Escape from Alcatraz Triathlon	278 *
July 10-11, 2010	Avon 2 Day Walk	305-306 *
July 25, 2010	San Francisco Marathon	320 *
August 7-8, 2010	Aloha Festival Event	333-334 *
September 13, 2010	Alcatraz Triathlon - See Below	
September 25, 2010	Film in the Fog	382 *
October 1-3, 2010	Susan G. Komen 3-Day Breast Cancer Walk	388-390 *
October 3, 2010	KNBR Bridge to Bridge Run	390 *
October 9-10, 2010	Fleet Week/Blue Angels Performances	396-397 *
October 17, 2010	Nike Marathon	404 *
1st or 2nd Sun/June	Anchorman Escape from San Francisco	
3rd or 4th Sun/June	Golden Gate Triathlon	
2nd or 3rd Sun/Nov	U.S. 1/2 Marathon	

2011		
Date	Event	Construction Day
March 13, 2011	Emerald Nuts Across the Bay 12k	551 *
May 14, 2011	Girl Scout Golden Gate Bridging Ceremony	613 *
May 30, 2011	Annual Memorial Day Observance	629 *
June 12, 2011	Escape from Alcatraz Triathlon	642 *
July 9-10, 2011	Avon 2 Day Walk	669-670 *
July 31, 2011	San Francisco Marathon	691 *
August 6-7, 2011	Aloha Festival Event	697-698 *
September 13, 2011	Alcatraz Triathlon - See Below	
September 24, 2011	Film in the Fog	746 *
October 7-9	Susan G. Komen 3-Day Breast Cancer Walk	759-761 *
October 2, 2011	KNBR Bridge to Bridge Run	754 *
October 8-9	Fleet Week/Blue Angels Performances	760-761 *
October 16, 2011	Nike Marathon	768 *
1st or 2nd Sun/June	Anchorman Escape from San Francisco	
3rd or 4th Sun/June	Golden Gate Triathlon	
2nd or 3rd Sun/Nov	U.S. 1/2 Marathon	

2012		
Date	Event	Construction Day
March 11, 2012	Emerald Nuts Across the Bay 12k	915 *
May 12, 2012	Girl Scout Golden Gate Bridging Ceremony	977 *
May 28, 2012	Annual Memorial Day Observance	993 *
June 10, 2012	Escape from Alcatraz Triathlon	6 *
July 14-15, 2012	Avon 2 Day Walk	40-41 *
July 29, 2012	San Francisco Marathon	55 *
August 4-5, 2012	Aloha Festival Event	61-62 *
September 13, 2012	Alcatraz Triathlon - See Below	
September 29, 2012	Film in the Fog	111 *
October 5-7, 2012	Susan G. Komen 3-Day Breast Cancer Walk	123-125 *
October 7, 2012	KNBR Bridge to Bridge Run	125 *
October 13-14, 2012	Fleet Week/Blue Angels Performances	131-132 *
October 21, 2012	Nike Marathon	139 *
1st or 2nd Sun/June	Anchorman Escape from San Francisco	
3rd or 4th Sun/June	Golden Gate Triathlon	
2nd or 3rd Sun/Nov	U.S. 1/2 Marathon	

2013		
Date	Event	Construction Day
March 10, 2013	Emerald Nuts Across the Bay 12k	279 *
May 11, 2013	Girl Scout Golden Gate Bridging Ceremony	341 *
May 27, 2013	Annual Memorial Day Observance	357 *
June 9, 2013	Escape from Alcatraz Triathlon	370 *
July 13-14, 2013	Avon 2 Day Walk	404-405 *
July 28, 2013	San Francisco Marathon	419 *
August 3-4	Aloha Festival Event	425-426 *
September 13, 2013	Alcatraz Triathlon - See Below	
September 28, 2013	Film in the Fog	481 *
October 4-6, 2013	Susan G. Komen 3-Day Breast Cancer Walk	487-489 *
October 6, 2013	KNBR Bridge to Bridge Run	489 *
October 12-13, 2013	Fleet Week/Blue Angels Performances	495-496 *
October 20, 2013	Nike Marathon	503 *
1st or 2nd Sun/June	Anchorman Escape from San Francisco	
3rd or 4th Sun/June	Golden Gate Triathlon	
2nd or 3rd Sun/Nov	U.S. 1/2 Marathon	

2014		
Date	Event	Construction Day
March 9, 2014	Emerald Nuts Across the Bay 12k	643 *
May 10, 2014	Girl Scout Golden Gate Bridging Ceremony	705 *
May 26, 2014	Annual Memorial Day Observance	721 *
June 8, 2014	Escape from Alcatraz Triathlon	734 *
July 12-13, 2014	Avon 2 Day Walk	768-769 *
July 27, 2014	San Francisco Marathon	783 *
August 2-3, 2014	Aloha Festival Event	789-790 *
September 13, 2014	Alcatraz Triathlon - See Below	
September 27, 2014	Film in the Fog	845 *
October 3-5, 2014	Susan G. Komen 3-Day Breast Cancer Walk	851-853 *
October 5, 2014	KNBR Bridge to Bridge Run	853 *
October 11-12, 2014	Fleet Week/Blue Angels Performances	859-860 *
October 19, 2014	Nike Marathon	867 *
1st or 2nd Sun/June	Anchorman Escape from San Francisco	
3rd or 4th Sun/June	Golden Gate Triathlon	
2nd or 3rd Sun/Nov	U.S. 1/2 Marathon	

*Special Event Dates were forecasted for this schedule as follows:
 Emerald Nuts Across the Bay 12k - 2nd Sunday in March
 Girl Scout Golden Gate Bridging Ceremony - 2nd Saturday in May
 Escape from Alcatraz Triathlon - 2nd Sunday in June
 Avon 2 Day Walk - 2nd Saturday/Sunday in July
 San Francisco Marathon - Last Sunday in July
 Aloha Festival Event - 1st full weekend in August
 Film in the Fog - Either last Saturday of September or 1st. Saturday of October (last Sat shown on this sheet)
 Susan G. Komen 3-Day Breast Cancer Walk - First full Fri-Sun Weekend in October?????
 KNBR Bridge to Bridge Run - First Sunday of October
 Fleet Week/Blue Angels Performances - 2nd or 3rd weekend of October (2nd shown this sheet)
 Nike Marathon - 3rd Sunday of October
 Alcatraz Triathlon - Tide Dependent Between June and September. Date is a placeholder for years other than 2009.

EXHIBIT F

BS CRM


TEMPORARY PARKING LOT
(Blue)





State of California • Arnold Schwarzenegger, Governor
State and Consumer Services Agency

DEPARTMENT OF GENERAL SERVICES
Administration Division
Office of Risk & Insurance Management

BS CRM
[Signature]

April 27, 2009

The Presidio Trust

**STATE OF CALIFORNIA
PUBLIC LIABILITY AND WORKERS' COMPENSATION INSURANCE
FISCAL YEAR JULY 1, 2008 TO JUNE 30, 2009
RE: CALIFORNIA DEPARTMENT OF TRANSPORTATION**

To Whom It May Concern:

The State of California has elected to be insured for its motor vehicle and general liability exposures through a self-insurance program. The State Attorney General administers the general liability program through an annual appropriation from the General Fund. The Office of Risk and Insurance Management administers the motor vehicle liability program.

Under this form of insurance, the State and its employees (as defined in Section 810.2 of the Government Code) are insured for any tort liability that may develop through carrying out official activities, including state official operations on non-state owned property. Should any claims arise by reason of such operations or under an official contract or license agreement, they should be referred to the Attorney General, State of California, Tort Liability Section, 1300 I Street, Suite 1101, PO Box 944255, Sacramento, CA 94244-2550.

The State of California has entered into a Master Agreement with the State Compensation Insurance Fund to administer workers' compensation benefits for all state employees, as required by the Labor Code.

Sincerely,

Jeffrey N. Dierks
Associate Risk Analyst
916-376-5279

jeff.dierks@dgs.ca.gov

The Ziggurat • 707 Third Street, First Floor • West Sacramento, California 95605-2811 • (916) 376-5300

Communication aids or services will be provided to individuals with disabilities upon request. The California Relay Service telephone numbers are (voice) 1-800-735-2922 and (TTY) 1-800-735-2929.

EXHIBIT G

BS CRM


EXHIBIT H

The State of California Department of Transportation ("State") and the San Francisco County Transportation Authority ("Authority") will procure and maintain or cause the General Contractor(s) to procure and maintain throughout the term of this Agreement, at Contractor's expense, and any extension hereof, the following types of insurance.

The limits of liability for required insurance shall provide coverage for no less than the following amounts, or greater amounts where required by applicable laws:

PORTIONS OF THE WORK TO BE COVERED BY OCIP

Use of Owner Controlled Insurance Program: State of California will obtain an Owner Controlled Insurance Program (OCIP) for the project that provides coverage in accordance with (a) through (c) below. The work/contracts covered under the OCIP are summarized in Attachment A. All work that comes under the OCIP Coverages (a), (b) and (c) hereunder will be provided with coverage scope at minimum equivalent to that required in (a),(b) and (c) with a combined total limit for General Liability, Non Owned Auto Liability and Employers Liability of \$200,000,000.. The parties listed in "Additional Requirements (d)" on page 3 shall be insureds on the OCIP. Coverages (d) through (g) in this section will apply to work/contracts covered by the OCIP.

(a) Commercial General Liability,

Shall include

1. premises, operations and mobile equipment.
2. products and completed operations for a period of 10-years following project completion.
3. broad form property damage (including completed operations).
4. explosion, collapse and underground hazards.
5. personal injury.
6. contractual liability.
7. independent contractors liability
8. severability of interest – (no cross liability exclusion);

(b) Business Automobile Liability insuring non-owned and hired vehicles;

(c) Workers' Compensation in accordance with State of California law, and **Employers' Liability** ; waiver of subrogation endorsement required in favor of the United States, the Presidio Trust, the National Park Service and its officers, directors, agents, subsidiaries, parents and employees. If there is an exposure of injury to the Contractors' employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act or under laws, regulations or statutes applicable to maritime employees, coverage shall be included for such injuries or claims;

(d) Contractor's Pollution Liability with a limit of not less than \$25,000,000 per occurrence and aggregate and maximum \$100,000 self-insured retention. Coverage shall extend to hazardous materials transport and treatment / disposal facilities;

(e) Professional Liability for errors and omissions from design responsibility with a \$2,000,000 limit of liability and maximum \$100,000 self insured retention on an if any exposure basis with coverage terms appropriate to the risk;

(f) Protection & Indemnity (P&I) in respect of third party liabilities and expenses arising from use of vessels, if any;

- (g) **Aircraft Liability** in respect of third party liabilities and expenses arising from use of aircraft including fixed and rotary wing, if any;

PORTIONS OF THE WORK NOT COVERED BY OCIP

For work/contracts not covered by the OCIP. The following coverages are required.

- (a) **Commercial General Liability**, in amounts shown in the table below; Maximum self insured retention or deductible of \$100,000. Shall include:
1. premises, operations and mobile equipment.
 2. products and completed operations coverage shall be maintained for a period of 10-years following project completion.
 3. broad form property damage (including completed operations).
 4. explosion, collapse and underground hazards.
 5. personal injury.
 6. contractual liability.
 7. independent contractors liability
 8. severability of interest – (no cross liability exclusion);
- (b) **Business Automobile Liability** insuring all owned, non-owned and hired vehicles operated by or on behalf of Contractor, with a per accident limit of not less than \$1,000,000. \$100,000 maximum deductible;
- (c) **Workers' Compensation** in accordance with State of California law, and **Employers' Liability** with a limit of not less than \$1,000,000 each coverage; waiver of subrogation endorsement required in favor of the United States, the Presidio Trust, the National Park Service and its officers, directors, agents, subsidiaries, parents and employees. If there is an exposure of injury to the Contractors' employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act or under laws, regulations or statutes applicable to maritime employees, coverage shall be included for such injuries or claims;
- (d) **Umbrella or Excess Liability** with a per occurrence limit and annual aggregate excess of the limits provided under (a) through (c) above in amounts shown in the table below;

The Presidio Trust
Required Contractor Insurance Provisions

Total Contract	General Liability			Umbrella – Excess of General, Auto & Employers Liability
	For Each Occurrence ¹	Aggregate for Products/Completed Operation	General Aggregate ²	Umbrella or Excess Liability ³
≤\$1,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$5,000,000
>\$1,000,000 ≤\$5,000,000	\$1,000,000	\$2,000,000	\$2,000,000	\$10,000,000
>\$5,000,000 ≤\$25,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$15,000,000
>\$25,000,000	\$2,000,000	\$2,000,000	\$4,000,000	\$25,000,000
1. Combined single limit for bodily injury and property damage. 2. This limit shall apply separately to the Contractor's work under this contract. 3. The umbrella or excess policy shall contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.				

- (e) **Contractor's Pollution Liability** with a limit of not less than \$5,000,000 per occurrence and aggregate and maximum \$100,000 self-insured retention. Coverage shall extend to hazardous materials transport and treatment / disposal facilities;
- (f) **Professional Liability** for errors and omissions from design responsibility with a \$2,000,000 limit of liability and maximum \$100,000 self insured retention on an if any exposure basis with coverage terms appropriate to the risk;
- (g) **Protection & Indemnity (P&I)** in respect of third party liabilities and expenses arising from use of vessels, if any;
- (h) **Aircraft Liability** in respect of third party liabilities and expenses arising from use of aircraft including fixed and rotary wing, if any;

Additional Requirements applying to work/contracts covered by the OCIP and not covered by the OCIP

- (a) The Contractor shall furnish Certificates of Insurance evidencing the above coverage to the The State of California Department of Transportation ("State") upon execution of the Contract and prior to expiration of any line of coverage henceforth during the term of this contract.
- (b) The insurance company shall provide written notice to same thirty (30) days prior to the effective date of any cancellation or termination of the policy; or any modification of the policy which may adversely affect the interest of the additional insureds in such insurance.
- (c) Contractor's coverage shall be primary as respects the United States, the Presidio Trust and its officers, directors, agents, subsidiaries, parents, and employees and non-contributory with any insurance carried by or available to the same.
- (d) The insurance shall provide for waiver of subrogation and include the United States, the Presidio Trust, the National Park Service and their officers, directors, agents, subsidiaries, parents, and employees as Insureds (except Workers Compensation and Professional Liability). Such additional insured coverage shall be provided by a policy provision or by an endorsement providing coverage for loss arising out of ongoing operations and completed operations.

The Presidio Trust

Required Contractor Insurance Provisions

- (e) All insurance required shall be with insurers rated A-: VII or higher in the then current A.M. Best's Insurance Guide.
- (f) The Trust will have the right but not the obligation to audit insurance compliance at any time.

It is understood that a lapse of insurance is a material breach and the Trust may then terminate this Agreement at its option.

Contractor shall not be relieved of its responsibility for any and all loss, damage, or liability stemming from any risk or exposure that is not insured, within deductibles or self insured retentions, or not covered as a result of normal policy exclusions.

Contractor is also solely responsible for damage to or loss of its business personal property, equipment and vehicles.

ATTACHMENT A

OCIP Contract/Work:

Contract #3 – South Bound Presidio Interchange

Contract #4 – South Battery Tunnel & at Grade Detour

Contract #5 – Girard Interchange & Main Post Tunnels

Contract #6 – Northbound Battery Tunnel with Approaches

Contract #7 – Northbound Presidio Interchange

Contract #8 – Landscape Project

Non-OCIP Contract/Work:

Contract #	Project	Cost	General Liability	Umbrella	Total Liability
2	Utility relocation	\$15M	\$2/\$4	\$15/\$15	\$17/\$19
1.1	Plant/material propagation	\$600K	\$1/\$2	\$5/\$5	\$6/\$7
1.2	Building stabilization	\$1.1M	\$1/\$2	\$10/\$10	\$11/\$12
1.3	Tree Program	\$3M	\$1/\$2	\$10/\$10	\$11/\$12
1.4	Geotechnical Demonstration - pile testing	\$500K	\$1/\$2	\$5/\$5	\$6/\$7
1.5	Environmental Mitigation - create a wetland	2.8M	\$1/\$2	\$10/\$10	\$11/\$12

BS CRM
[Signature]

EXHIBIT I

**PRESIDIO TRUST LAND USE CONTROLS MASTER REFERENCE
REPORT**

PRESIDIO OF SAN FRANCISCO, CALIFORNIA

Prepared for:

The Presidio Trust
34 Graham Street, P.O. Box 29052
San Francisco, California 94129-0052

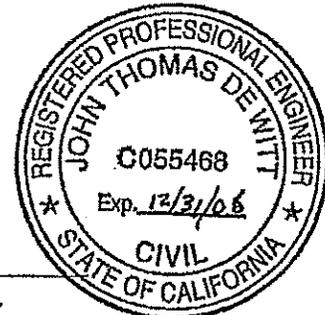
Prepared by:

Erler & Kalinowski, Inc.
1870 Ogden Drive
Burlingame, California 94010

August 2006

John T. DeWitt

John T. DeWitt, P.E., Erler & Kalinowski, Inc.



22 August 2006

Date

PRESIDIO TRUST LAND USE CONTROLS MASTER REFERENCE REPORT

Presidio of San Francisco, California

CONTENTS

	Page
1. INTRODUCTION	1
1.1 Environmental Requirements.....	1
1.2 Key Documents.....	3
1.3 Areas Subject to Land Use Controls.....	4
1.4 Adoption of Site-Specific Land Use Controls	5
1.5 Trust's GIS System Integrating Land Use Controls	5
1.6 Key Users of the LUCMRR.....	6
2. OVERVIEW OF LAND USE CONTROLS	7
2.1 Definition and Categories of Land Use Controls.....	7
2.2 Application of LUCs at the Presidio.....	8
3. IMPLEMENTATION OF LAND USE CONTROLS.....	10
3.1 Implementation Mechanisms	10
3.1.1 LUCMRR and Addenda	10
3.1.2 Project Review/Permitting Program	11
3.1.3 Trust GIS System.....	11
3.1.4 Trust Signage	12
3.2 Presidio-wide Land Use Control Implemented by the Trust	12
3.3 Specific Land Use Controls Used by the Trust.....	13
3.3.1 Sensitive Use Restriction	13
3.3.2 Groundwater Use Restriction.....	14
3.3.3 Health and Safety Requirements.....	14
3.3.4 Soil Management Requirements.....	15
3.3.5 Ecological Use Restrictions	17
3.3.6 Surface Cover Requirements and Restrictions	17
3.3.7 Public Access Restrictions.....	18
3.3.8 Land Use Notifications	18
3.4 Monitoring Land Use Controls	19
3.5 Terminating Land Use Controls.....	20

PRESIDIO TRUST LAND USE CONTROLS MASTER REFERENCE REPORT

Presidio of San Francisco, California

CONTENTS

3.6	Enforcing Land Use Controls	21
3.7	Transfer of Ownership or Control.....	21
3.8	Annual Report to Regulatory Agencies	21
4.	LAND USE CONTROL ADDENDA OUTLINE.....	23
5.	REFERENCES	24

TABLE:

Table 1 Land Use Controls Master Reference Report Addenda Components and Valid Values

FIGURE:

Figure 1 Areas A and B of the Presidio

Figure 2 Land Use Control Areas at the Presidio

LAND USE CONTROLS MASTER REFERENCE REPORT ADDENDA

Low Temperature Thermal Desorption-Treated Soil Tracking and Management Plan
Building 923/937 Area
Building 1151/1153 Area
Building 9 Area
Building 10 Area

Additional Addenda to be added as necessary

1. INTRODUCTION

The Presidio Trust ("Trust") has prepared this Land Use Controls Master Reference Report ("LUCMRR") to serve as the implementation and enforcement plan to meet regulatory requirements and to describe the land use controls ("LUCs") the Trust will use at the Presidio of San Francisco ("Presidio") (see Figure 1).

The Presidio is located at the northern tip of the San Francisco peninsula. The Presidio occupies approximately 1,491 acres and is bounded by the San Francisco Bay on the north, the Pacific Ocean on the west, and residential neighborhoods of the City of San Francisco on the south and east. The United States Department of the Defense, Department of the Army ("Army") operated the Presidio as a military post from 1848 to 1994. It served as a coastal defense fortification, a mobilization and embarkation point during several foreign defense conflicts, and a medical debarkation center. On 1 October 1994, the Army completed its transfer of the Presidio to the United States Department of the Interior, National Park Service ("NPS").

In 1996, Congress enacted the Presidio Trust Act (Section 103 of the Omnibus Parks and Public Lands Management Act of 1996, Public Law 104-333, 110 Stat. 4097, codified as amended at 16 USC §§460 bb appendix) creating the Trust and giving the Trust jurisdiction over the 1,168-acre inland area of the Presidio known as Area B. The NPS continues to manage the shoreline area, or Area A (see Figure 1). The Trust is a wholly-owned federal government corporation whose mission is to preserve the Presidio in perpetuity for the public benefit. This LUCMRR is only applicable to Area B of the Presidio because the Trust does not have legal jurisdiction over, and cannot enforce and monitor LUCs within, Area A.

1.1 Environmental Requirements

Subsequent to the transfer of the Presidio to NPS and later Area B to the Trust, it was apparent that park preservation and reuse could be realized more quickly and efficiently and cleanup would be more effective if the Trust controlled and managed the environmental restoration of the Presidio. With certain exceptions, the Trust assumed responsibility for remediation of both Areas A and B of the Presidio by signing the *Memorandum of Agreement Regarding Environmental Remediation at the Presidio of San Francisco* among the Trust, Army, and NPS ("Presidio MOA") (Army, Trust, NPS; 1999), and the *Memorandum of Agreement for Environmental Remediation of Presidio of San Francisco "Area A" Property* between the Trust and NPS ("Area A MOA") (NPS,

Trust; 1999). As part of its environmental remediation responsibility, the Trust has retained environmental consultants to assist with the remedial actions and associated documentation. The Trust has retained Erler & Kalinowski, Inc. ("EKI") to prepare this LUCMRR for the Presidio.

The Trust also entered into a Consent Agreement with the California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") and NPS (DTSC, 1999). The Consent Agreement establishes responsibilities and procedures for cleanup of releases of hazardous substances and hazardous waste at the Presidio consistent with the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") and Resource Conservation and Recovery Act ("RCRA"). Section 5.11 of the Consent Agreement requires that if LUCs are part of a remedy, the Trust will coordinate implementation of the LUC with the DTSC. DTSC is providing regulatory oversight for the Trust's remediation of Presidio hazardous substance release sites. In accordance with the California Code of Regulations ("CCR") Section 67391.1, DTSC requires LUCs to be implemented when hazardous materials remain at a site at concentrations that are not suitable for unrestricted land use. In addition, CCR §67391.1 requires an implementation and enforcement plan for the LUCs.

This LUCMRR serves as the implementation and enforcement plan to meet the requirements of CCR §67391.1(b) and §5.11 of the Consent Agreement (DTSC, 1999), and describes the procedures the Trust will use to implement LUCs at the Presidio in accordance with state regulations and DTSC requirements for sites subject to CERCLA cleanup authorities.

In addition to the Trust's CERCLA cleanup program, the California Environmental Protection Agency, Regional Water Quality Control Board, San Francisco Bay Region ("RWQCB") has issued the Presidio-wide Site Cleanup Requirements as adopted in RWQCB Order No. R2-2003-0080 ("Order") (RWQCB, 2003) that governs the Trust's environmental abatement of petroleum-based contaminants at the Presidio. The Order also defines cleanup standards for freshwater and saltwater ecological protection zones. The Order, under which the RWQCB regulates the Trust's petroleum program sites does not speak to the use of LUCs. In a 16 June 2003 letter to the RWQCB commenting on the draft tentative Order, the Trust requested that LUCs be explicitly stated as possible under the Order. The RWQCB staff noted the comment and stated, "No change in the text is necessary. LUCs may be evaluated on a case-by-case basis and may be included as a component of a final remedy identified in site-specific corrective action plans." (Appendices of RWQCB, 2003) Therefore, in a manner consistent with the CERCLA program, the Trust will apply the procedures of this LUCMRR to petroleum program

sites where petroleum is not removed to unrestricted levels as determined by the RWQCB Order.

In sum, therefore, the categories of sites that may be addressed by this LUCMRR include Presidio of San Francisco CERCLA sites and sites with lead-based paint in soil that are being remediated under the oversight of the DTSC, petroleum program sites that are being remediated under the oversight of the RWQCB, and any other sites where the Trust voluntarily implements a LUC.

The Trust is electing to institute a comprehensive and uniform procedure to track, implement, and enforce environmental land use restrictions for all cleanup sites within Area B of the Presidio, regardless of whether or not LUCs are legally required, so as to simplify the Presidio's future land management. For any future project or action affecting land use or management, the LUCMRR and its associated site-specific addenda will be consulted to determine whether any particular parcel of land is environmentally restricted in its use and the nature and extent of the restriction.

As typically used, the term "land use control" is a catchall phrase for deed restrictions, institutional controls, and other non-engineering legal controls such as easements, restrictive covenants, and zoning ordinances. Irrespective of the legal form of the restriction, LUCs are non-engineering measures designed to limit exposure to hazardous substances left in-place or to ensure the effectiveness of the chosen remedy. Technically, DTSC requires a LUC that "runs with the land" and encumbers all subsequent title holders at sites where hazardous materials remain above residential (unrestricted) cleanup levels. Because the Presidio is federal land, land use covenants that encumber future title cannot be adopted at the Presidio (GSA, 1998). The types of LUCs that can be implemented at the Presidio are discussed in Section 2.2.

1.2 Key Documents

In 1990, in anticipation of the transfer by the Army, NPS began planning the conversion of the Presidio from a military post to a national park site. The planning effort culminated in the preparation of the *General Management Plan Amendment* ("GMPA") by the NPS (1994). The GMPA provides guidelines for the management and improvement of the Presidio, and is the governing plan for Area A. The Trust prepared the *Presidio Trust Management Plan* ("PTMP") (Trust, 2002) setting forth the Trust's land use policies and general management framework for Area B of the Presidio. The Trust manages Area B of the Presidio in accordance with the PTMP, the general objectives of the GMPA, which are set forth in Trust Board Resolution 99-11, and in

such a way as to protect the Presidio from development and uses that would destroy the scenic beauty, historic and natural characteristics of the area, and cultural and recreational resources. Together, the Trust and NPS developed the *Vegetation Management Plan and Environmental Assessment for the Presidio of San Francisco* ("VMP") (NPS and Trust, 2001) to guide the management of the vegetation resources at the Presidio. The PTMP together with the VMP, which it incorporates, effectively serves as a zoning document or Master Plan for Area B of the Presidio.

Other key documents that are used to guide LUCs at a Presidio site include the DTSC Consent Agreement and the RWQCB Order (described in Section 1.1). The Trust's *Draft Presidio-Wide Lead-Based Paint in Soil Plan* (Treadwell & Rollo, 2004) and subsequent revisions of this plan control the cleanup of sites with lead-based paint in soil at the Presidio. CERCLA Remedial Action Plans and Petroleum Corrective Action Plans may specify site-specific decisions to apply LUCs at certain remediation sites and identify the need for a site-specific addendum (described in Section 3.1.1 and outlined in Section 4). The *Presidio-wide Cleanup Level Document* (EKI, 2002) ("Cleanup Level Document") is the final key document that is used to guide LUCs at the Presidio. The Cleanup Level Document utilizes chemical-specific regulatory requirements, risk-based goals, and site-specific lithology to develop Presidio-specific cleanup levels for remedial actions. Factors that were used to develop cleanup levels are background metal concentrations, human health exposure, and ecological exposure. Thus, for any given site, the applicable cleanup level incorporates the planned land use (residential, recreational, institutional, or commercial/industrial) and potential ecological species present (including the presence of special-status species) as informed by the GMPA, PTMP, VMP, and the Cleanup Level Document. Special ecological protection zones and cleanup levels for petroleum hydrocarbons and related constituents are established in the RWQCB Order. The Order allows varying cleanup levels depending on the existing and expected future land use, depth to groundwater, the Presidio drainage basin, and whether or not an area is within an ecological protection zone.

1.3 Areas Subject to Land Use Controls

The DTSC requires sites that do not fully meet the most stringent Presidio-specific human health cleanup levels (i.e., residential cleanup levels) to have LUCs to inform and protect future users (CCR §67391.1 and DTSC, 2000). Examples of such sites include landfills that are covered and leave representative concentrations of chemicals of concern ("COCs") in place above residential cleanup levels, as well as sites within areas designated for recreational use that are remediated to recreational cleanup levels, but do not meet more stringent residential cleanup levels. LUCs may also voluntarily be used to

restrict sensitive ecological uses for sites within the freshwater or saltwater protection zones that do not meet specific ecological cleanup requirements listed in the Order (i.e., the freshwater or saltwater cleanup levels) or ecological special-status zones specified in the Cleanup Level Document. However, ecological LUCs are not required at sites within areas designated in the Cleanup Level Document as buffer zone ecological or non-ecological that are not remediated to ecological special-status cleanup levels. In other words, the entire Presidio does not require remediation to ecological special-status cleanup levels.

1.4 Adoption of Site-Specific Land Use Controls

This LUCMRR provides an overarching view of LUCs at the Presidio. General principles and generic conditions are addressed. For each individual site where LUCs are required or voluntarily adopted, the Trust will prepare a site-specific addendum to the LUCMRR that includes the details of the applicable LUC. Each addendum will be prepared as a short document that will reference general principals from this LUCMRR and identify which LUCs apply at the site. The addenda will be compiled into a three-ring binder for reference, together with a copy of this LUCMRR. Thus, the LUCMRR, with its addenda, is a "living" document, with new addenda being added as sites with LUCs are identified, and other addenda being removed if the sites are ultimately remediated or otherwise meet unrestricted use requirements.

Copies of the LUCMRR and all current addenda will be kept at the Trust Library and the Trust Environmental Remediation Department (or its successor department with its Environmental Officer), which will maintain and communicate the intent of the LUCMRR and addenda within the Trust. The key components and outline of the site-specific addenda are described in Section 4. The substantive content of the site-specific addenda will also be available for electronic retrieval through the Trust's geographical information system ("GIS").

1.5 Trust's GIS System Integrating Land Use Controls

The Trust is developing a GIS that will facilitate the tracking, management, and implementation of LUCs at the Presidio. The GIS system will allow Trust users to select an area or building of interest and query for the presence of a LUC. If a LUC is present within the selected area, a flag identifies the site name and type of the LUC, and a link displays a copy of the site-specific addendum or report that describes the LUC(s) that are present at the site. This tool allows Trust users to check for the presence of a LUC in the planning stages of site development or leasing, or prior to initiating work or a change in

use or tenancy in an area. The GIS system for LUCs is described in more detail in Section 3.1.3.

1.6 Key Users of the LUCMRR

The Trust anticipates that many parties will use, review, and reference this LUCMRR and the site-specific addenda. The Trust's Real Estate, Planning, and Legal departments will likely refer to the LUCMRR to evaluate the feasibility and restrictions for the development, leasing, and reuse of specific areas and buildings at the Presidio and to disclose use restrictions to potential tenants and users. The Trust's Operations, Utilities, and Environmental Remediation departments will likely use the LUCMRR to identify potential restrictions in an area requiring maintenance, repair, or subgrade activities (such as installation of a new utility or removal and installation of vegetation). The Environmental Remediation Department will keep the LUCMRR current, and may evaluate the cost/benefit of future remedial actions based on the LUCs involved. All these parties may use the LUCMRR as an informational tool in the Trust's project review program, which assesses, analyzes, and certifies the environmental effects of proposed actions for compliance with the National Environmental Policy Act ("NEPA") and the National Historic Preservation Act ("NHPA"). This Trust process is called "N²". Tenants and prospective tenants may also review the LUCMRR and site-specific addenda as part of due diligence prior to signing a lease or other use agreement.

Trust employees who use the LUCMRR will also likely use the Trust's GIS system as described in Section 3.1.3.

2. OVERVIEW OF LAND USE CONTROLS

This section provides an overview of the LUCs at the Presidio.

2.1 Definition and Categories of Land Use Controls

The United States Environmental Protection Agency (“U.S. EPA”) identifies four key constituents of institutional controls (“ICs”), called LUCs at the Presidio, as follows (U.S. EPA, 2000):

- non-engineering instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use;
- generally to be used in conjunction with, rather than in lieu of, engineering measures such as waste treatment or containment;
- can be used at all stages of the cleanup process to accomplish various cleanup-related objectives; and
- should be ‘layered’ (i.e., use multiple institutional controls) in a series to provide overlapping assurances of protection from contamination.

DTSC has also issued a fact sheet regarding Land Use Covenant Agreements (DTSC, 2000). DTSC’s fact sheet states that institutional controls are used to limit or reduce the release or threat of release of hazardous substances, limit exposure of humans and environmental receptors, supplement engineering remedies, and ensure that engineering controls maintain their integrity and effectiveness (DTSC, 2000).

General examples of LUCs include easements, covenants, well drilling prohibitions, digging notifications, zoning or site restoration restrictions, and special building permits. Example LUCs at the Presidio include the Presidio MOA (Army, Trust, NPS; 1999), the Area A MOA (NPS, Trust; 1999), the PTMP (Trust, 2002), leasing agreements between tenants and the Trust, and the N² process. Some of these controls limit or prohibit certain kinds of site uses, notify potential owners or tenants of the presence of hazardous substances remaining on-site at concentrations that are not protective of all uses, or establish procedures for subsurface soil disturbance.

The U.S. EPA identifies four categories of ICs or LUCs: (1) governmental controls, (2) proprietary controls, (3) enforcement and permit tools with IC or LUC components, and (4) informational devices (U.S. EPA, 2000). Governmental controls are generally implemented by the state or local government, which has authority to promulgate its own laws, and may include zoning restrictions, ordinances, statutes, building permits, or other

provisions that restrict or limit site use. Proprietary controls, such as easements and covenants, have their basis in real property law and generally create legal property interests. Enforcement and permit tools with LUC components include unilateral administrative orders (“UAO”) or administrative orders on consent (“AOC”), but these CERCLA tools are generally only available to regulatory agencies with independent enforcement authority and are binding only on the signatories of the agreement or order. The Consent Agreement (DTSC, 1999) and the Order (RWQCB, 2003) are examples of enforcement or permit tools in place at the Presidio. Finally, informational devices, which could include state registries of contaminated property, deed notices, and advisories, are general notification devices that may provide information about COCs on a site, but may not be enforceable. The Trust will use the land use notification (“LUN”) as a general notification device to provide information about COCs or other environmental concerns that may remain in place at a site. Signs restricting access posted on fences, locked gates, or barricades are also an example of informational devices used at the Presidio.

2.2 Application of LUCs at the Presidio

In 1996, Congress adopted the Presidio Trust Act, establishing the Trust as a wholly-owned federal government corporation. The Trust “may not dispose of or convey fee title to any real property transferred to it under” the Trust Act.¹ Additionally, the General Services Administration does not believe landholding federal agencies have the authority to place use restrictions or other covenants on property in their inventory (GSA, 1998). As such, typical land use restrictions are not applicable to Trust property. DTSC acknowledges that some land use covenants may not be applicable to federal facilities. Consequently, CCR Section 67391.1(f) has a provision for LUCs at federal facilities, which allows for other instruments such as Memorandums of Agreement, Consent Decrees, and physical monuments to be used to implement LUCs on federally owned property. Section 5.11 of the Consent Agreement (DTSC, 1999) specifically mentions the use of institutional controls in remedies at the Presidio.

The Trust’s PTMP (Trust, 2002), the NPS’ GMPA (NPS, 1994), and the VMP (NPS and Trust, 2001) effectively act as zoning guidelines for land use at the Presidio. These plans, in conjunction with the RWQCB Order,² are effectively the governmental controls for LUCs at the Presidio. In addition to these governmental controls, informational devices at the Presidio include this LUCMRR, the Trust’s GIS system, and notices and

¹ The Presidio Trust Act § 104(b), 16 U.S.C. § 460bb app. § 104(b) (2005).

² The RWQCB Order is considered a governmental control because it defines the saltwater and freshwater ecological protection zones.

communication through the Trust's leasing program (such as due diligence disclosures or the notice restricting gardening to raised beds and other environmental directives).

LUCs will be recommended by the Trust at specific remediation sites that do not meet residential (i.e., the most restrictive human health) cleanup levels. The Trust will implement appropriate LUCs for these areas to restrict land use if the level of cleanup to meet residential (unrestricted) land use is limited due to:

- Limited access to impacted material by historic buildings or other features,
- Incomplete removal of impacted material to residential cleanup levels (i.e., landfills and other sites with containment remedial actions that will leave residual hazardous substances and/or petroleum hydrocarbons in place),
- Cost effectiveness, or
- Other reasons that remedial actions are not or cannot be completed to meet residential cleanup levels.

The Trust will also implement LUCs for areas that have low temperature thermal desorption ("LTTD") treated soil, in accordance with the Order, and as described in the Trust's LTTD Tracking and Management Plan (EKI, 2004a).

The Trust will also voluntarily implement ecological-based LUCs for areas that (a) do not meet the saltwater or freshwater protection criteria within the Saltwater or Freshwater Protection Zones, as identified in the Order (RWQCB, 2003), or (b) do not meet ecological special-status cleanup levels at sites regulated under the DTSC Consent Agreement. Non-compliance with cleanup levels at ecological special-status sites or the Saltwater or Freshwater Protection Zones are anticipated cases in which ecologically-based LUCs will be applicable at the Presidio.

LUNs will be recommended by the Trust as general notification devices at certain sites. LUNs do not restrict site uses, but provide notification to present or future users of the presence and locations of residual COCs, debris fill, abandoned utilities, or other environmental concerns that may remain in place at a site. LUNs are described in more detail in Section 3.3.8.

3. IMPLEMENTATION OF LAND USE CONTROLS

LUCs will be implemented at the Presidio through a number of methods. LUCs may be implemented at remediation sites in conjunction with engineering controls (such as containment remedial actions) that are used to create a physical barrier between potentially exposed populations and impacted material above applicable residential (or ecological special-status or Saltwater or Freshwater Protection Zone) cleanup levels in soil. In addition, LUCs may be appropriate for remediation sites where remedial actions achieve the cleanup levels for the land use designation identified in the PTMP, but may not achieve the most stringent residential cleanup level.

This section discusses mechanisms for implementing the LUCs and then provides details about Presidio-wide and specific LUCs that may be used at the Presidio.

3.1 Implementation Mechanisms

There are three key tools for implementing the LUCs at the Presidio: this LUCMRR and included addenda, the Trust's Project Review/Permitting Program, and the Trust's GIS system. In addition, signage is an optional and supplementary mechanism that can be used to maintain a "community memory" that can help preserve LUCs that are implemented via the three key tools. These tools are discussed below.

3.1.1 LUCMRR and Addenda

This LUCMRR is the master reference for LUCs within Area B. This LUCMRR identifies Presidio-wide LUCs, such as restrictions on planting homegrown produce (Section 3.2), as well as general LUCs that could be used at sites requiring LUCs (Section 3.3). For each individual site identified as requiring a LUC, a site-specific addendum to the LUCMRR will be prepared. The Trust intends to add each site-specific addendum to the LUCMRR. As such, the LUCMRR will be a "living" document, supplemented with additional and more up-to-date information as it becomes known or as site conditions change.

Each site-specific LUCMRR addendum will include a figure depicting the site location and nearby area, and will summarize the site history, the specific COCs encountered at the site, the actions taken to remediate the site, the in-place management system (such as containment), the levels and general locations of COCs remaining at the site that required the implementation of the LUC, and site-specific restrictions for that LUC area. In addition, these site-specific addenda will discuss restricted or prohibited land uses at the

site and any special requirements (e.g., health and safety requirements) if the area is disturbed in the future. The site-specific LUCMRR addenda will be added to the Trust's GIS system that serves as an informational database for all remediation sites with LUCs in Area B of the Presidio. An outline for these LUCMRR addenda is provided in Section 4.

3.1.2 Project Review/Permitting Program

As a federal agency, the Trust is required under NEPA to consider the potential environmental impacts of any project, plan, program, or action at the earliest stage of planning and before implementation. The Trust carries out this obligation using a project review process that screens proposals for compliance with NEPA/NHPA ("N²"), and other such laws and regulations. The Trust's N² compliance process screens every proposed action in Area B at the Presidio (e.g., fence post installation, tree trimming, native plant restoration, building renovation, and building demolition). The N² compliance process (i.e., project review program) is a first step to insure that Trust staff is aware of known contamination and associated LUCs in the vicinity of project sites. This review process, by scrutinizing the attributes of the project site and the proposed action, can be used to alert Trust staff to known and remediated hazardous substance sites, as well as LUCs.

In addition, for any Area B project involving construction, excavation, or subsurface work, the Trust requires not only N² clearance but also a building/project permit. For any project, the permit process requires Preliminary Design, Preliminary Plan Review, Design Development, and Permit Plan Review and approval. Here too, at the earliest stage of project planning, the Trust project manager, tenant, or user is provided with an information checklist with key information about the project site, including any LUCs. The Trust will use its project permit process to notify and require adherence by project proponents to any LUC restrictions and requirements. Both the Trust's project review and project permitting programs will include a link (i.e., in both the standardized N² project screening form and the project permit checklist) to the Trust's GIS system containing complete LUC site information (Section 3.1.3).

3.1.3 Trust GIS System

The Trust currently uses its GIS system to identify buildings, utilities, and other physical features at the Presidio. The Trust is adding a LUC component to the GIS system. The LUC component of the GIS system will allow future project proponents, Trust project review program staff, and other users to evaluate if LUCs are present in a specific area of concern. For example, if the Real Estate Department is assessing leasing options for a

specific area, Real Estate Department staff representatives can go to the Trust GIS system through the on-line intranet and review that area for potential LUCs. The Real Estate Department can then make planning and leasing decisions that are suitable in relation to any COCs that may be present and the associated LUCs. In a similar fashion, the Trust utility maintenance crews can review an area containing a utility or other feature that requires repair to see if there is the potential for encountering known impacted soil prior to excavation and learn about the associated LUCs for the protection of human health and the environment.

The GIS system will be updated and maintained by the Remediation Department in coordination with the Trust Information Services Department, which will incorporate the site-specific LUCMRR addenda as they are prepared.

3.1.4 Trust Signage

To supplement the implementation and enforcement of LUCs by other mechanisms, the Trust may implement interpretive signage or physical monuments that describe the site historic use and imply the reasons for the land use restrictions. For example, an interpretive sign may be placed on a former aircraft maintenance building, noting that the building is historic for its architecture and previous uses such as maintenance. This same notice would also imply to an environmental professional (though not explicitly stated on the sign) that historic chemical uses may have been associated with the building, and use restrictions, such as prohibiting groundwater as drinking water, may very likely be present at the site. In this way, the Trust would create a "community memory" of historical and environmental significance that would span generations and providing a supplemental method to help preserve the reasoning for LUCs (EPA, 2005). If such supplemental signs are deemed appropriate for a LUC site, the Trust Environmental Remediation Department will work with the Trust Public Affairs Office to develop appropriate signage.

3.2 **Presidio-wide Land Use Control Implemented by the Trust**

The Trust and NPS manage plantings at the Presidio because of efforts to restore native plants and maintain historic plantings, as described in the VMP (NPS and Trust, 2001). The vegetation restriction also serves as a Presidio-wide LUC that eliminates produce being homegrown at the Presidio (outside a designated community garden), thus preventing completion of a potential exposure pathway to COCs. The in-ground planting of vegetation by residents and the tenants at the Presidio is prohibited through Trust lease agreements. As part of these agreements, the Trust has issued Presidio-specific potted

plant guidelines, which, among other things restrict containers, specific plants, pesticides and herbicides, and prohibit the discarding of soil or plant material anywhere at the Presidio.

3.3 Specific Land Use Controls Used by the Trust

This section identifies typical LUCs the Trust is likely to implement at various sites in Area B of the Presidio. The site-specific LUCMRR addenda will draw applicable LUCs from this list for implementation at an individual site.

3.3.1 Sensitive Use Restriction

For sites where the representative concentrations³ of COCs exceed Presidio-specific residential cleanup levels, the Trust will prohibit sensitive or residential land use. Such sensitive use restrictions include the prohibition of housing and other sensitive uses, such as schools, day care facilities, hospitals, playgrounds, or any other uses involving the regular and constant use by children, the infirm, or the elderly.

For sites with no indoor air quality concerns (i.e., no known VOCs present underneath buildings), regular and constant use is defined as one individual being present on the site outdoors more than the equivalent of 3 hours per day, 150 days per year. Hours indoors do not count toward the total hours defined under regular and constant use. As such, recreational and educational uses of the site in outdoor areas by children, the infirm, or the elderly, not exceeding the equivalent of 3 hours per day, 150 days per year per individual, will be allowable. Typical wording to describe the sensitive use restriction in a LUCMRR addendum for sites with no indoor air quality concerns is as follows: *“Sensitive uses, such as housing, schools, playgrounds, hospitals, and day care facilities, or any other uses involving the regular and constant use by children, the infirm, or the elderly in outdoor areas are prohibited.”* This text may be revised to describe and reference a figure to accurately identify the LUC area.

For sites with potential indoor air quality concerns (i.e., VOCs are known to be present underneath buildings), regular and constant use is also defined as one individual being present on the site outdoors more than the equivalent of 3 hours per day, 150 days per year. However, the number of hours a sensitive user is allowed inside a building with an

³ Representative concentrations will be determined in the corrective action plan (“CAP”), remedial action plan (“RAP”), completion report, or other such decision document based on properties such as the maximum concentration detected, the 95% upper confidence limit (“UCL”) of the mean concentration of the chemical, or other site-specific conditions, such as the location and depths of chemical concentrations above cleanup levels, and upgradient conditions.

addendum is as follows: *“Soil disturbance activities within the designated LUC Area must be performed according to a site-specific health and safety plan (“H&S Plan”) that is consistent with applicable health and safety standards, such as 29 CFR 1910.120. Workers in the designated LUC Area shall follow the H&S Plan, must have the appropriate level of health and safety training and must use the appropriate level of personal protective equipment, as specified in the relevant H&S Plan.”* This text may be revised to describe and reference a figure to accurately identify the LUC area.

3.3.4 Soil Management Requirements

All soil excavated from LUC areas will be managed and/or disposed in accordance with the applicable federal, state, and local laws and regulations governing excavation, handling, management, and disposal of the excavated material. Excavated soil that is planned to be returned to the excavation (e.g., excavation for installation of a utility in a trench) may be stockpiled adjacent to the trench, and if no visual or odorous contamination is observed, the soil may be returned to the trench from which it came without sampling, providing all other LUCs (such as covering, if required) are implemented. Any excess soil excavated from LUC areas that is considered for reuse elsewhere on the Presidio outside the original excavation shall be sampled and analyzed for a broad suite of chemicals, including all chemicals that have been identified as potential chemicals of concern at that site, before such soil may be reused at the Presidio. If the excavated soil will be disposed off-site, the soil will be characterized based on known chemical impacts and the disposal facility’s requirements before the material is appropriately disposed offsite. Soil can only be reused outside the original excavation or elsewhere at the Presidio if chemical concentrations in the excavated soil are less than the applicable cleanup levels for that particular receiving site and hazardous waste criteria (CCR, Title 22, Section 66261). Typical wording to describe the soil management requirements in a LUCMRR addendum is as follows: *“Soil excavated from the LUC area may be returned to its original excavation provided no chemical impact is observed. Soil excavated from the LUC Area that will not return to the original excavation shall be sampled and analyzed for potential COCs [including metals and petroleum hydrocarbons] before such soil may be reused elsewhere at the Presidio. Soil that will be disposed offsite shall be characterized based on known chemical impacts and the disposal facility’s requirements. Soil can only be reused elsewhere on the Presidio outside the original excavation if chemical concentrations in the excavated soil are less than the applicable cleanup levels at the receiving site and hazardous waste criteria (CCR, Title 22, Section 66261).”* This text may be revised to describe and reference a figure to accurately identify the LUC area, and site-specific COCs.

The Trust reserves the option to implement the soil management practices described in this Section by trenching to excavate soil for a utility within a LUC area, install a subsurface utility, and then backfill that utility trench with clean import fill to create a clean utility corridor. If the Trust chooses to create such a utility corridor, future excavation, maintenance and repair entirely within that defined utility corridor would not fall under the requirements of the LUCMRR or site-specific addenda, provided the work was carried out completely within the clean utility corridor. The clean utility corridor must be demarcated during backfilling with the clean import fill physically separated from existing site soils by a barrier or marker. For example, a layer of geotextile or filter fabric could be placed in the excavated utility corridor (bottom and both sides) prior to the installation of the utility and the subsequent placement of backfill. To facilitate future access to the corridor and locating the utility, the corridor may be a wider trench than may be normally required for the installed pipe size, and metallic tracer wires could be installed over the pipe as well as along the sides of the trench limits. If a clean corridor is installed, the specific area of the clean corridor, as well as the depth, should be noted in the utility installation record drawings and in the site-specific LUCMRR addendum.

Previously-identified chemically-impacted soil encountered during excavation or subsurface work shall be addressed in accordance with the Trust's Petroleum Contingency Plan, dated 16 August 2004 (EKI, 2004b). Typical wording to describe the chemically-impacted soil management requirements in a LUCMRR addendum is as follows: *"If encountered, chemically-impacted soil discovered during excavation or subsurface work shall be addressed in accordance with the Trust's Petroleum Contingency Plan, dated 16 August 2004."*

LTTD-treated soil in the LUC area shall be managed in accordance with the requirements of RWQCB Order (RWQCB, 2003) and the Trust's LTTD Soil Management Plan, dated 1 November 2004 (EKI, 2004a). LTTD soil shall not be placed within 50 feet of any surface water body, chemical concentrations must comply with the RWQCB Order, and excavations filled with LTTD-treated soil shall have clean fill (no detectable fuel constituents) in the top 18 inches of the backfill. Typical wording to describe the LTTD soil management requirements in a LUCMRR addendum is as follows: *"LTTD-treated soil in the LUC area shall be managed in accordance with the requirements of RWQCB Order No. R2-2003-0080 ("Order") and the Trust's LTTD Soil Management Plan, dated 1 November 2004. LTTD soil shall not be placed within 50 feet of any surface water body, chemical concentrations must comply with the Order, and excavations filled with LTTD soil shall have clean fill (no detectable fuel constituents) in the top 18 inches of the backfill."* This text may be revised to describe and reference a figure to accurately identify the LUC area.

3.3.5 Ecological Use Restrictions

For sites located in the saltwater or freshwater ecological protection zones identified in the Order (RWQCB, 2003) or in areas designated as ecological special-status zones, ecological-based use restrictions may apply. In some cases, ecological-based LUNs could also apply; LUNs are discussed in Section 3.3.8.

Ecological-based LUCs will be applied where the COCs exceed Presidio-specific cleanup levels for the applicable ecological protection zone or special-status use area. For certain locations identified on a site-specific basis, the Trust may restrict the proposed ecological features (such as a marsh or freshwater zone or special-status use area) until remedial actions achieve required cleanup levels. This restriction could be a temporary measure and may be implemented in cases when the implementation of the ecological restoration activities within the ecological protection zone or special-status ecological use area are not funded or are uncertain. This restriction could also be a permanent measure and may be implemented in cases when the anticipated land use changes and the area no longer supports sensitive ecological uses. Note that this restriction does not apply to areas classified as buffer zone ecological or non-ecological that do not meet the most stringent ecological cleanup levels for the Presidio. Typical wording to describe the ecological use restrictions in a LUCMRR addendum is as follows: *"The use of the LUC area within the [freshwater/saltwater/ecological special-status] ecological protection zone as a [freshwater/saltwater/ecological special-status] ecological habitat restoration area is prohibited until remedial actions meet the applicable cleanup levels as required by the RWQCB Order No. R2-2003-0080 and the Cleanup Level Document."* This text may be revised to describe and reference a figure to accurately identify the LUC area, refer to the applicable ecological protection zone, and identify the chemicals present above cleanup levels.

3.3.6 Surface Cover Requirements and Restrictions

For sites where the representative concentrations of COCs in soil exceed the applicable Presidio-specific cleanup levels and the site is covered by buildings, paved areas, or an engineered cover, and the direct contact pathway is not complete, the designated LUC area must remain covered with either buildings, pavement, or other barrier in landscaped areas. Within landscaped areas, the barrier could be 2 feet of clean soil; an engineered barrier such as a membrane, geogrid, or coated wire mesh covered with 6 inches of topsoil; or other site-specific protective system that achieves the objective of limiting direct contact with the COCs. As discussed above in Section 3.3.4, landscaped areas with LTTD-treated soil require a minimum of 18 inches of clean soil cover. The LUC requires

cover maintenance for the entire LUC zone unless, for a specific area, confirmation soil sampling shows that the representative concentrations of COCs do not exceed the applicable cleanup levels. Confirmation soil sampling requirements (analytes and frequency) shall be designated in an individual LUCMRR addendum. For engineered covers that have been implemented as part of a remedy, the cover will be monitored in accordance with a site-specific cover monitoring plan. For covers that have been included for redundant protection, but are not specifically part of the remedy for a site, typical wording to describe the surface cover restrictions in a LUCMRR addendum is as follows: *“The LUC area must remain covered with buildings, pavement, or another barrier in landscaped areas that have not been previously remediated. The cover must be maintained for the entire LUC area unless, for a specific area, soil sampling shows that the representative concentrations of COCs do not exceed residential cleanup levels.”* This text may be revised to describe and reference a figure to accurately identify the LUC area and describe site-specific confirmation sampling requirements.

3.3.7 Public Access Restrictions

For some sites, public access may be restricted. For example, if steep terrain, sensitive natural resources (such as wetlands), or special conditions or hazards (such as vials of unknown chemicals) could potentially be present in the LUC area, access to the area by the general public may be restricted or prohibited. The Trust may also limit on-site workers to those designated authorized natural resources restoration workers or others who have the appropriate health and safety training required by the specific LUCMRR addendum. Typical wording to describe the public access restrictions in a LUCMRR addendum is as follows: *“No general public access allowed”* or *“Presidio Park employees, including authorized natural resources workers and volunteers, may be allowed in this area only after such personnel have been trained in the health and safety requirements applicable to this Site.”* This text may be amended by additional text or a footnote to explain public access restriction or worker training requirements.

3.3.8 Land Use Notifications

The LUN is designed to notify present or future owners, tenants, maintenance workers, landscaping/planting crews, or other entities of the presence and locations of residual COCs, debris fill, abandoned utilities, building foundations, or other such items left in place at a site. The LUN involves no restriction of land use, and only serves to notify about the existing site conditions. Examples of cases where a LUN may be warranted include representative concentrations of residual chemicals above site-specific remedial goals are located in the deeper subsurface and are considered a low threat to ecological receptors and/or the representative concentrations are only marginally above ecological

saltwater, freshwater, or special-status protection zone cleanup levels. The site-specific LUN will not restrict human or ecological land use in the area, but the site data will be made available to the appropriate Trust staff (i.e., natural resources program staff) so that an informed decision regarding future use of the site can be made (in the case of this example, the ecological uses will be reviewed).

Because the wording used in LUNs is anticipated to be site-specific in nature, preparing typical wording to describe the LUN in a LUCMRR addendum is not appropriate. However, in the same fashion as LUCs, LUNs will be described in site-specific addenda (Section 3.1.1), identified in project review/permitting (Section 3.1.2), tracked with the Trust's GIS system (Section 3.1.3), monitored (Section 3.4), terminated when appropriate (Section 3.5), and reported in the annual report to agencies (Section 3.8).

3.4 Monitoring Land Use Controls

The Trust will maintain this LUCMRR as a "living" document, and it will be maintained as the up-to-date record of LUCs throughout Area B of the Presidio (see Section 1.4). The Trust's project review process and GIS system will also be utilized to assist in the communication and enforcement of the LUCs. The Trust will prepare an annual report documenting Presidio sites that have LUCs (see Section 3.8). This LUC annual report will be separate from any annual monitoring report that is required to monitor an engineered remedy at a site; however, the LUC annual report may reference other reports that document monitoring of engineered remedies at sites. The Trust will notify DTSC and RWQCB of any proposed termination of LUCs, as described in Section 3.5.⁴ No LUC sites will be terminated without the approval of the DTSC at CERCLA hazardous substances sites or the RWQCB at petroleum sites.

LUCs are intended to maintain protection of human health and the environment over time. While operations and maintenance ("O&M") and monitoring issues are not technically LUCs, some of the engineering measures within a remedy will also be identified in the site-specific LUC addendum, but be distinguished from the LUCs, to allow the convenient tracking of all long-term site activities and restrictions regarding remaining environmental contamination. Examples of these O&M and monitoring issues, which are distinct from LUCs, but likely to be noted in the addendum for certain sites, include groundwater monitoring; cap inspections, maintenance, and repair (for landfills or sites that are covered with an engineered cap or buildings); implementation of restrictions on soil reuse and required clean soil cover (such as for LTTD soil); CERCLA Five-Year Reviews; and fencing or other site access restriction mechanisms. Another

⁴ The Trust reserves the right to add LUC sites to the LUCMRR by addenda and copy to the DTSC and RWQCB.

In order to terminate a site LUC, the Trust will request termination in a LUC Termination Letter. This letter will be similar to the LUCMRR addendum prepared for a site, and will describe the reason why the LUC is no longer required. The LUC Termination Letter will be transmitted to DTSC and RWQCB for review and approval for CERCLA sites and petroleum sites, respectively. The LUC Termination Letter and any written approval, if issued, will become part of the LUCMRR addendum for that site in the Trust's master copies of the LUCMRR, and the LUCMRR addendum will be prominently marked "Terminated." The Trust GIS system will also be updated to remove the LUC from the site.

3.6 Enforcing Land Use Controls

LUCs are instituted in order to be protective of human health and the environment and must therefore be enforced. The Trust will enforce the LUC primarily through the mechanisms discussed above. Specifically, the implementation of this LUCMRR and addition of needed site-specific addenda (Section 3.1.1) provide a standardized procedure for preparing, recording, maintaining, reporting, and updating Presidio-wide LUCs. The Trust's project review program (Section 3.1.2) together with its permitting program requirements for any project involving excavation or construction will serve to notify project managers and proponents of any LUCs at the earliest stages of project planning and well before implementation. Finally, the Trust's GIS system (Section 3.1.3) will support and enhance the ease of LUCs notification and enforcement and complete information retrieval. These three components are the backbone of LUCs implementation and enforcement for Area B of the Presidio.

3.7 Transfer of Ownership or Control

Under the Presidio Trust Act, the Trust must preserve and enhance the Presidio and also become financially self-sufficient by the year 2013. In the unlikely event that the Trust is unable to meet this financial objective, all property under the administrative jurisdiction of the Trust will be transferred to the General Services Administration ("GSA"). The Trust will provide adequate notice to DTSC and RWQCB in advance of any such transfer. The Trust will provide information to the GSA in the transfer documents on LUCs and applicable resource use restrictions including a complete copy of the LUCMRR and current addenda.

3.8 Annual Report to Regulatory Agencies

The Trust will prepare an annual Presidio Area B LUCs Report documenting Presidio Area B sites that have LUCs and implementation of the LUCs (e.g., human and ecological land uses within Presidio LUCs areas are consistent with the restrictions and requirements of the site-specific LUCMRR addenda). The report will also identify any sites where the LUCs have been terminated during the preceding year. While the Trust is preparing the annual report, the Trust could potentially encounter a site that is inconsistent with this LUCMRR or site-specific addenda or the LUCs are not fully functional. If such an inconsistency is identified, the Trust will describe how the inconsistency has been or is planned to be remedied in the annual report.

The Trust will provide the annual report to the DTSC and RWQCB by 31 March for the prior calendar year. This timing was established so the LUC annual report could include relevant information from the most recent quarterly or annual O&M or monitoring report for sites with an annual monitoring requirement (e.g., a cover monitoring requirement). The annual report will be a table that includes the following headings:

- Site Name,
- LUCs Present at the Site,
- Deviations from the LUCs,
- Corrective Actions to Address Deviations; and
- Date of Last Site Visit.

Additional text describing site history, events, or status will not be included in the annual report, except to address an encountered inconsistency with the LUCMRR or site-specific addenda for that calendar year and how the inconsistency is resolved.

4. LAND USE CONTROL ADDENDA OUTLINE

For an individual site subject to a LUC, a site-specific LUCMRR Addendum will be prepared to identify the specific location or "address" of the LUC. The following is an outline of the topics and information that will be included in the individual LUCMRR addendum:

- Introduction and Objective(s) of LUC
- Buildings/areas/sites included in LUC
- Remediation summary and COCs
 - Site history and description of remedial actions implemented
 - Chemicals of concern necessitating LUC. Identify maximum COC concentrations, if appropriate.
- Site-specific LUC restrictions to be implemented, including specific descriptions of the LUCs as described in the LUCMRR or as modified to meet site-specific needs.
- List of References that includes all relevant reports for the site
- Figure/Site Map delineating the LUC area
- Database table with information needed in the GIS database (including survey coordinates)

Included with the site-specific LUCMRR Addendum, the Trust or its consultant will compile the following electronic information for incorporation into the Trust's GIS database:

1. An electronic copy of the LUCMRR Addendum in Adobe® Acrobat® *.pdf format,
2. Table 1 (in Excel or Access format) with valid values for the site-specific LUCs, survey coordinates in Northing Easting UTM Meter Zone 10 North coordinates, and notation of whether the LUC is a regulatory requirement. The LUCMRR Addendum name and date are also required.
3. Shape file with an outline of LUC area(s) that can be imported into the Trust GIS system.

The Trust plans to survey key points of the LUC area(s) with its global positioning system, rather than with an external licensed surveyor. This will facilitate the implementation of the LUCMRR Addendum and the timely importation of the data into the Trust's GIS system.

5. REFERENCES

Department of the Army, Presidio Trust, and National Park Service. 24 May 1999. *Memorandum of Agreement Regarding Environmental Remediation at the Presidio of San Francisco.*

Department of the Interior, National Park Service and Presidio Trust. 24 May 1999. *Memorandum of Agreement for Environmental Remediation of Presidio of San Francisco "Area A" Property.*

Department of the Interior, National Park Service and Presidio Trust. May 2001. *Vegetation Management Plan and Environmental Assessment for the Presidio of San Francisco.*

Department of the Interior, National Park Service, 1994. *Creating a Park for the 21st Century, from Military Post to National Park - Final General Management Plan Amendment, Presidio of San Francisco, Golden Gate National Park Recreation Area, California.* July 1994.

Department of Toxic Substances Control ("DTSC"). October 2000. *Fact Sheet: Land Use Covenant Agreements, LUC Agreements in California.*

DTSC. 30 August 1999. *Consent Agreement Between the California Department of Toxic Substances Control, the Presidio Trust, and the US Department of the Interior, National Park Service for the Remediation of Hazardous Substances at the Presidio of San Francisco.*

Erler & Kalinowski, Inc. ("EKI"), 2004a. *Low Temperature Thermal Desorption-Treated Soil Tracking and Management Plan, Presidio of San Francisco, California.* 1 November 2004.

EKI, 2004b. *Petroleum Contingency Plan, Presidio of San Francisco, California.* 16 August 2004.

EKI, 2002. *Development of Presidio-wide Cleanup Levels for Soil, Sediment, Groundwater, and Surface Water, Presidio of San Francisco, California.* October 2002.

GSA, 1998. Memorandum from John Q. Martin, Director of the Redeployment Services Division, U.S. General Services Administration, *Restrictive Covenants on Non-Excess Property* (October 16, 1998).

Presidio Trust, 2002. *Presidio Trust Management Plan, Land Use Policies for Area B of the Presidio of San Francisco*. May 2002.

Regional Water Quality Control Board ("RWQCB"), 2003. *Order No. R2-2003-0080, Revised Site Cleanup Requirements and Rescission of Order No. 91-082 and Order No. 96-070, for the Property Located at the Presidio of San Francisco, City and County of San Francisco, California*. San Francisco Bay Region. Appendix B includes Correspondence RWQCB received during comment period, and Appendix C includes RWQCB Staff's Response to Comments. 20 August 2003.

Treadwell & Rollo, 2004. *Draft Presidio-Wide Lead-Based Paint in Soil Plan, Presidio of San Francisco, California*. May 2004.

U.S. EPA. September 2005. *Long-Term Stewardship: Ensuring Environmental Site Cleanups Remain Protective Over Time*. Office of Solid Waste and Emergency Response. EPA 500-R-05-001.

U.S. EPA. April 2004. *ProUCL Version 3.0 Users Guide*, U.S. EPA, Las Vegas, Nevada.

U.S. EPA. September 2000. *Institutional Controls: A Site Manager's Guide to Identifying, Evaluating, and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups*. Office of Solid Waste and Emergency Response. EPA 540-F-00-005.

U.S. EPA. July 1999. *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents*. Office of Solid Waste and Emergency Response. EPA 540-R-98-031.

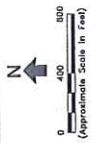
**TABLE 1
LAND USE CONTROLS TEMPLATE**

Presidio of San Francisco, California

Site Name	Land Use Controls (Valid Values)	Regulatory Requirement for LUC?	Coordinates of 4 Points (a)		LUCMRR Addendum Information	
			A	B	Name	Date
Name	<ul style="list-style-type: none"> ● Sensitive Use Restrictions ● Groundwater Use Restrictions ● Health and Safety Requirements ● Soil Management Requirements ● Ecological Use Restriction ● Surface Cover Requirements/Restrictions ● Public Access Restrictions ● Land Use Notifications 	<ul style="list-style-type: none"> Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No Yes/No 	<ul style="list-style-type: none"> North Easting North Easting North Easting North Easting North Easting 			

Notes:

(a) Provide field surveyed coordinates in Northing East UTM Meter Zone 10 North coordinates.



LEGEND

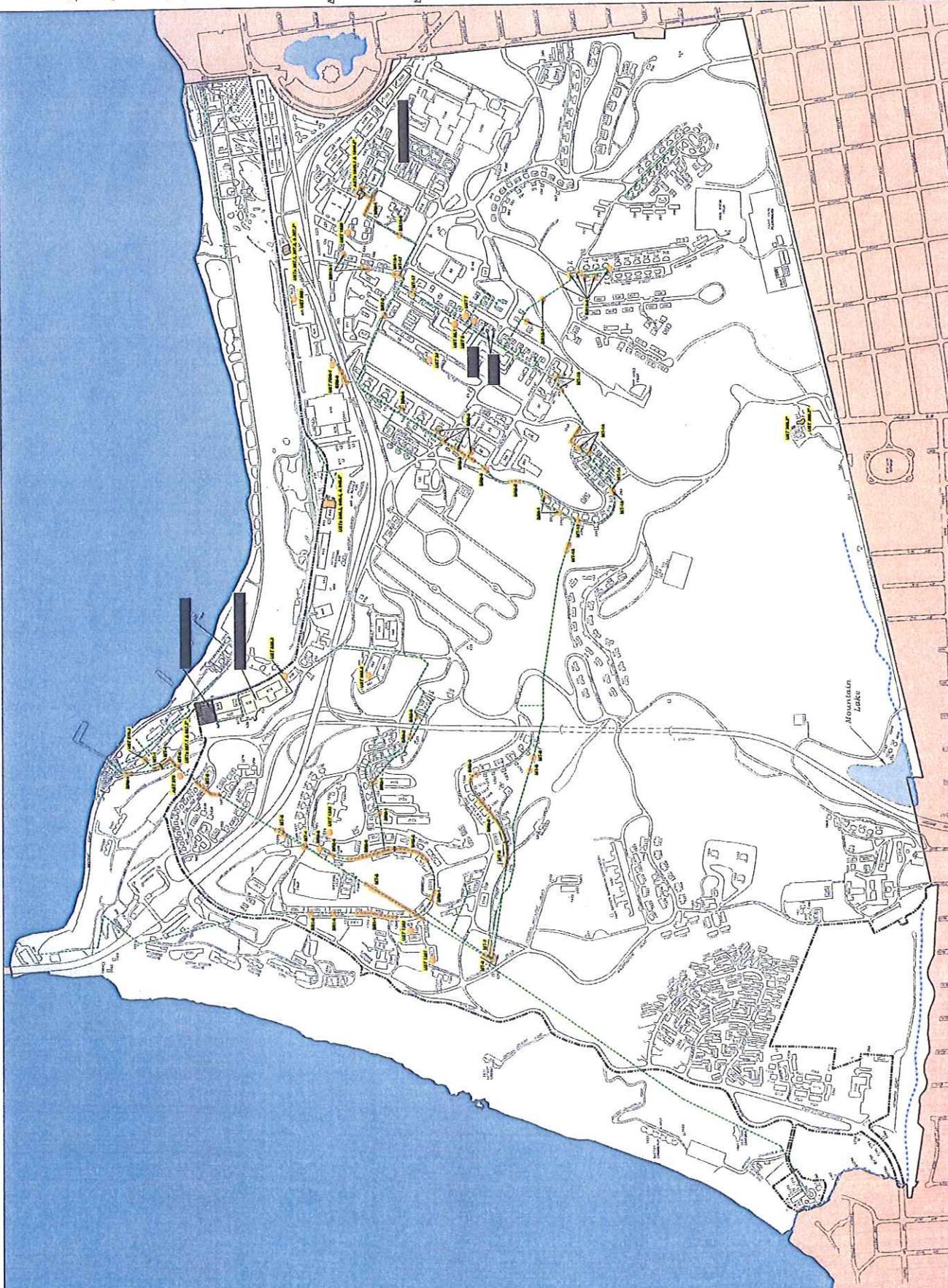
- Remedial Excavation backfilled with LTD-Treated Soil
- FDS Trench backfilled with LTD-Treated Soil
- FDS Section ID or Tank ID with LTD-Treated Soil in Backfill
- Site with Land Use Control
- FDS Pipelines Removed or Abandoned In-place
- Area A/D Boundary
- Existing Building
- Former Building
- Soil Lead Use Control Areas (excluding LTD - Treated Soil)
- Groundwater Use Restriction

Abbreviations:

- FDS Fuel Distribution System
- LTD Low Temperature Thermal Desorption
- LUOHR Land Use Control Master Reference Report

Notes:

1. Base map was provided by the Presidio Trust.
2. All locations are approximate.
3. Information was derived from the report prepared by International Technology Corporation, entitled "Fuel Distribution System Closure Report", and dated July 1998.
4. "x" denotes outline of excavation area is shown.
5. Land Use Control Areas shown above sites 2a, and 10 are site-specific LUOHR Areas for detailed figures.

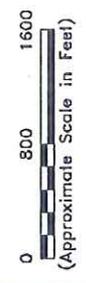
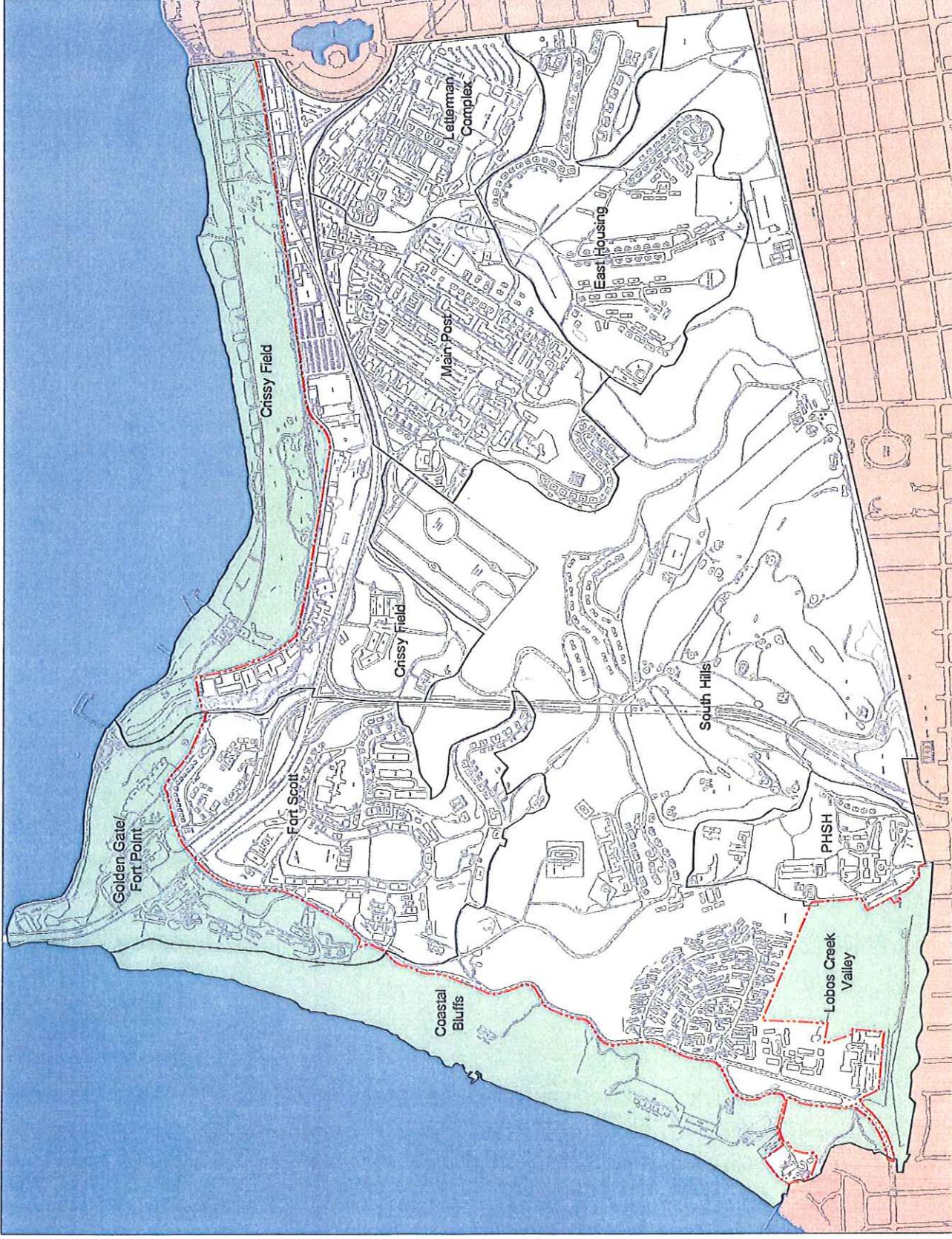


Erler & Kalinowski, Inc.

Land Use Control Areas
of the Presidio



Presidio Trust
San Francisco, CA
August 2000
EKL A080003.14
Figure 2



LEGEND

- Presidio Planning District Boundary
- - - Designation of Areas A and B
- - - Area A/B Boundary
- Area A - Stewardship by the National Park Service
- Area B - Stewardship by the Presidio Trust

Notes:

1. All locations are approximate.
2. Base map developed from site plan provided by the Presidio Trust.
3. PHS is the Public Health Service Hospital.

Erler & Kainowski, Inc.

Areas A and B
of the Presidio



Presidio Trust
San Francisco, CA
August 2008
EKI A000003.14

Figure 1

500.3.8.2 Waste Management Pollution Control

An inventory of construction activities, materials, and waste is provided in Section 500.3.1. The following BMP consideration checklist indicates the BMPs that have been selected to control construction site wastes and materials. The steps outlined in the instructions for this section for identifying waste management and materials pollution control BMPs to be included in the SWPPP have been followed. The applicable Contract Special Provisions, Contract Plans, Standard Plans, and Standard Specifications are provided or listed in Attachment B. Locations and details of applicable materials handling and waste management BMPs are shown on the WPCDs in Attachment B. 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 narrative explain how the selected BMPs will be incorporated into the project.

CONSTRUCTION SITE MANAGEMENT						
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs						
CONSTRUCTION BMP ID NO ⁽¹⁾	BMP NAME	MINIMUM REQUIRE- MENT ⁽²⁾	CONTRACT BID ITEM	BMP USED		IF NOT USED, STATE REASON
				YES	NO	
WM-1	Material Delivery and Storage	✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-2	Material Use	✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-3	Stockpile Management	✓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WM-4	Spill Prevention and Control	✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-5	Solid Waste Management	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-6	Hazardous Waste Management ⁽³⁾		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-7	Contaminated Soil Management ⁽³⁾		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-8	Concrete Waste Management		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Temporary Concrete Washout Facility		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Temporary Concrete Washout (Portable)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-9	Sanitary/Septic Waste Management	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-10	Liquid Waste Management		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ALTERNATIVE WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs USED ⁽⁴⁾						IF USED, STATE REASON
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
WM-8	Temporary Concrete Washout Facility (Portable)					
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⁾ Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the Contractor or determined by Caltrans. ⁽³⁾ The BMPs listed above are incidental and do not include operations included as separate line items in the contract. ⁽⁴⁾ Use of alternative BMPs will require written approval by the Resident Engineer.						

MATERIAL MANAGEMENT:

Material will be delivered, used, and stored for this job in a way that minimizes or eliminates discharge of material into the air, storm drain systems, or watercourses. Employees trained in emergency spill clean-up procedures will be present during unloading of hazardous materials or chemicals. Chemical storage areas such as concrete curing compound will be stored in secondary containment system for refueling system, a cover system with side protection will be included to prevent rain water from coming in contact with the refueling system. The contractor must contact the local certified unified program agency (CUPA) to comply with their requirements, such as the preparation of a hazardous materials management plan.

STOCKPILE MANAGEMENT:

Following practices described in this section for managing stockpiles will be implemented during the rainy season and during the non-rainy season when the National Weather Service predicts precipitation with a probability of at least 30 percent.

Stockpile management procedures will be used to reduce or eliminate potential air and water pollution from stockpiled material including soil, paving material, or pressure treated wood.

Stockpiles located within the floodplain, at least 100 feet from concentrated flows of stormwater, drainage courses, or inlets, unless approved. If located outside the floodplain, at least 50 feet from concentrated flows of stormwater, drainage courses, or inlets.

Active and inactive soil stockpiles will be covered with soil stabilization measures, plastic sheeting, or geosynthetic fabric and surrounded with a linear sediment barrier. Portland cement concrete rubble, AC, HMA, AC and HMA rubble, aggregate base or aggregate sub-base stockpiles will be covered with plastic sheeting, or geosynthetic fabric and surrounded with a linear sediment barrier.

Pressure treated wood stockpiles will be placed on pallets, covered with impermeable material.

Cold mix asphalt concrete stockpiles will be placed on impervious surface, covered with impermeable material and protected from run-on and run-off.

If material is added or removed for up to 21 days, the stockpile will be considered still active during that period.

Linear sediment barriers and covers will be maintained as needed to keep them functioning properly. If sediment accumulates to 1/3 of the linear sediment barrier height, sediment will be removed.

SPILL PREVENTION AND CONTROL:

Implement spill and leak prevention procedures for chemicals and hazardous substances stored on the job site. 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.

SOLID WASTE MANAGEMENT:

Trash and debris will be removed from the job site at least once a week. If practicable, nonhazardous job site waste and excess material will be recycled. If recycling is not practicable, disposal will comply with Section 7-1.13, "Disposal of Material Outside the Highway Right of Way."

Sufficient number of closed-lid dumpsters with adequate volume to contain the solid waste generated by work activities will be furnished. When refuse reaches the fill line, dumpsters will be emptied. Dumpsters will be watertight. Dumpsters will not be washed at the job site. Additional containers and more frequent pick-ups will be necessary during the demolition phase of construction.

HAZARDOUS WASTE MANAGEMENT:

Hazardous waste management practices will be used for the following:

1. Petroleum products
2. Asphalt products
3. Concrete curing compound
4. Pesticides
5. Acids
6. Paints
7. Stains
8. Solvents
9. Wood preservatives
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

Containers with adequate storage volume at convenient locations for hazardous waste collection will be furnished. Hazardous wastes will not be mixed and will not be allowed 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.

Cleaning water-based or oil-based paint from brushes or equipment within a contained area will be done in a manner that does not contaminate soil, watercourses, or storm drain systems. Paints, thinners, solvents, residues, and sludges that cannot be recycled or reused will be handled and disposed of as hazardous waste. Dry latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths will be disposed of as solid waste.

Within 90 days of being generated, hazardous waste must be disposed. A licensed hazardous waste transporter will be used to take hazardous waste to a Class I Disposal Site. A copy of uniform hazardous waste manifest forms will be submitted within 24 hours of transporting hazardous waste.

The WPCM will perform daily inspection of storage areas for hazardous materials and wastes, hazardous waste disposal and transporting activities and hazardous material delivery and storage activities.

CONTAMINATED SOIL MANAGEMENT:

Soil within Contract 4 is contaminated, but not hazardous, with aeryally deposited lead. The present strategy is to off-haul all excavated material. Some excavated soil may be re-used, but a decision from the Presidio is forthcoming. Bedrock under soil contains serpentine and is considered hazardous. Excavated bedrock will be disposed of at a class I facility.

TEMPORARY CONCRETE WASHOUT FACILITY (PORTABLE):

Temporary Concrete Washout (Portable) will be used for collection and disposal of: washout from concrete delivery trucks; slurries containing portland cement concrete or hot mix asphalt from sawcutting, coring, grinding, grooving, and hydro-concrete demolition; concrete waste from mortar mixing stations.

CONCRETE WASTE:

Practices to prevent the discharge of portland cement concrete, AC, or HMA waste into storm drain systems or watercourses will be implemented. Portland cement concrete, AC, or HMA will be collected and disposed at waste 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

Sandblast debris/residue generated from grinding, grooving or demolition activities will be contained, in order to prevent the waste from being blown into adjacent system or water bodies.

SANITARY AND SEPTIC WASTE MANAGEMENT:

The WPCM will inspect, at least weekly, sanitary or septic waste storage and monitor disposal procedures. Sanitary facilities that discharge to the sanitary sewer system will be properly connected and free from leaks. Sanitary facilities will be placed at least 50 feet away from storm drains, watercourse, and flow lines. Written approval/permits from local health agency, city, county, and sewer district will be obtained before discharging from a sanitary or septic system directly into a sanitary sewer system, and submit a copy to the Resident Engineer. Local health agency provisions will be complied with while using an on-site disposal system. Temporary sanitary facilities will be serviced on a weekly basis and documented.

LIQUID WASTE MANAGEMENT:

Practices to prevent job site liquid waste from entering storm drain systems or watercourses will be used. Liquid wastes expected on the job site include the following:

1. Drilling slurries or fluids
2. Grease-free or oil-free wastewater or rinse water
3. Dredgings, including liquid waste from drainage system cleaning
4. Liquid waste running off a surface including wash or rinse water
5. Other non-storm water liquids not covered by separate permits

Liquid waste will be held in structurally sound, leak-proof containers such as:

1. Roll-off bins
2. Portable tanks

Liquid waste containers will be of sufficient quantity and volume to prevent overflow, spills and leaks.

Containers will be stored at least 50 feet from moving vehicles and equipment, if within the floodplain, at least 100 feet from concentrated flows of stormwater, drainage courses, watercourses, or storm drain inlets. If outside the floodplain, they will be stored at least 50 feet from concentrated flows of stormwater, drainage courses, watercourses, or storm drain inlets unless approved

Remove and dispose of deposited solids from sediment traps under "Solid Waste," unless the Engineer authorizes another method.

Liquid waste may require testing to determine hazardous material content before disposal. Drilling fluids and residue will be disposed outside of the right-of-way.

500.4 Water Pollution Control Drawings (WPCDs)

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

500.5 Construction BMP Maintenance, Inspection and Repair

Inspections shall be conducted by the Contractor's WPCM or other 24-hour trained staff at the following minimum frequencies:

- Prior to a forecast storm;
- After a rain event that causes runoff from the construction site;
- At 24-hour intervals during extended rain events;
- Daily inspections within the Lake Tahoe Hydrologic Unit;
- Weekly during the rainy season;
- Every 2 weeks during the non-rainy season; and
- At any other time(s) or intervals of time specified in the project Special Provisions.

Completed inspection checklists shall be submitted to the Resident Engineer within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs shall be provided in Attachment G of this SWPPP.

500.6 Post-Construction Stormwater Management

500.6.1 Post-Construction Control Practices

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

- Hydraulic Mulch (Polymer Stabilized Fiber Matrix)
- Erosion Control (Netting)
- Fiber Rolls
- Erosion Control (Compost Blanket)

500.6.2 Operation/Maintenance after Project Completion

The post-construction BMPs that are described above will be funded and maintained as follows:

Short Term Funding: Caltrans District 4 Maintenance

Long Term Funding: Caltrans District 4 Maintenance

The responsible party for the long-term maintenance of post-construction BMPs is Caltrans District 4 Maintenance.

500.7 Training

Section 300.5 shows the name of the contractor's WPCM. This person has received the following training:

- To be listed by the Contractor

The training log showing formal and informal training of various personnel is shown in Attachment I. A copy of all training certificate(s) (e.g., Caltrans 24 Hour Training Class and Construction General Permit Training) for the WPCM and the SWPPP Preparer are included in Attachment I. Training records shall be updated, documented and reported in the SWPPP quarterly. Documentation of new training shall be submitted to the Resident Engineer within 24-hours of training.

-CONTRACTOR TO INSERT HERE ANY ADDITIONAL TEXT REGARDING TRAINING OF PERSONNEL.

This SWPPP was prepared by CONTRACTOR TO 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.

500.8 List of Subcontractors

All contractors and subcontractors shall be notified of the requirement for stormwater management measures during the project. A list of contractors shall be maintained and included in the SWPPP. If subcontractors change during the project, the list shall be updated accordingly. The completed subcontractor notification letter and log is included in the SWPPP as Attachment J.

Section 600

Monitoring Program and Reports

600.1 Site Inspections

Site inspections shall be conducted by the Contractor's WPCM or other Caltrans approved 24-hour trained staff at the following minimum frequencies:

- Prior to a forecast storm;
- After a rain event that causes runoff from the construction site;
- At 24-hour intervals during extended rain events;
- Daily inspections within the Lake Tahoe Hydrologic Unit;
- Weekly during the rainy season;
- Every 2 weeks during the non-rainy season; and
- At any other time(s) or intervals of time specified in the Contract Special Provisions.

The results of all inspections and assessments shall be documented, a copy shall be provided to the Resident Engineer within 24 hours of the inspection, and copies of the completed inspection checklists shall be maintained with the SWPPP. Site inspections conducted for monitoring purposes shall be performed using the inspection checklist shown in Attachment H.

The name(s) and contact number(s) of the assigned inspection personnel are listed below and their training qualifications are provided in Attachment I:

Assigned inspector: NAME OF INSPECTOR
Alternate inspector: NAME OF INSPECTOR

Contact phone: TELEPHONE NUMBER
Contact phone: TELEPHONE NUMBER

600.2 Discharge Reporting

If a discharge occurs or if the project receives a written notice or order from any regulatory agency, the contractor will immediately notify the Resident Engineer, and will file a written report to the Resident Engineer within 7 days (3 days for Districts 7 and 11) of the discharge event, notice, or order. Corrective measures will be implemented immediately following the discharge, notice or order. All discharges will be documented on a Discharge Reporting Log.

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 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;
- Where water quality sample results from a CWA Section 303(d) stream listed for sediment, siltation or turbidity indicate elevated levels of sediment or turbidity in downstream samples;
- Where water quality sample results indicate elevated levels of non-visible pollutants;
- Discharges that may endanger health or the environment; and
- Other discharge reporting as directed by the Resident Engineer.

The report to the Resident Engineer will contain the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge, including the cause or nature of the notice or order;
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order;
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence; and
- An implementation and maintenance schedule for any affected BMPs.

600.3 Record Keeping and Reports

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

- Site inspections;
- Compliance certifications;
- Discharge reports;
- Approved SWPPP document and amendments;
- Sampling and analysis results; and
- Copies of all applicable permits.

600.4 Sampling and Analysis Plan for Sediment

Does this project have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act, Section 303(d)?

Yes No

Does this project have the potential to discharge collected stormwater by dewatering?

Yes No

This project does not have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act, Section 303(d).

This project does not have the potential to discharge collected stormwater by dewatering.

600.5 Sampling and Analysis Plan for Non-Visible Pollutants

This Sampling and Analysis Plan (SAP) for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater discharges from the project site and offsite activities directly related to the project in accordance with the requirements of Section B of the General Permit, and applicable requirements of the Caltrans *Construction Site Storm Water Quality Sampling Guidance Manual*, December 2003.

600.5.1 Scope of Monitoring Activities

The following construction materials, wastes or activities, as identified in Section 500.3.1, 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 B.

- Vehicle fluids, including oil, grease, petroleum, and coolant;
- Asphaltic emulsions associated with asphalt-concrete paving operations;
- Cement materials associated with PCC paving operations, drainage structures, median barriers, and bridge construction;
- Base and subbase material;
- Joint and curing compounds;
- Concrete curing compounds (e.g. methacrylate and epoxy resin products);
- Paints;
- Solvents, thinners, acids;
- Sandblasting materials;

- Mortar Mix;
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, pesticides, mulch);
- BMP materials (sandbags, liquid copolymer);
- Treated lumber (materials and wastes);
- PCC rubble;
- Masonry block rubble; and
- General litter

The following existing site features, as identified in Section 500.3.3, are potential sources of non-visible pollutants to stormwater discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Attachment B.

- ?????

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

- Not applicable

The project has the potential to receive stormwater run-on with the potential to contribute non-visible pollutants to stormwater discharges from the project. Locations of such run-on to the Caltrans right-of-way are shown on the WPCDs in Attachment B.

- Not applicable

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

600.5.2 Monitoring Strategy

Sampling Schedule

Samples for the applicable non-visible pollutant(s) and a sufficiently large uncontaminated background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of year, status of the construction site, or day of the week.

In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during the required inspections conducted before or during rain events:

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- An operational activity, including but not limited to those in Section 600.5.1, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) applicable BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, personnel safety; and other factors in accordance with the applicable requirements in the Caltrans *Construction Site Storm Water Quality Sampling Guidance Manual*, December 2003. Planned sampling locations are shown on the WPCDs and include the following:

- Eight sampling location(s) on the project site and the contractor's yard have been identified for the collection of samples or runoff from planned material and waste storage areas and from areas where that non-visible pollutant producing operations are planned.
- Sample location number(s) S1-S8 is located throughout the project site, as shown on the CWPCDs included in Attachment B.

- Two sampling locations have been identified for the collection of samples of runoff that drain areas where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil will be applied.
- If applicable, Sample location number(s) S1-S8 is located at drainage inlets shown on the CWPCDs, included in Attachment B.
- [Enter Number] sampling locations have been identified for the collection of samples of runoff that drain areas contaminated by historical usage of the site.
- If applicable, Sample location number(s) [Enter Number] is located [Enter Location].
- No sampling locations have been identified for the collection of samples of run-on to the Caltrans right-of-way with the potential to combine with discharges being sampled for non-visible pollutants. These samples are intended to identify sources of potential non-visible pollutants that originate off the project site.
- If applicable, Sample location number(s) [Enter Number] is located [Enter Location].
- Two 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 500.3.1; (2) potential non-visible pollutants due to historical use of the site as identified in Section 500.3.3; (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.
- Sample location number(s) S9-S10 is located as shown on the CWPCDs, included in Attachment B.

If an operational activity or stormwater inspection conducted 24 hours prior to or during a rain event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm sewer system that was an unplanned location and has not been identified on the WPCDs, sampling locations will be selected using the same rationale as that used to identify planned locations.

600.5.3 Monitoring Preparation

Samples will be collected by:

- | | | |
|------------|------------------------------|-----------------------------|
| Contractor | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Consultant | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Laboratory | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

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

Name/Telephone Number:

Name/Telephone Number:

Alternate(s)/Telephone Number:

Alternate(s)/Telephone Number:

Prior to the rainy season, all sampling personnel and alternates will review Section 600 through 600.5.10 of this SWPPP. Qualifications of designated contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, 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, Sampling Activity Log forms, and COC forms.

The contractor will obtain and maintain the field testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by contractor sampling personnel.

Safety practices for sample collection will be in accordance with the [ENTER TITLE AND PUBLICATION DATE OF CONTRACTOR'S HEALTH AND SAFETY PLAN FOR THE PROJECT OR PROVIDE SPECIFIC REQUIREMENTS HEREIN].

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

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated sampling personnel describing environmental sampling training and experience are provided in Attachment I.

WPCM will contact [specify name of laboratory or environmental consultant] 24 hours prior to a predicted rain event and if one of the triggering conditions is identified during an inspection before,

during, or after a storm event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

[Specify name of laboratory or environmental consultant] will obtain and maintain the field testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by their sampling personnel.

600.5.4 Analytical Constituents

Identification of 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 600-3
Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Cleaning Products	Acids, Bleaches, Detergents, TSP, Solvents,	pH, Residual Chlorine, Phosphate, VOC, SVOC
Portland Cement Concrete & Masonry Products	Masonry Products, Sealant, Fly Ash, Municipal Solid Waste, Curing Compounds	pH, Alkalinity, Methyl Methacrylate, Metals, VOC, SVOC
Landscaping and Other Products	Fertilizers, Inorganic and Organic, Herbicides, Top Soil	TDS, Aluminum, Sulfate, Nitrate, Phosphate, pH, Organic Nitrogen and COD
Painting Products	Paint, Paint Strippers, Sealants, Solvents, Thinners, etc.	VOC, SVOC, COD
Contaminated Soil	Aerially Deposited Lead, Petroleum, etc.	Lead, Contaminant specific
Adhesives	Adhesives	COD, Phenols, SVOC
Dust Palliative Products	Salts	Chloride, TDS, Cations (Sodium, Magnesium, Calcium)
Vehicle	Antifreeze, Batteries, Fuels, Lubricants	Lead, pH, Sulfuric Acid
Soil Amendment/Stabilization Products	Polymer/Copolymer	Organic Nitrogen, BOD, COD, DOC, Nitrate, Sulfate, Nickel
Treated Wood Products	ACZA, CCA, ACA Copper Naphthenate, Creosote	Arsenic, Total Chromium, Copper and Zinc

600.5.5 Sample Collection and Handling

Sample Collection Procedures

Samples of discharge shall be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" table provided in Section 600.5.6. Only personnel trained in proper water quality sampling shall collect samples.

Samples shall be collected by placing a separate laboratory-provided sample container directly into a stream of water downgradient and within close proximity to the potential non-visible pollutant discharge location. This separate laboratory-provided sample container shall be used to collect water, which shall be transferred to sample bottles for laboratory analysis. The upgradient and uncontaminated background samples shall be collected first prior to collecting the downgradient to minimize cross-contamination. The sampling personnel shall collect the water upgradient of where they are standing. Once the separate laboratory-provided sample container is filled, the water sample shall be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel shall:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location;
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample;
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection;
- Not leave the cooler lid open for an extended period of time once samples are placed inside;
- Not sample near a running vehicle where exhaust fumes may impact the sample;
- 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;
- Not eat, smoke, or drink during sample collection;
- 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 to take place;
- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water; and
- Dispose of decontamination water/soaps appropriately (i.e., not discharge to the storm drain system or receiving water).

Sample Handling Procedures

All or some of samples will be analyzed by (select one or both):

Laboratory Yes No
Contractor (Field Measurement) Yes No

Immediately following collection, sample bottles for laboratory analytical testing shall be capped, labeled, documented on a COC form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at ± 4 degrees Celsius as practicable, and delivered within 24 hours to the following California Environmental Laboratory Accreditation Program (ELAP) – certified laboratory:

Laboratory Name:

Address:

Telephone Number:

Point of Contact:

Immediately following collection, samples for field analysis shall be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

Sample Documentation Procedures

All original data documented on sample bottle identification labels, COC forms, Sampling Activity Logs, and Inspection Checklists 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. Copies of the COC form and Sampling Activity Log are provided in Attachment R.

Duplicate samples shall be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the Sampling Activity Logs.

Sampling and field analysis activities shall be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. At a minimum, the following information shall be recorded on the label, as appropriate:
 - Project name
 - Project number
 - Unique sample identification code as shown below:

SSSSYYMMDDHHmmTT

Where:

SSSS = sampling point number (e.g., CCUP1, CCDN2)
YY = last two digits of the year (e.g. 06)
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 CCUP1 collected at 4:15PM on December 8, 2006 would be:

CCUP10612081615G

- Collection date/time (No time applied to QA/QC samples)
 - Analysis constituent
 - Initials of person who collected the sample
- Sampling Activity Logs: A log of sampling events shall identify:
 - Sampling date;
 - Separate times for collected samples and QA/QC samples recorded to the nearest minute;
 - Unique sample identification number and location;
 - Analysis constituent;
 - Names of sampling personnel;
 - Weather conditions (including precipitation amount);
 - Field analysis results; and
 - Other pertinent data.

- COC Forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

- Stormwater Quality Construction Inspection Checklists: When applicable, the contractor's Stormwater inspector will document on the checklist that samples for non-visible pollutants were taken during a rain event.

600.5.6 Sample Analysis

Samples shall be analyzed for the applicable constituents using the analytical methods identified in Table 600-4, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" table in this section.

Will samples be analyzed in the field?:

Yes No

600.5.7 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples shall be collected at a rate of 10 percent or 1 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 at each location immediately after the primary sample has been collected. Duplicates shall be collected where contamination is likely, not on the background sample. Duplicate samples shall not influence any evaluations or conclusions; however, they shall be used as a check on laboratory quality assurance.

600.5.8 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data shall be submitted to the Resident Engineer within 5 days of sampling (for field analyses) and within 30 days (for laboratory analyses). All submitted information shall include a signed copy of the sampling data reporting certification form. Electronic results shall be submitted on diskette 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, Lab Name, Method Reference, Method Number, Method Detection Limit, and Reported Detection Limit. Attachment T contains the Sampling Data Reporting Form, which must accompany the submittal of sampling data.

Lab reports and COCs shall be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms, Sampling Activity Logs, and Sampling Data Reporting Forms shall be kept with the SWPPP document. Electronic results shall be emailed to [NAME] of [COMPANY] at [email address] after final sample results are received after each sampling event. Electronic copies shall be forwarded by email to [Resident Engineer Name] at [email address] for inclusion into a statewide database.

600.5.9 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, shall be submitted to the Resident Engineer with the water quality analytical results and the QA/QC data. Should the runoff/downgradient sample show an increased level of the tested 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. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

600.5.10 Change of Conditions

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations or introduce additional non-visible pollutants of concern, testing protocols shall be revised accordingly. All such revisions shall be recorded as amendments to the SWPPP.

**CONCEPTUAL
STORMWATER POLLUTION PREVENTION PLAN**

**VICINITY MAP
FOR
THE CONSTRUCTION FROM 0.7 MILE TO 0.3 MILE SOUTH
OF ROUTE 101/1 SEPARATION
IN THE CITY AND COUNTY OF SAN FRANCISCO
04-163744**



LEGEND



PROJECT AREA



DISCHARGE POINTS

CONCEPTUAL WATER POLLUTION CONTROL DRAWINGS (CWPCDs)

FOR CONSTRUCTION ON STATE HIGHWAY IN THE CITY AND COUNTY OF SAN FRANCISCO ON ROUTE 101 FROM 0.7 MILE TO 0.3 MILE SOUTH OF ROUTE 101/1 SEPARATION

LEGEND:

	CONFINEMENT SYSTEM FOR HORSE PIT
	CONCENTRATED SURFACE FLOW
	CONSTRUCTION SITE MANAGEMENT (CSM)
	DEWATERING & NON-STORM WATER DISCHARGE CONTROL
	PIPE/UNDERGROUND FLOW DIRECTION
	RUN-ON FLOW AREA (A1-A3) & DIRECTION
	SAMPLING LOCATION
	SANITARY SEWER DISCHARGE LOCATION (NON-STORM WATER)
	STAGING/CONSTRUCTION AREA
	STAGING AREA FOR CONTRACTOR'S USE
	STORM WATER DISCHARGE LOCATION
	STORM DRAIN DISCHARGE LOCATION (NON-STORM WATER)
	TEMPORARY CHECK DAM
	TEMPORARY CONSTRUCTION EASEMENT (TCE)
	TEMPORARY CONSTRUCTION ENTRANCE/EXIT
	TEMPORARY CONCRETE WASHOUT (PORTABLE)
	TEMPORARY DRAINAGE INLET PROTECTION
	TEMPORARY EROSION CONTROL BLANKET (TECB)
	TEMPORARY FENCE (ESA)
	TEMPORARY FIBER ROLL (TFR)
	TEMPORARY GRAVEL BERM BAG (TGBB)
	TEMPORARY RAILING (TYPE K)
	TEMPORARY REINFORCED SILT FENCE (TRSF)
	TEMPORARY SILT FENCE (TSF)
	TEMPORARY TIRE WASH
	TEMPORARY TYPE III BARRICADE

GENERAL WATER POLLUTION CONTROL NOTES

- CWPCDs depict construction activities and best management practices (BMPs) by each stage that are expected to occur in the rainy season(s) for the duration of the Contract.
 - The Conceptual Water Pollution Control Drawings (CWPCDs) are intended to provide additional direction and convey specific BMP expectations to the contractor. The (CWPCDs) are prepared assuming standard construction practices and may not reflect the contractor's actual methods of construction, access requirements or project phasing.
 - The Conceptual Storm Water Pollution Prevention Plan (CSWPPP) will be adhered to for all construction activities planned for the first 60 days after contract approval, or until the Contractor's SWPPP is approved by the Engineer.
 - The CSWPPP will be used as a guide and reference tool to develop and submit the contract SWPPP that includes all elements of the CSWPPP and any additional elements required to complete the SWPPP in conformance with the Special Provisions, the Permits, any other local requirements. The Contractor's SWPPP shall supersede the Conceptual SWPPP upon Engineer's approval.
 - Field conditions may necessitate modifications to the CWPCDs in the contract SWPPP prepared by the Contractor.
 - Disturbed Soil Areas (DSA) are limited to 5 acres during the rainy season from October 15 to April 15.
 - The Contractor will use all temporary water pollution control practices included in the Contract to develop and submit the Contract SWPPP.
 - The Contractor will use best management practices (BMPs) described under in special provisions section "Construction Site Management" to control potential sources of water pollution before they come in contact with storm water systems or watercourses. Control material pollution and manage waste and non-storm water at the job site by implementing effective handling, storage, use, and disposal practices.
 - The Contractor will include the following contract items of work for permanent water pollution control as shown on the Erosion Control Plans: Hydraulic Mulch (Polymer Stabilized Fiber Matrix); Move-In/Move-Out (Erosion Control); Erosion Control (Netting); Fiber Rolls; Erosion Control (Compost Blanket). Permanent water Pollution Control measures shall be applied to non-active DSAs deemed complete. These permanent water pollution control practices may be constructed and utilized during the construction period. The Contractor shall maintain and protect the permanent water pollution control practices throughout the duration of the project and shall restore these controls to the lines, grades and condition shown on the plans prior to acceptance of the contract.
 - Construction Site Management BMPs will be implemented year-round to control mobile operations common to this contract, which may include Asphalt recycling, concrete mixing, crushing and storage of materials.
 - The Contractor shall monitor the National Weather Service weather forecast on a daily basis during the contract. The Contractor may use an alternative weather forecasting service if approved by the Engineer. Active DSAs where soil disturbance has occurred and will continue to occur during the ensuing 21 days shall be protected using appropriate water pollution control practices within 15 days, or before predicted precipitation, whichever occurs first.
 - Temporary soil stabilization and sediment control practices will be implemented during the rainy season between October 15 and April 15. The Contractor shall implement soil stabilization and sediment control practices a minimum of 6 days before the start of the rainy season using Temporary Hydraulic Mulch, Temporary Silt Fences, Temporary Fiber Rolls and Temporary Drainage Inlet Protection. The Contractor shall maintain soil stabilization and sediment control materials on site to protect disturbed soil areas.
- Sampling and Analysis**
- A Sampling and Analysis Plan (SAP) to monitor the effectiveness of the water pollution control practices has been prepared. This project has the potential to discharge non-visible pollutants in storm water from the construction site. Non-visible pollutant sampling locations (downhill from each non-visible pollutant source and background/uncontaminated control sample) are shown on the CWPCDs.

STORM WATER POLLUTION CONTROL CONSTRUCTION NOTES:

- Construction schedule should consider the amount and duration of soil exposed to erosion by wind, rainfall and vehicle tracking and minimizes DSA during any rainy season. Contractor will be prepared with sufficient quantities of temporary water pollution control practices year-round to deploy soil stabilization and sediment control practices in response to seasonal and unseasonal rainfall.
- Temporary Fence Type ESA (TFESA) will be installed prior to clearing and grubbing or soil disturbing activities in order to preserve existing vegetation through out the project site. TFESA locations have been delineated after consideration of impacts from grade changes to existing vegetation and the root zone.
- Temporary Hydraulic Mulch (Bonded Fiber Matrix - BFM) will be applied to active and non-active DSAs that require temporary protection until permanent vegetation is established, or disturbed areas that must be redistributed following an extended period of inactivity. Prior to application, embankments and fill areas will be roughened by rolling with a crimping or punching type roller or by track walking. BFM will require 24 hours to dry to become effective.
- Temporary Erosion Control Blanket will be used on active DSAs when areas are particularly difficult to stabilize. These DSAs will include: steep slopes (greater than 1:3, V:H); channels where flow exceeds 3.3 ft per sec; and areas where vegetation establishment can take periods extending into the rainy season.
- Temporary Cover will be used on active DSAs when areas are particularly difficult to stabilize, especially stockpiles of soil, cold mix asphalt concrete, portland cement concrete (PCC) rubble, asphalt concrete, hot mix asphalt (HMA), AC, HMA rubble, aggregate base or subbase shall be placed on an impervious surface and covered with plastic, when precipitation is predicted. Inactive soil stockpiles will be protected with a plastic or geotextile cover, or with soil stabilization measures at all times during the rainy season. During the non-rainy season all soil stockpiles shall be covered and protected with a linear sediment barrier when precipitation is predicted.
- Temporary Silt Fence will be installed and maintained at locations shown on the plans to allow sediment to settle and from runoff before it leaves the site.
- Temporary Reinforced Silt Fence will be installed and maintained at locations shown on the plans to allow sediment to settle and from runoff before it leaves the site.
- Temporary Check Dams will be used in natural and man made channels or drainage ditches to reduce scour and channel erosion by reducing flow velocity and allowing sediment to settle.
- Temporary Fiber Rolls will be used to minimize erosive effects of storm water runoff from active and non-active DSAs to break up the slope lengths, and will be used around temporary stockpiles to intercept runoff, reduce velocity, release runoff as sheet flow and provide removal of sediment.
- Temporary Gravel Bag Berms will be installed to form a barrier across a slope to intercept runoff, reduce its flow velocity, release runoff as sheet flow and provide some sediment removal.
- Street Sweeping will be done by using a Mechanical sweeper followed by a vacuum-assisted sweeper, or Vacuum-assisted dry (waterless) sweeper or Regenerative-air sweeper. Street sweeping will occur at the job site entrance and exit locations during: clearing and grubbing activities; earthwork activities; trenching activities; roadway structural section activities; when vehicles are entering and leaving the job site; after soil disturbing activities; after observing offsite tracking of material.
- Temporary Drainage Inlet Protection will be used at all locations shown on CWPCDs.
- Temporary Construction Entrances will be used at points of entrance and exit to reduce tracking of mud and dirt onto public roads by construction vehicles.
- Construction Site Management will be implemented year-round control material pollution and manage waste and non-storm water existing at the construction site by implementing effective handling, storage, use, and disposal practices.
- Groundwater and accumulated precipitation dewatered from excavations will be collected, conveyed, treated, and disposed to either a storm drain system upon obtaining coverage under Order No. R2-2006-0075 adopted by the San Francisco Bay Regional Water Quality Control Board (RWQCB), or obtaining a Batch Discharge permit from San Francisco Public Utilities Commission (SFPUC) for discharges to the sanitary sewer. Designated sanitary sewer discharge (SSD) and storm drain discharge (SDD) locations are shown on the CWPCDs.
- Temporary Concrete Washout (Portable) will be used for collection and disposal of: Washout from concrete delivery trucks; Slurries containing portland cement concrete or hot mix asphalt from sawcutting, coring, grinding, grooving, and hydro-concrete demolition; Concrete waste from mortar mixing stations.

ATTACHMENT B: CWPCD-1

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

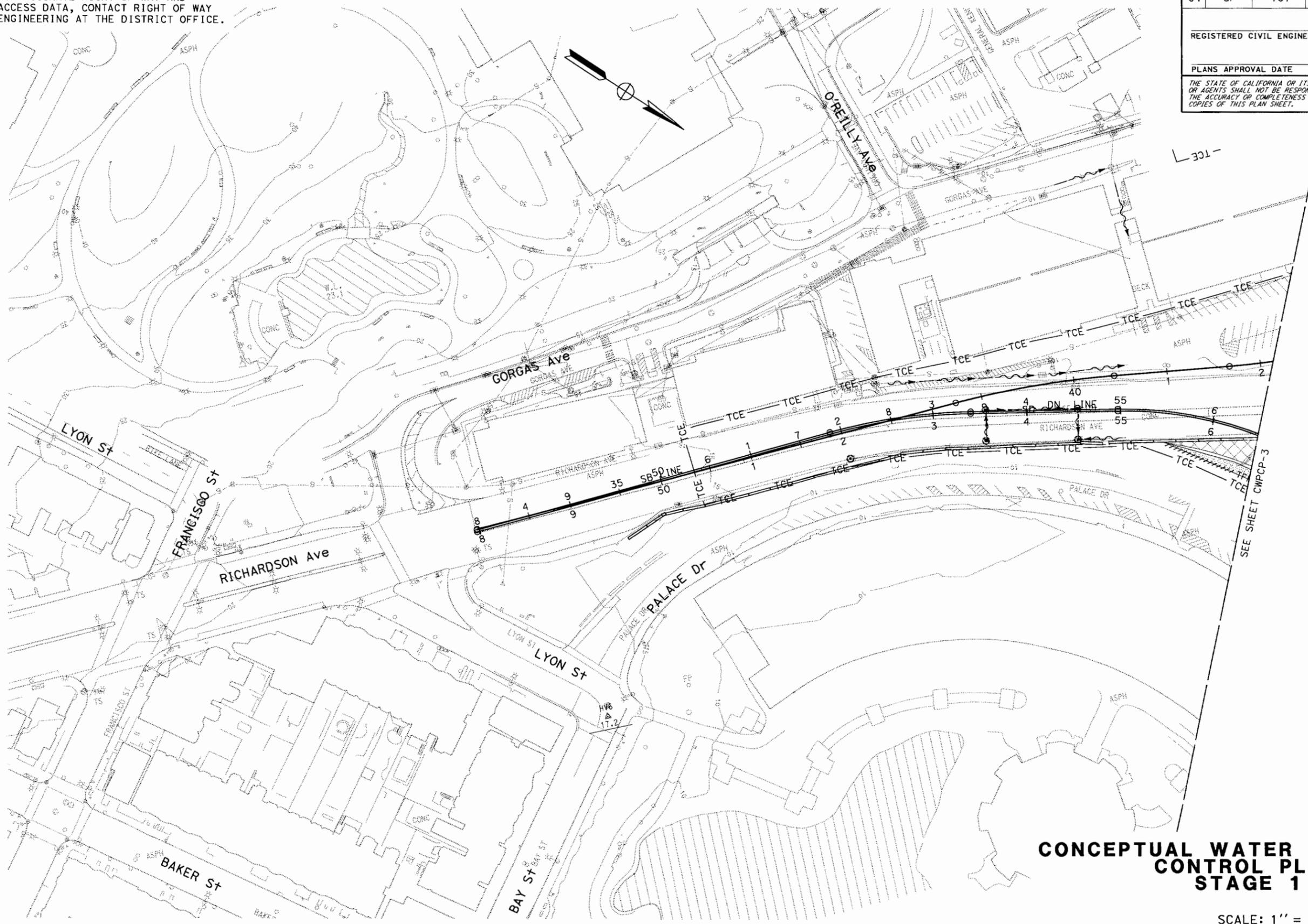
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
St. Gibbons
 FUNCTIONAL SUPERVISOR _____
 CALCULATED BY _____
 DESIGNED BY _____
 CHECKED BY _____
 REVISED BY _____
 DATE REVISED _____



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 1

SCALE: 1" = 50'

CWPCP-2

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE 15 IN INCHES



USERNAME => s128010
 DGN FILE => CWPCP_2.th.BR 09-25-09.dgn

CU 04335

EA 163741

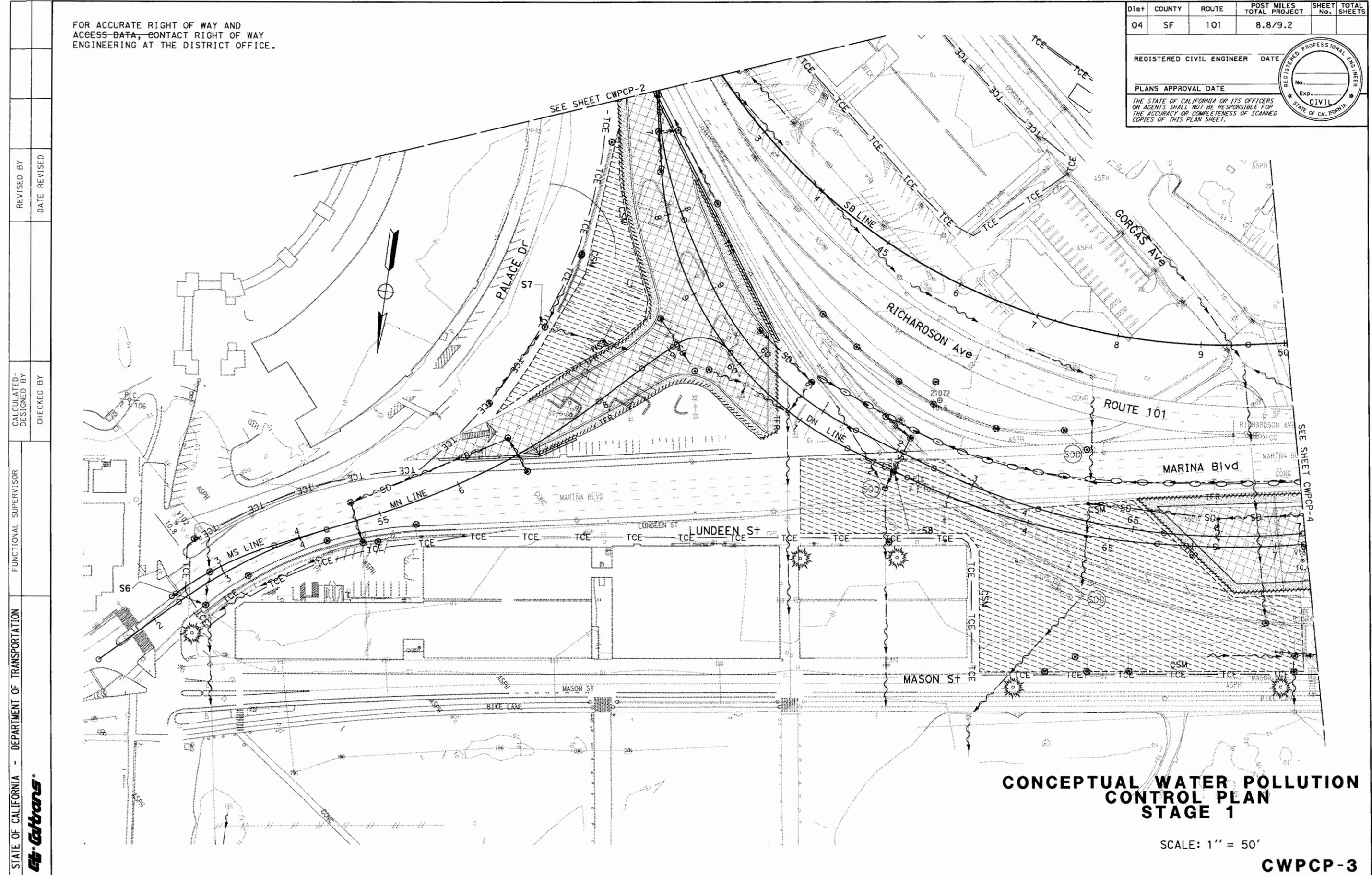
LAST REVISION DATE PLOTTED => 14-OCT-2009
 09-25-09 TIME PLOTTED => 11:01

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 1

SCALE: 1" = 50'

CWPCP-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
St. Gobbons		CHECKED BY	DATE REVISED

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE 15 IN INCHES



USERNAME => s128010
DGN FILE => CWPCP_3.th.BR 09-25-09.dgn

CU 04242

EA 163741

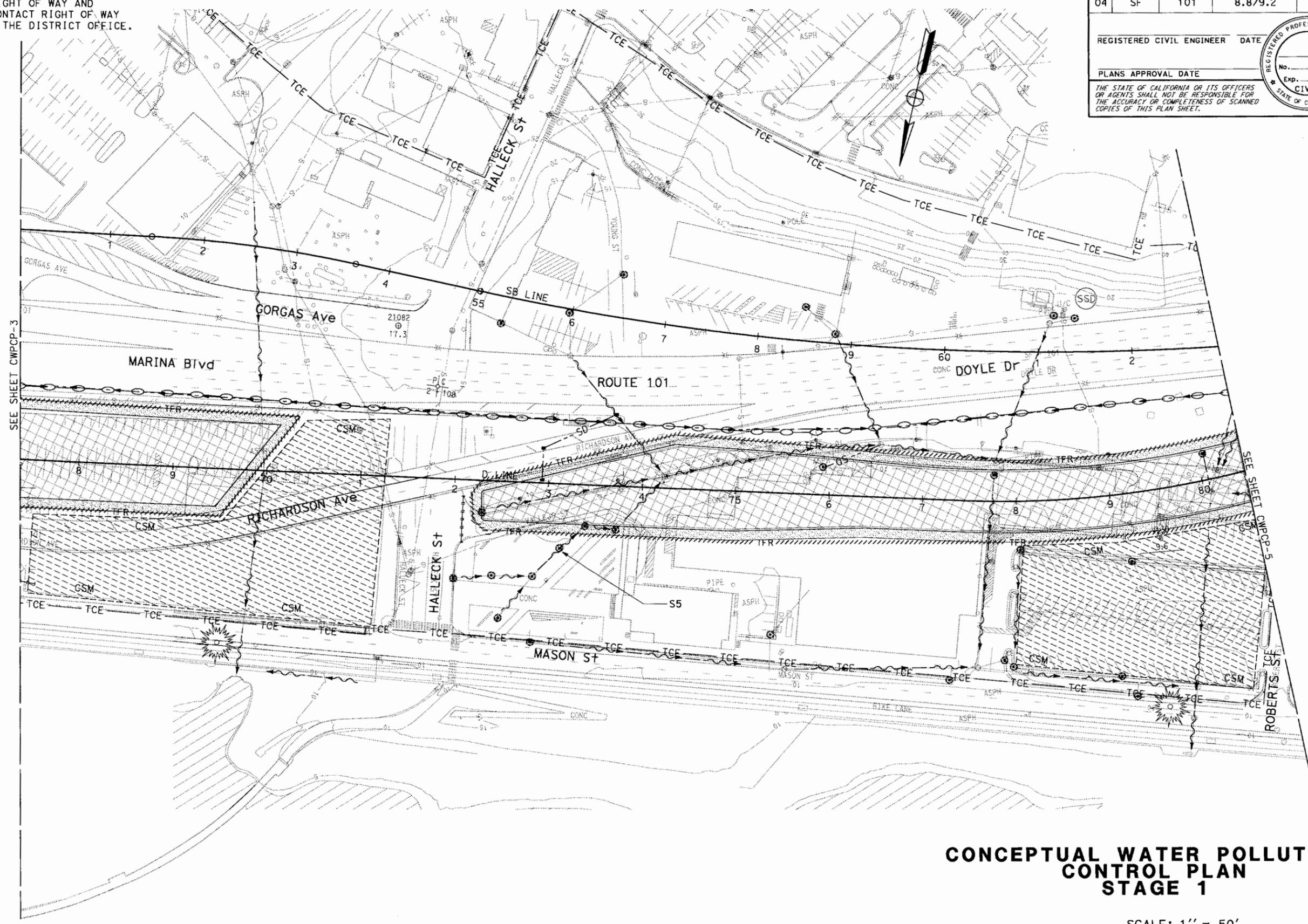
LAST REVISION DATE PLOTTED => 15-OCT-2009
09-25-09 TIME PLOTTED => 16:38

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.

CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 1

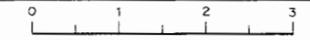
SCALE: 1" = 50'

CWPCP-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED BY	REVISOR BY
		CHECKED BY	DATE REVISED

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE 15 IN INCHES



USERNAME => s128010
DGN FILE => CWPCP_4.th.BR 09-25-09.dgn

CU 04335

EA 163741

LAST REVISION DATE PLOTTED => 15-OCT-2009
09-25-09 TIME PLOTTED => 15:28

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

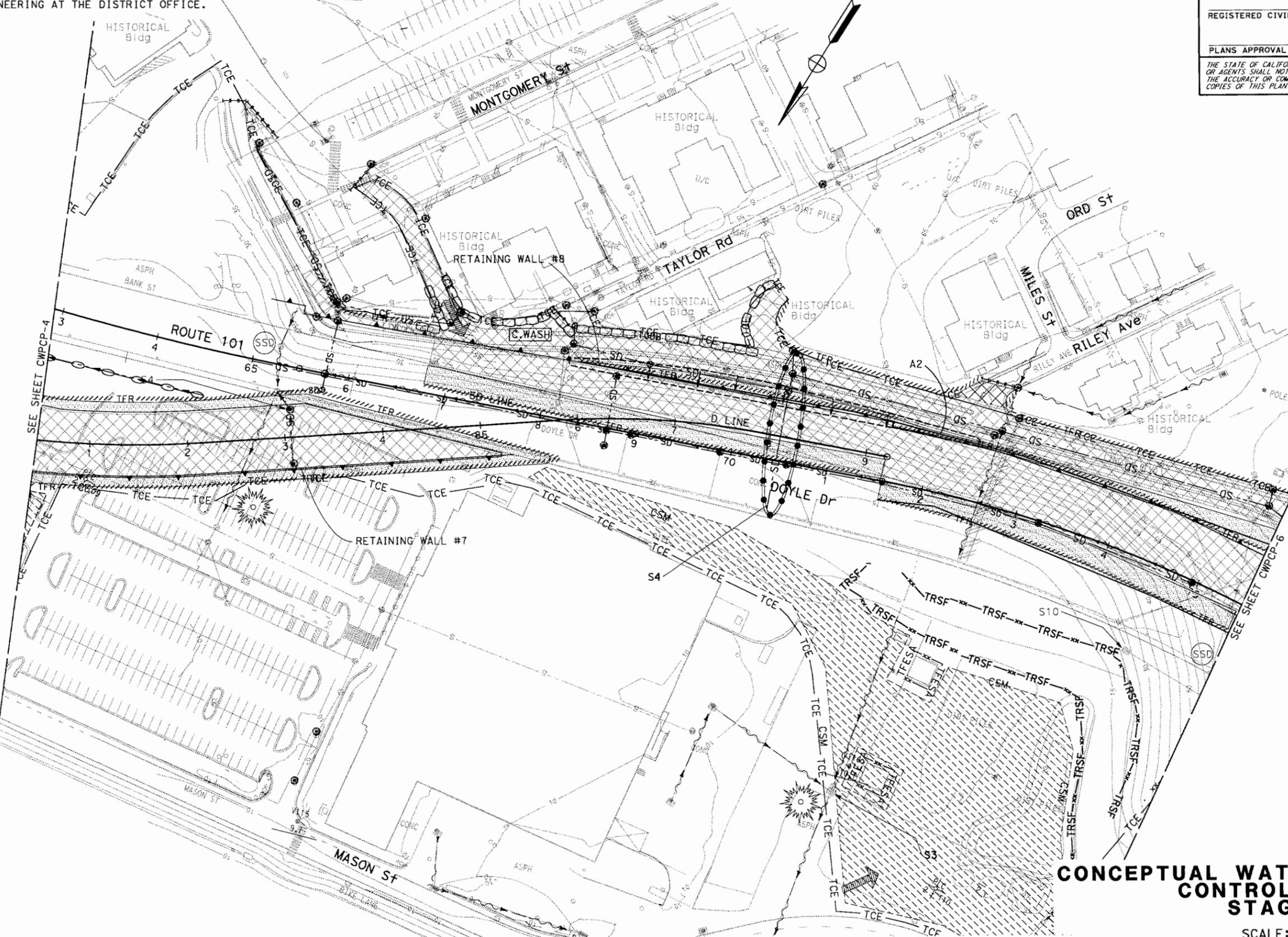
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
No. _____
Exp. _____
CIVIL
STATE OF CALIFORNIA



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 1

SCALE: 1" = 50'

CWPCP-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR BY
Gilbert		CHECKED BY	DATE REVISED

LAST REVISION DATE PLOTTED => 15-OCT-2009
09-25-09 TIME PLOTTED => 16:39

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
04	SF	101	8.8/9.2	

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 SCANNED COPIES OF THIS PLAN SHEET.



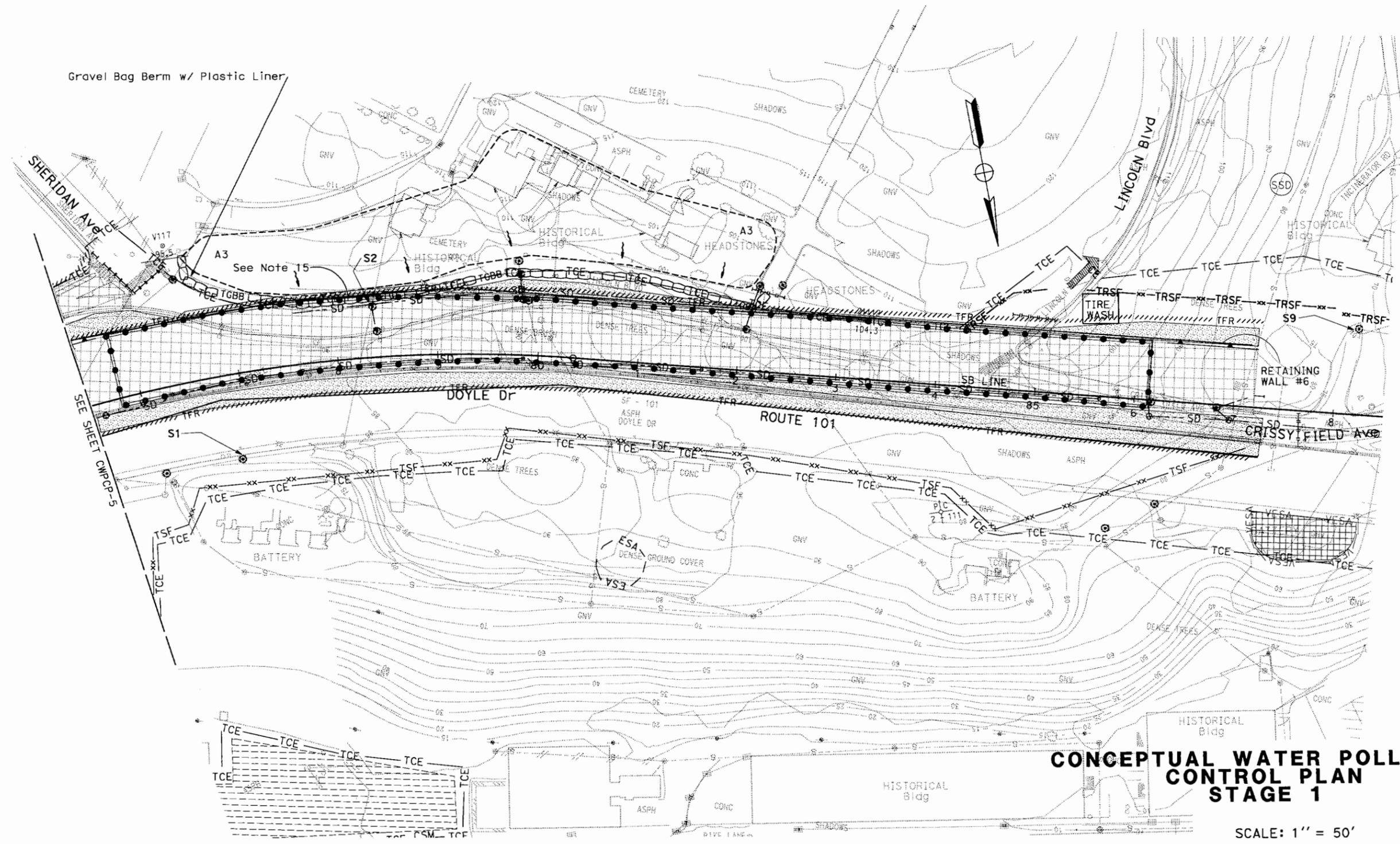
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

REVISOR: [] REVISION: []

DESIGNED BY: [] CHECKED BY: []

FUNCTIONAL SUPERVISOR: []

DATE: []



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 1

SCALE: 1" = 50'

CWPCP-6

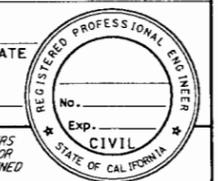
FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

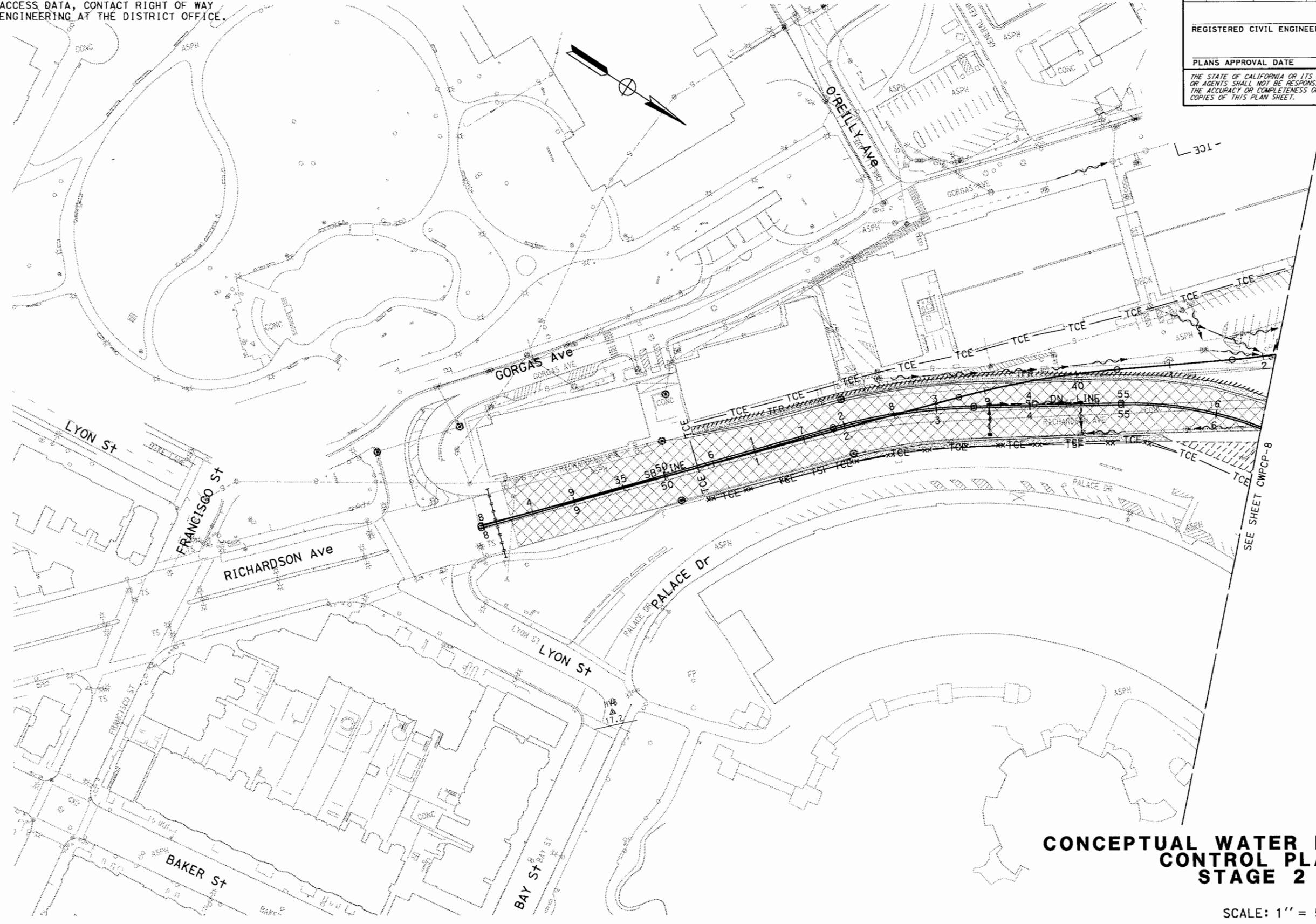
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR
 CALCULATED-DESIGNED BY
 CHECKED BY
 REVISOR BY
 DATE REVISOR



SEE SHEET CWPCP-8

CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 2

SCALE: 1" = 50'

CWPCP-7

BORDER LAST REVISED 4/11/2008



USERNAME => s128010
 DGN FILE => CWPCP_7.th.BR 09-25-09.dgn

CU 04335

EA 163741

LAST REVISION DATE PLOTTED => 15-OCT-2009
 09-25-09 TIME PLOTTED => 15:48

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.

REVISOR BY DATE REVISOR BY DATE

CALCULATED BY DESIGNED BY CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Stantec

This area for Contractor's use in August 2010.
 All other areas available 1st working day of Contract.



Note: GBB around perimeter of removal.
 ECB and TFR around detour construction.

CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 2

SCALE: 1" = 50'

CWPCP-8

RELATIVE BORDER SCALE IS IN INCHES



USERNAME => s128010
 DGN FILE => CWPCP_6.th.BR 09-25-09.dgn

CU 04242

EA 163741

BORDER LAST REVISED 4/11/2008

LAST REVISION DATE PLOTTED => 15-OCT-2009
 09-25-09 TIME PLOTTED => 15:51

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

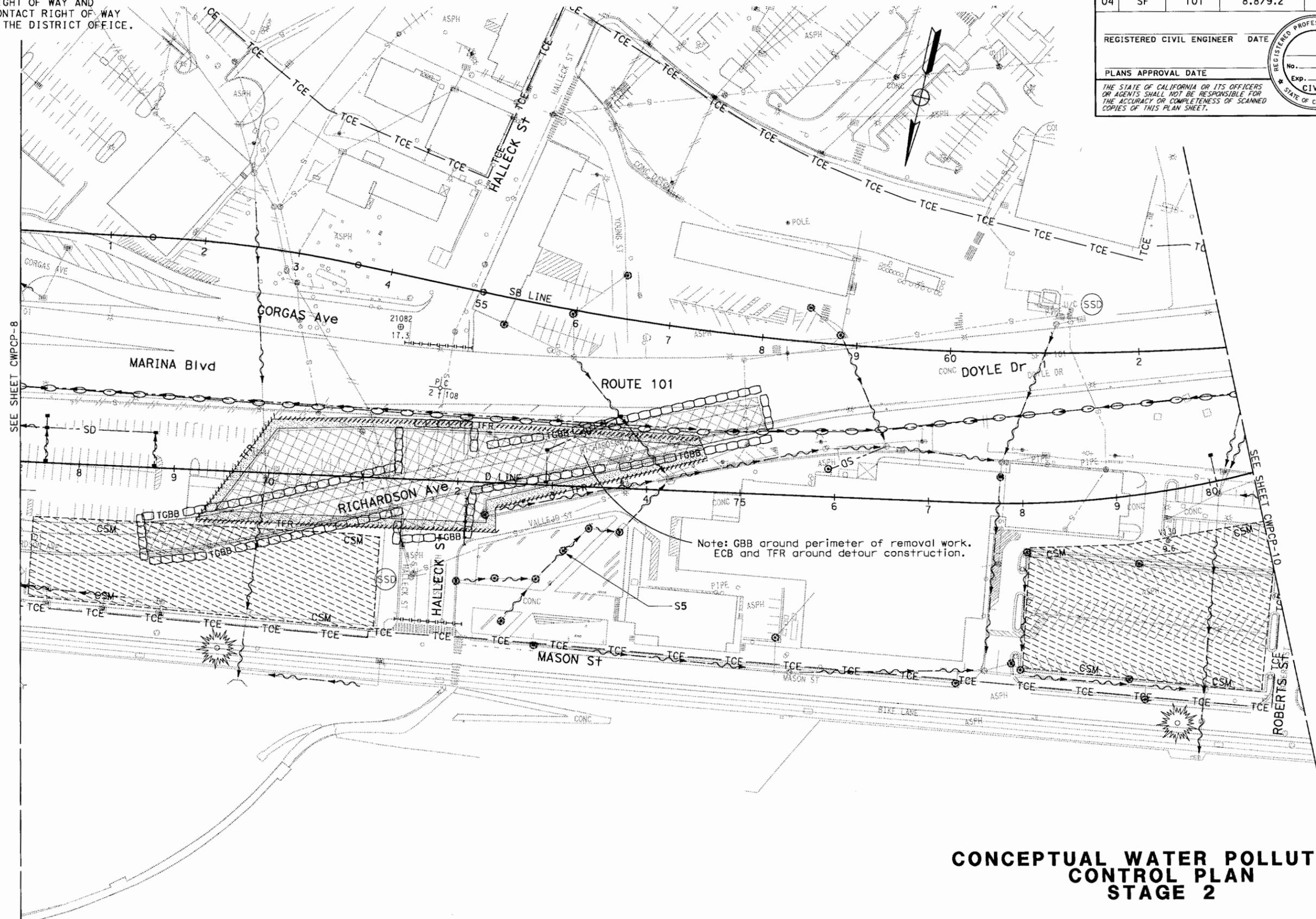
REVISOR: _____

DESIGNER: _____

CHECKED BY: _____

FUNCTIONAL SUPERVISOR: _____

DATE: _____



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 2

SCALE: 1" = 50'

CWPCP-9

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

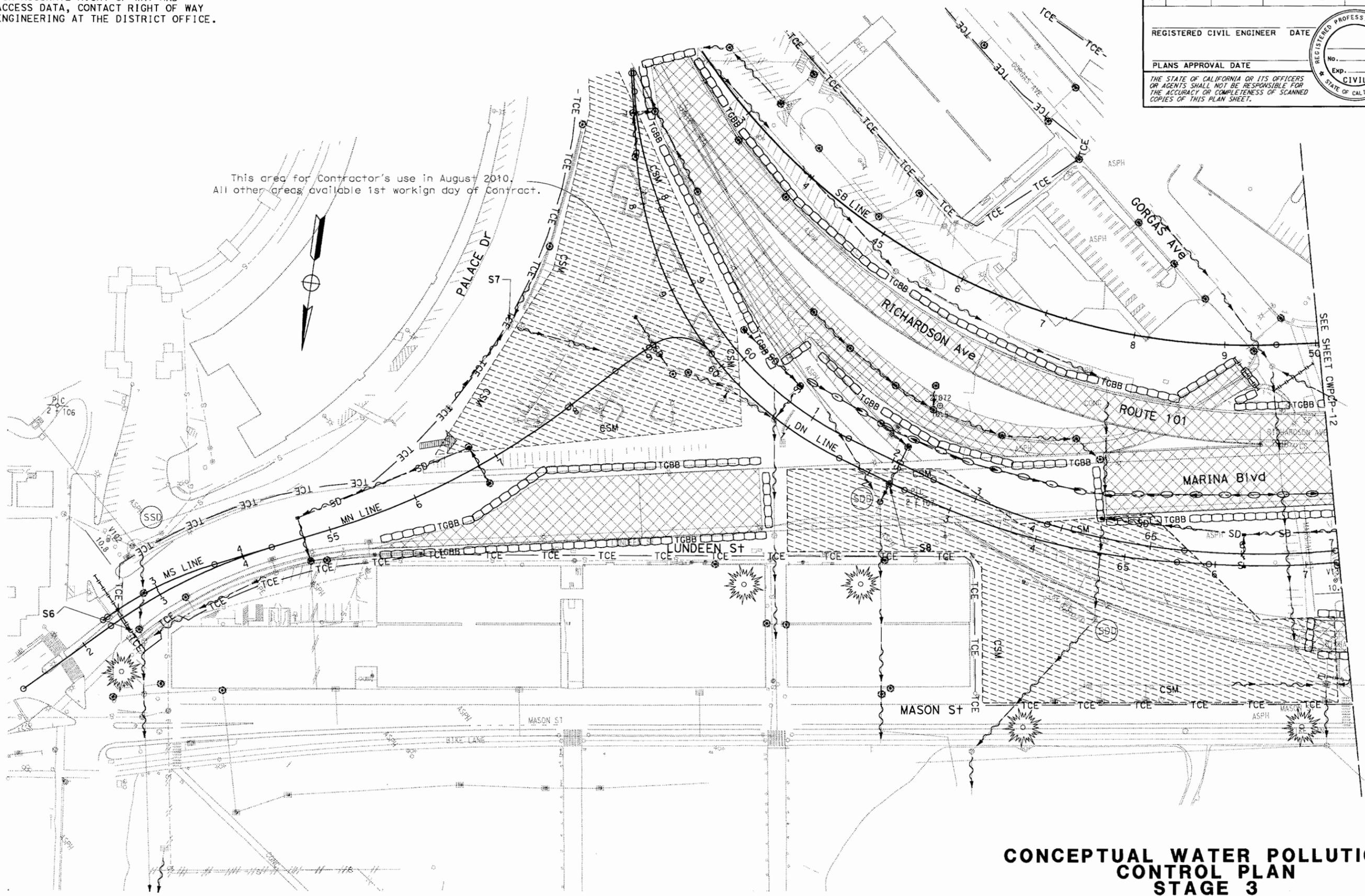
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.



This area for Contractor's use in August 2010.
All other areas available 1st workign day of Contract.



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 3
CWPCP-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Gilbert

REVISOR BY: _____ DATE REVISED: _____
CALCULATED BY: _____ CHECKED BY: _____

FUNCTIONAL SUPERVISOR

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE 1/5 IN INCHES



USERNAME => s128010
DGN FILE => CWPCP_13-11_thmerge.dgn

CU 04242 EA 163741

LAST REVISION DATE PLOTTED => 15-OCT-2009
09-25-09 TIME PLOTTED => 16:11

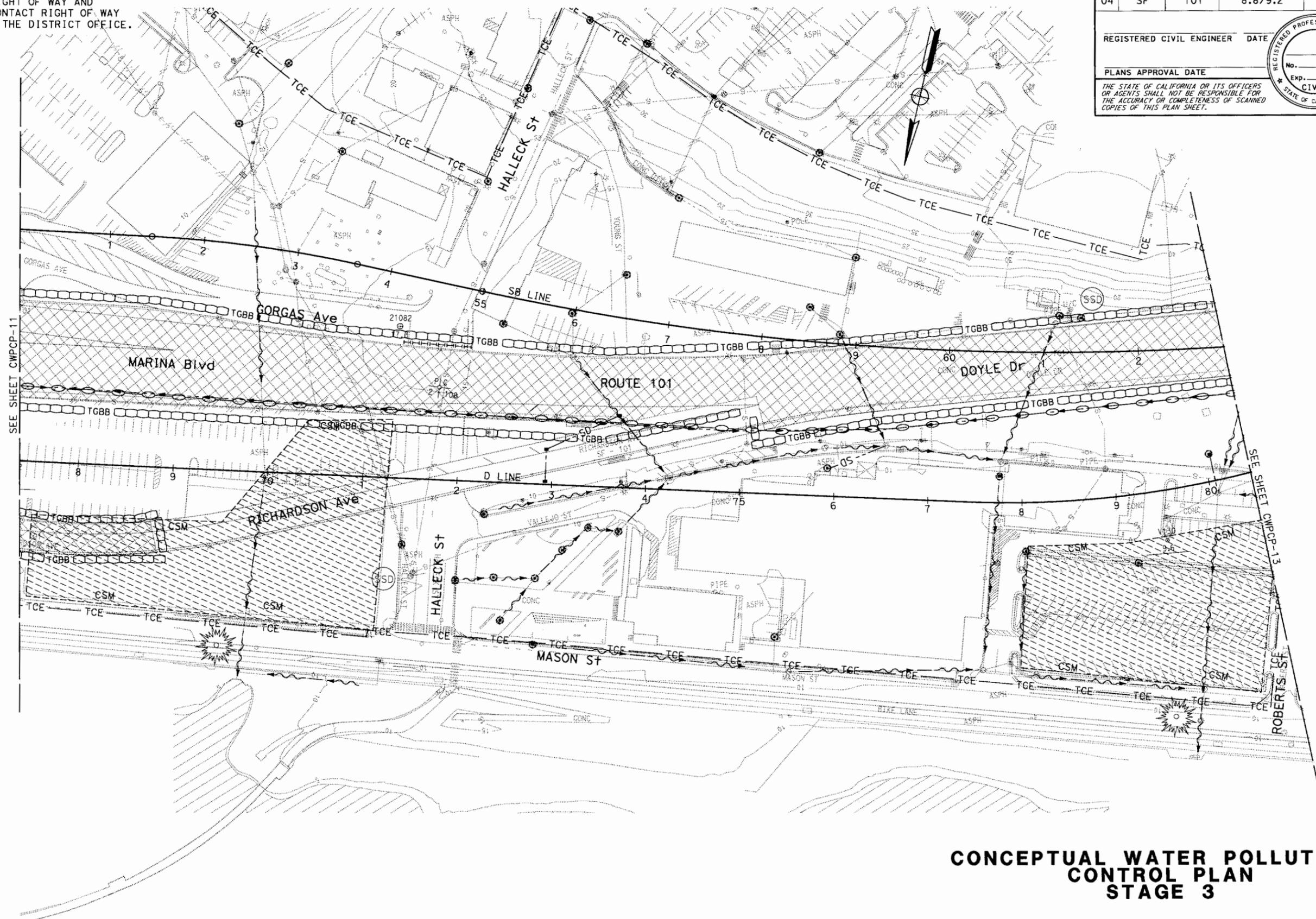
FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 3

SCALE: 1" = 50'

CWPCP-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

REVISOR: _____

DATE: _____

FUNCTIONAL SUPERVISOR: _____

CHECKED BY: _____

DESIGNED BY: _____



BORDER LAST REVISED 4/11/2008



USERNAME => s128010
DGN FILE => CWPCP_14-12_th.BR 09-25-09.dgn

CU 04335

EA 163741

LAST REVISION: DATE PLOTTED => 15-OCT-2009
09-25-09 TIME PLOTTED => 16:14

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

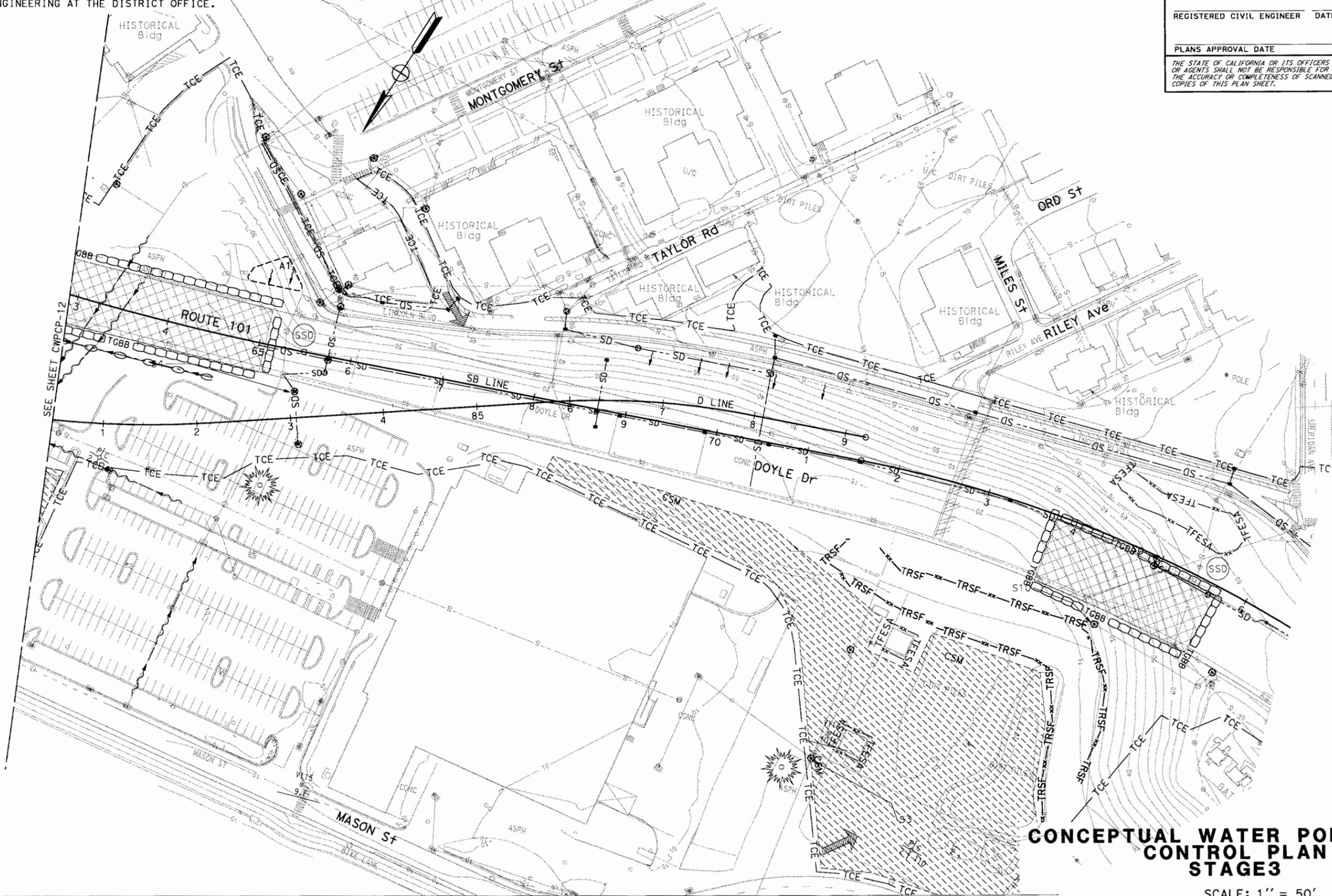
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.

89.6



CONCEPTUAL WATER POLLUTION CONTROL PLAN STAGE 3

SCALE: 1" = 50'

CWPCP-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

DESIGNED BY

CHECKED BY

REVISOR BY

DATE REVISED



BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE 1/8" = 1' IN INCHES

USERNAME => s128010
DGN FILE => CWPCP_15-13_th.BR 09-25-09.cgn

CU 04335

EA 163741

DATE PLOTTED => 15-OCT-2009
TIME PLOTTED => 16:17
09-25-09

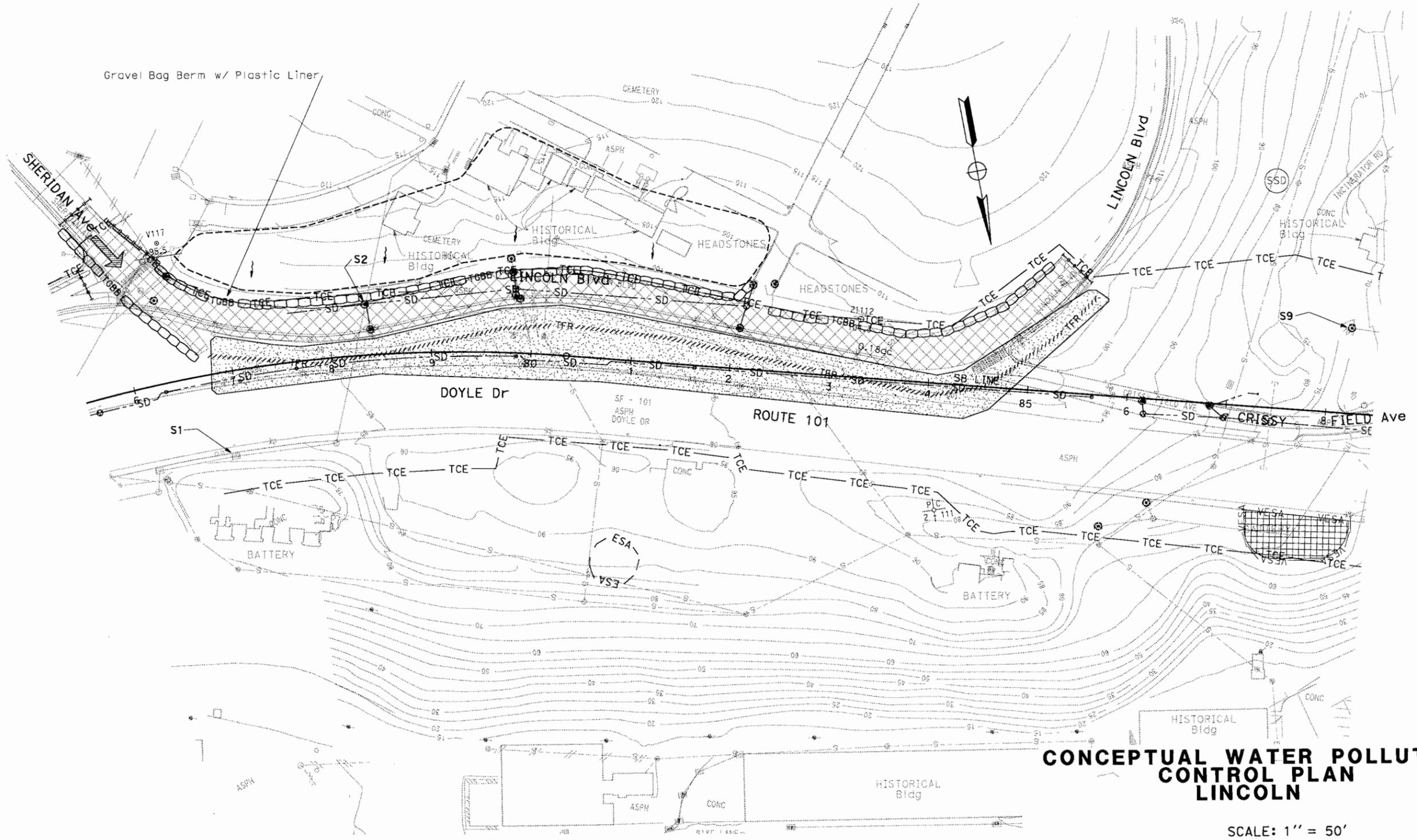
FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	101	8.8/9.2		

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 SCANNED COPIES OF THIS PLAN SHEET.

CONCEPTUAL WATER POLLUTION CONTROL PLAN LINCOLN

SCALE: 1" = 50'

CWPCP-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR
 DESIGNED BY
 CHECKED BY
 REVISIONS:
 1. REVISED BY DATE
 2. REVISED BY DATE

BORDER LAST REVISED 4/11/2008



USERNAME => s128010
 DGN FILE => CWPCP_16-14_th.BR 09-25-09.dgn

CU 04335

EA 163741

LAST REVISION DATE PLOTTED => 15-OCT-2009
 09-25-09 TIME PLOTTED => 16:23

DIST. COUNTY PROJ. NO. SHEET NO. OF SHEETS

Project B Right

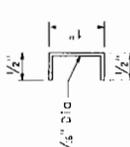
MOBILE LANDSCAPE ARCHITECT

MOBILE, AL

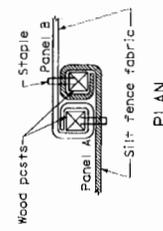
NOV. 1, 2006

THE STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE OF THE CHIEF ENGINEER
 DIVISION OF HIGHWAYS

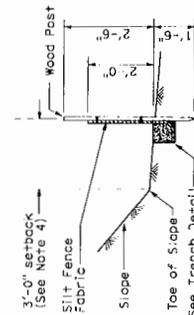
To go to the contract web site go to: <http://www.dsdapp>



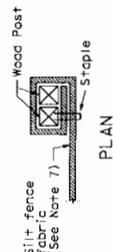
STAPLE DETAIL
(See Note 8)



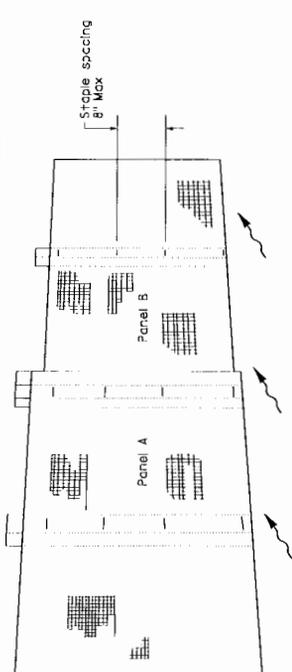
POST AT JOINTS
PLAN



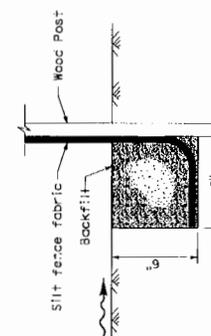
SECTION A-A
TEMPORARY SILT FENCE



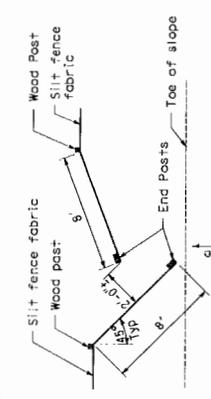
END POST DETAIL
PLAN



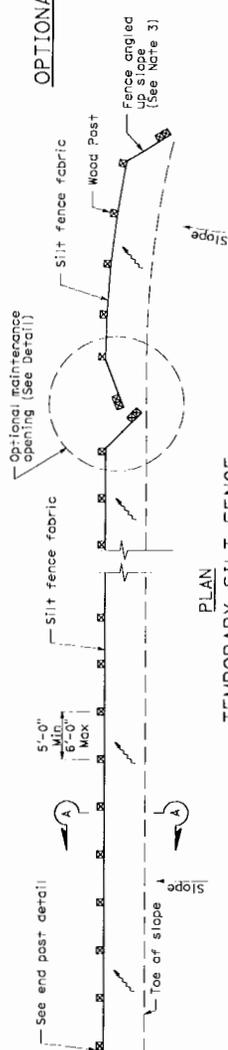
PERSPECTIVE
SILT FENCE PANELS AT JOINTS



TRENCH DETAIL
SECTION



OPTIONAL MAINTENANCE OPENING DETAIL
PLAN



PLAN
TEMPORARY SILT FENCE

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 for wind blowing fabric up the tops of the posts. 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 slump locations.

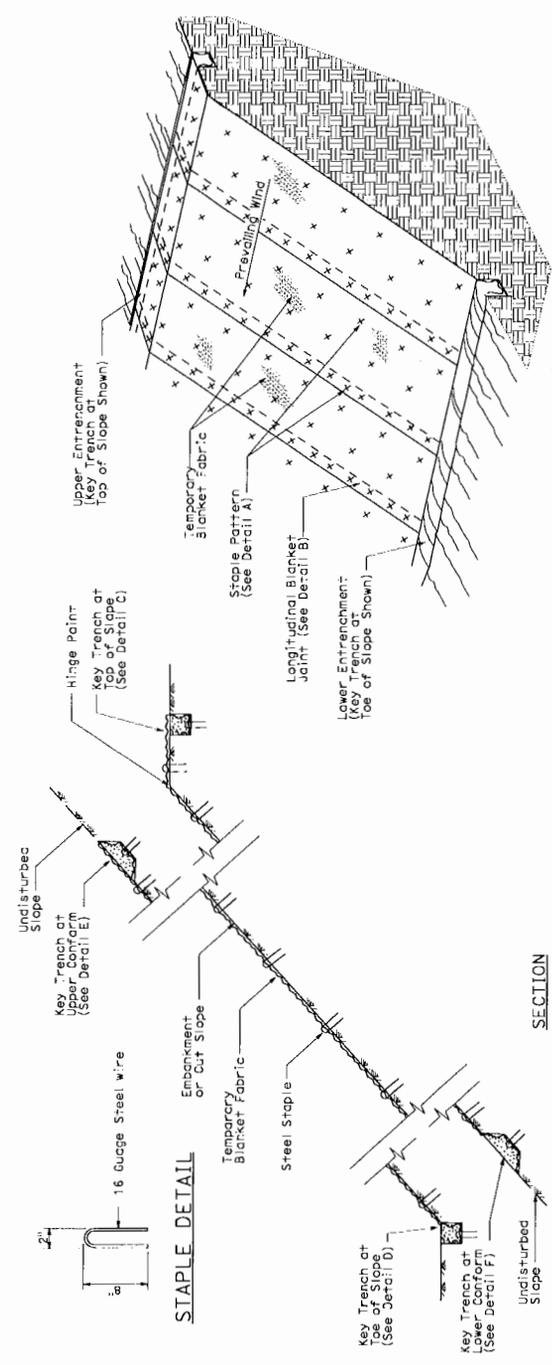
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY SILT FENCE)

NO SCALE

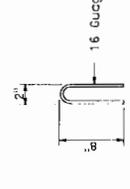
T51

DIST. COUNTY ROUTE DIST. SCALE SHEET NO. SHEETS
 PROJECT: LANDSCAPE ARCHITECT
 DATE: MAY 1, 2006
 PLANS: 1000000000
 THE STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 15.00' = 100' CONTRACT SEE SHEET T53 FOR DETAILS

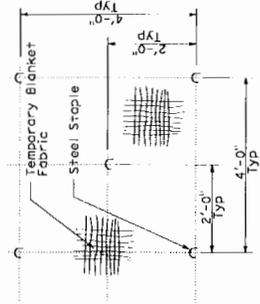
NOTE:
 1. Temporary fiber roll shown for reference purposes only.



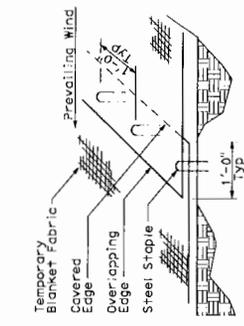
ISOMETRIC
 TEMPORARY EROSION CONTROL BLANKET
 ON SLOPE



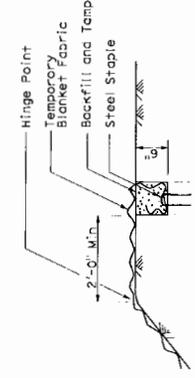
STAPLE DETAIL



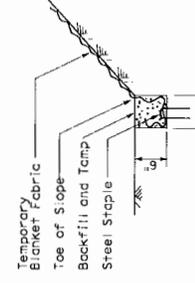
DETAIL A
 STAPLE PATTERN



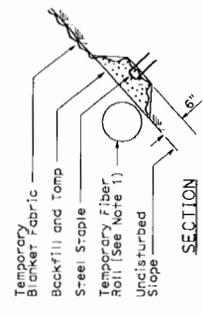
DETAIL B
 LONGITUDINAL BLANKET JOINT



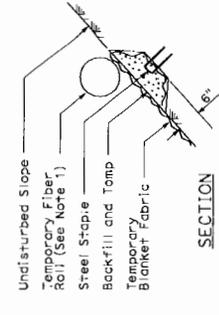
DETAIL C
 KEY TRENCH AT
 TOP OF SLOPE



DETAIL D
 KEY TRENCH AT
 TOE OF SLOPE



DETAIL E
 KEY TRENCH AT
 UPPER CONFORM



DETAIL F
 KEY TRENCH AT
 LOWER CONFORM

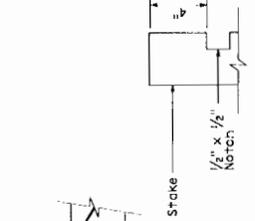
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TEMPORARY WATER POLLUTION
 CONTROL DETAILS
 (TEMPORARY EROSION CONTROL BLANKET)**
 NO SCALE
T54

DIST	COUNTY	ROUTE	POST MILEAGE	SHEET NO.	TOTAL SHEETS

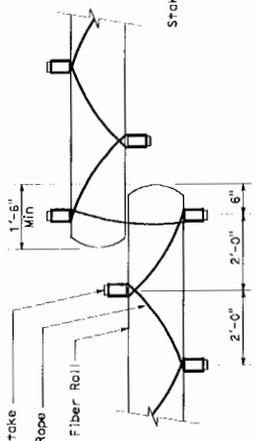
Robert P. Smith
LICENSED LANDSCAPE ARCHITECT

April 3, 2009
The State of California, by the authority of the State Board of Professional Engineers and Land Surveyors, certifies that the undersigned is a duly Licensed Landscape Architect, No. 12345.

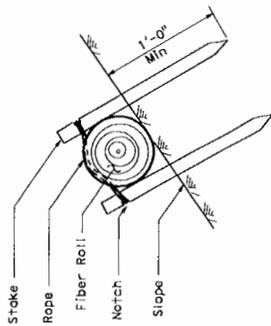
To accompany plans dated _____



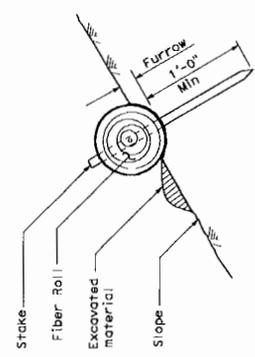
ELEVATION



PLAN



SECTION



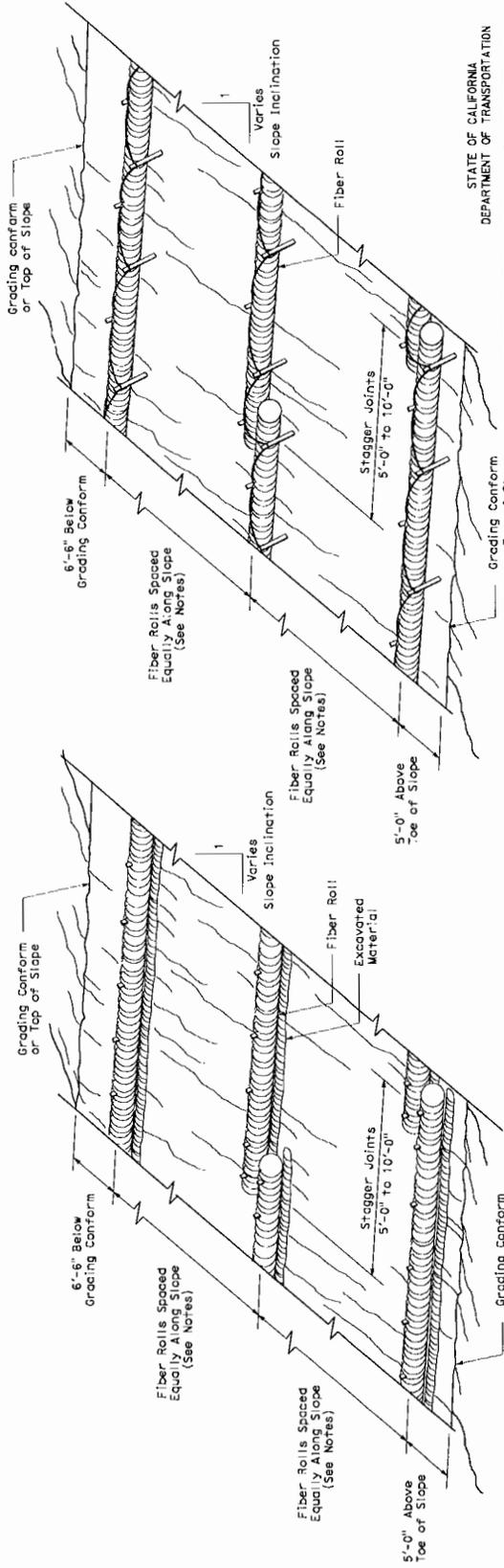
SECTION

- 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.

STAKE NOTCH DETAIL

TEMPORARY FIBER ROLL (TYPE 2)

TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE

PERSPECTIVE

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

DIST COUNTY RCITE TOP SHEET SHEET NO. SHEET TOTAL

Project 15 Right

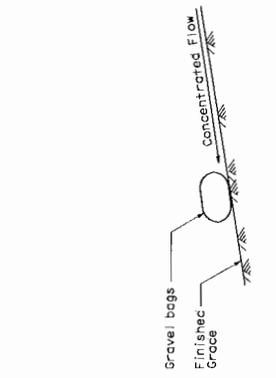
DESIGNED: LANDSCAPE ARCHITECT

MAY 1, 2006

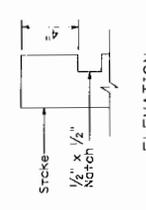
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

The State of California or its officers or agents shall not be responsible for the accuracy, completeness or adequacy of the information shown on this sheet.

To get to the Center with this file go to: <http://www.dgs.gov>



SECTION STAKING AND LASHING DETAIL

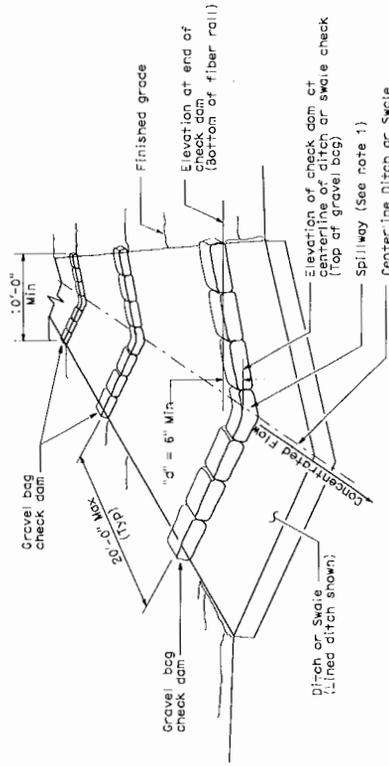


ELEVATION STAKE NOTCH DETAIL

NOTE:
1. Spillway depth "d" shall be maintained to prevent flanking of concentrated flow around the ends of each check dam.

SECTION

TEMPORARY CHECK DAM (TYPE 2)



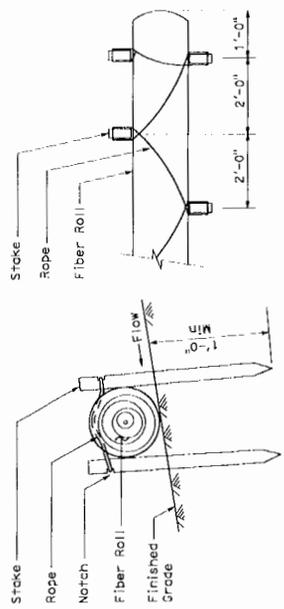
PERSPECTIVE

TEMPORARY CHECK DAM (TYPE 2)

(Total of 3 check dams shown)

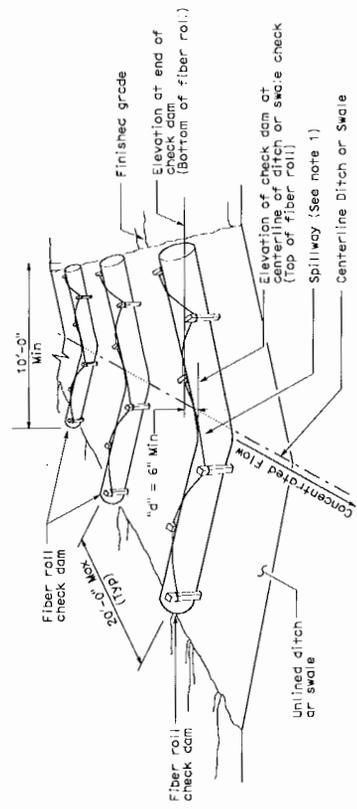
PLAN

TEMPORARY CHECK DAM (TYPE 1)



SECTION

TEMPORARY CHECK DAM (TYPE 1)



PERSPECTIVE

TEMPORARY CHECK DAM (TYPE 1)

(Total of 3 check dams shown)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CHECK DAM)

NO SCALE

T57

DIST. COUNTY ROUTE DIST. PROJECT SHEET NO. TOTAL SHEETS NO. TOTAL SHEETS

Robert P. Smith

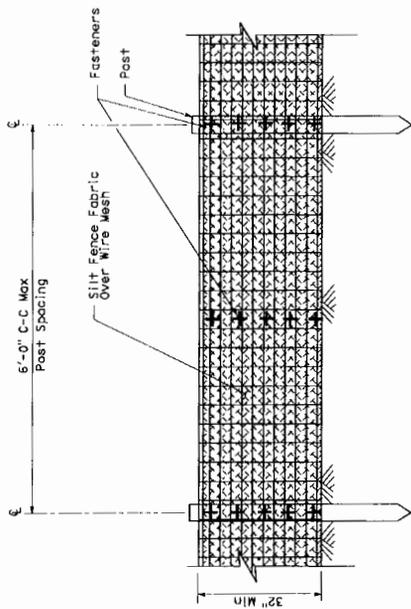
STANDARD LANDSCAPE ARCHITECT

April 3, 2009

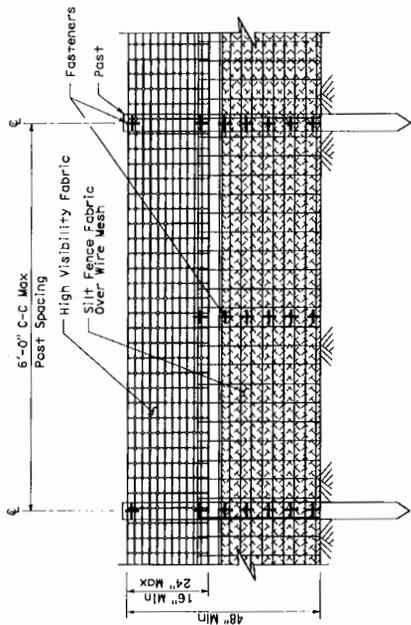
PERMITS APPROVAL DATE

THIS PLAN IS THE PROPERTY OF STANDARD LANDSCAPE ARCHITECTS AND IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. NO PART OF THIS PLAN IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF STANDARD LANDSCAPE ARCHITECTS.

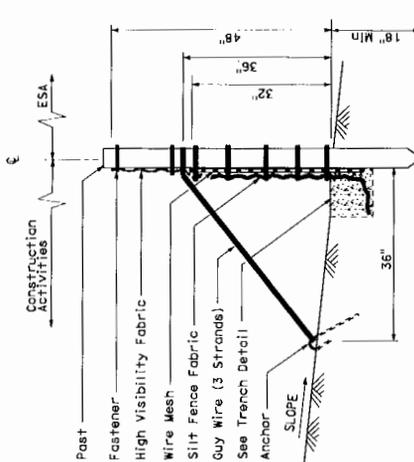
To accompany plans dated _____



ELEVATION

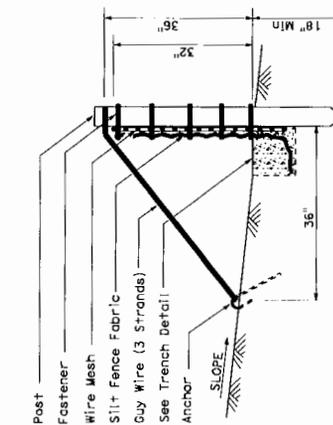


ELEVATION



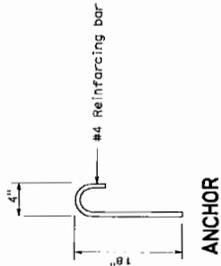
SECTION

TEMPORARY REINFORCED SILT FENCE (TYPE 1)

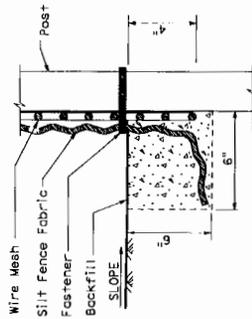


SECTION

TEMPORARY REINFORCED SILT FENCE (TYPE 2)



ANCHOR



SECTION

TRENCH DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION
CONTROL DETAILS
(TEMPORARY REINFORCED SILT FENCE)**

NO SCALE

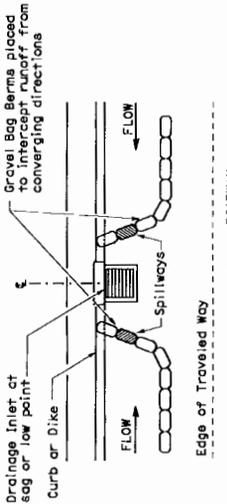
NSP T60 DATED APRIL 3, 2009 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

DIST COUNTY ROUTE TOTAL SHEETS SHEET NO. SHEETS
 PROJECT NO. 100-100-0000
 PROJECT NAME
 DATE
 DRAWN BY
 CHECKED BY
 APPROVED BY
 TITLE

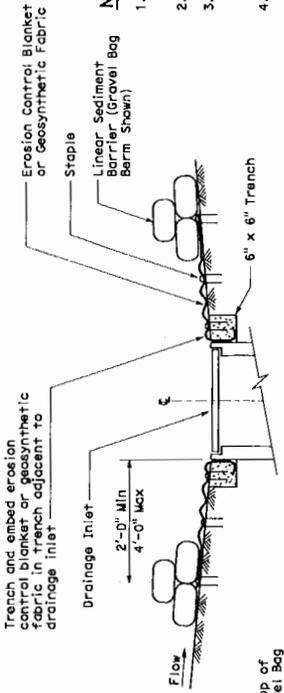
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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

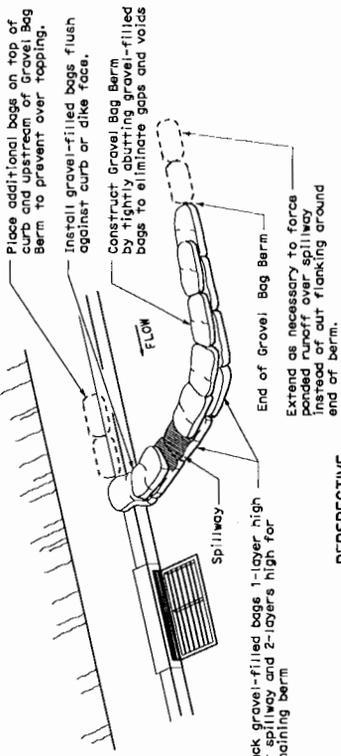


CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)



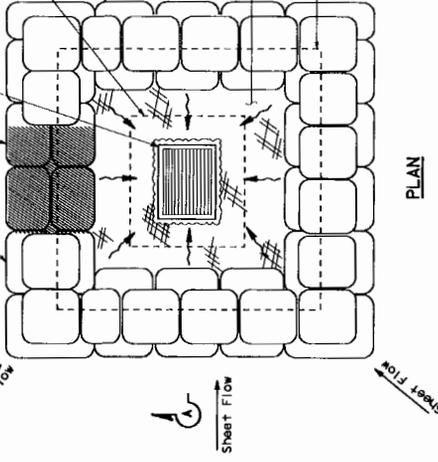
SECTION A-A

- 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

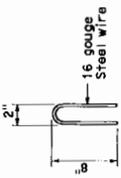
Stack gravel-filled bags 1-layer high for spillway and 2-layers high for remaining berm



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)

STAPLE DETAIL



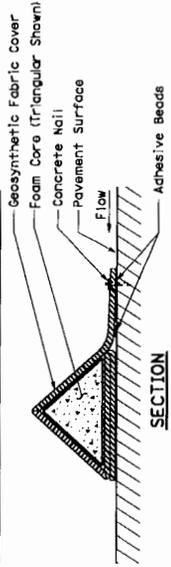
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)
 NO SCALE
 NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T62

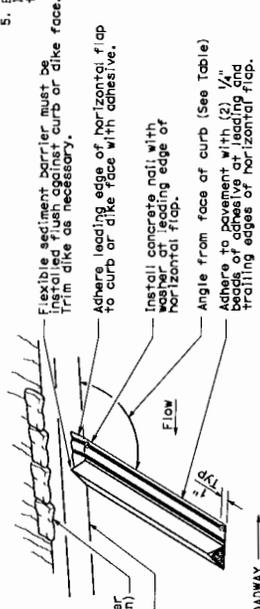
DIST. COUNTY ROUTE POST MILES SHEET NO. OF SHEETS
 TOTAL PROJECT NO. SHEETS
 August 15, 2008
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 The State of California State Office of
 General Services is responsible for the accuracy
 of the information on this plan. The accuracy
 of information at alternate scales of this plan
 is not guaranteed.

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

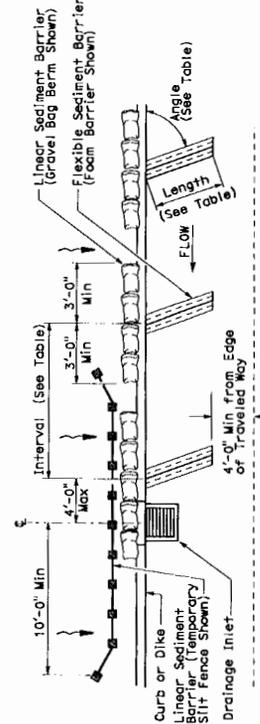
SLOPE OF ROADWAY (PERCENT)	0 TO 0.9	1 TO 1.9	2 TO 2.9	3 TO 4	5+
INTERVAL BETWEEN BARRIERS	30'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'



SECTION FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

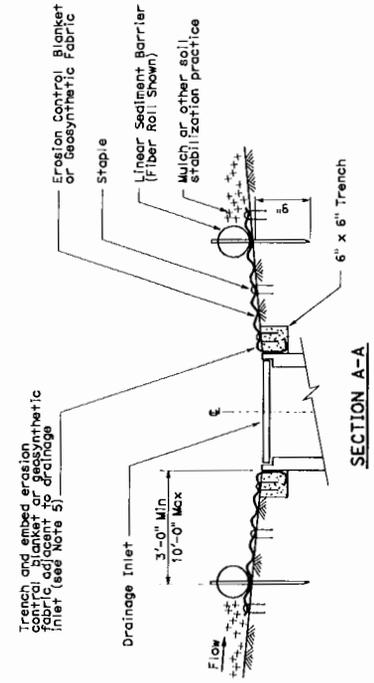


PERSPECTIVE

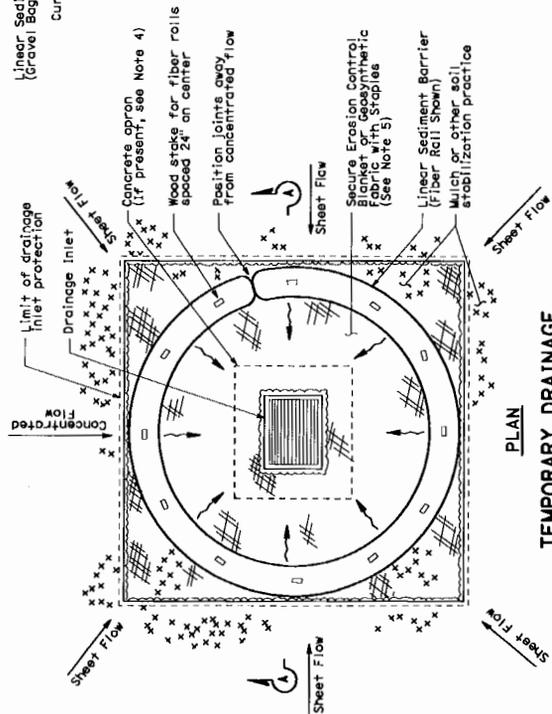


PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER



SECTION A-A



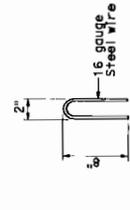
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)

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.

To accompany plans dated



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

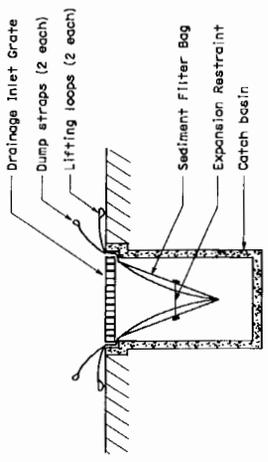
DIST.	COUNTY	ROUTE	NO. & DATES	SHEET NO.	TOTAL SHEETS

Robert P. Licht
 LEICHTER LANDSCAPE ARCHITECT

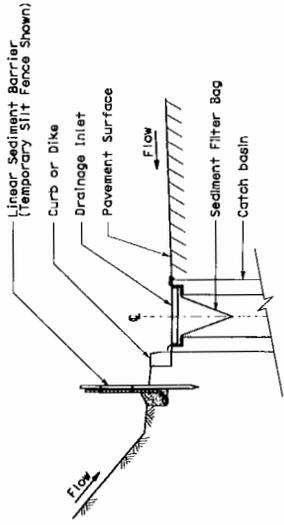
AUGUST 15, 2008
 PLANS APPROVAL DATE

THE ENGINEER OR ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY INFORMATION OF ANY NATURE AND FOR THE CONSEQUENCES OF ANY ERRORS OR OMISSIONS OF ANY NATURE.

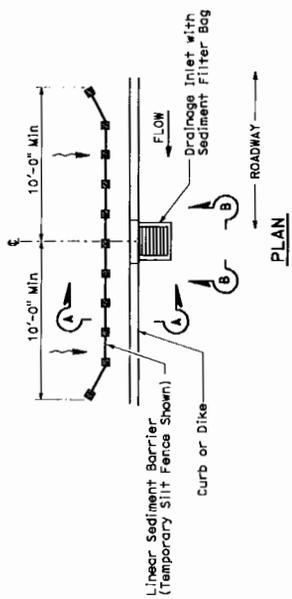
To accompany plans dated _____



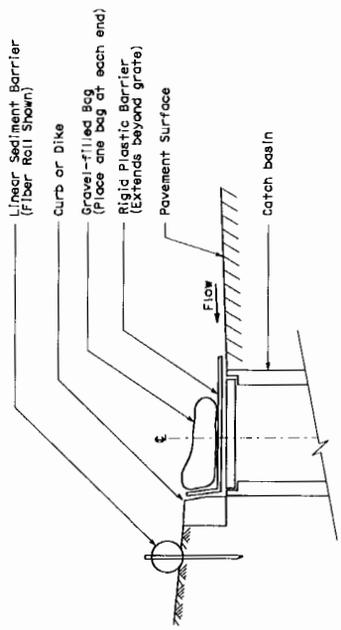
SECTION B-B
SEDIMENT FILTER BAG DETAIL



SECTION A-A

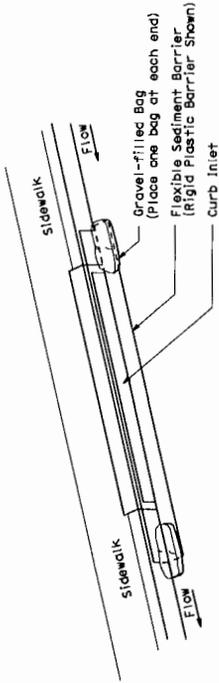


TEMPORARY DRAINAGE INLET PROTECTION (TYPE 5) (SEDIMENT FILTER BAG)



SECTION

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A) (CATCH BASIN WITH GRATE)



PERSPECTIVE

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6B) (CURB INLET WITHOUT GRATE)

NOTES:

1. See Standard Plan T61 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.

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

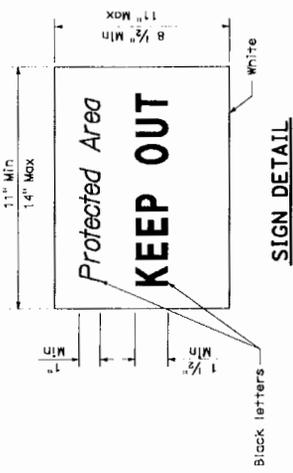
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Robert T. Schott
LICENSED LANDSCAPE ARCHITECT

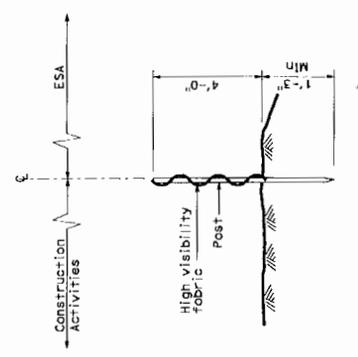
APR 11 3 2009
PLANS APPROVAL DATE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

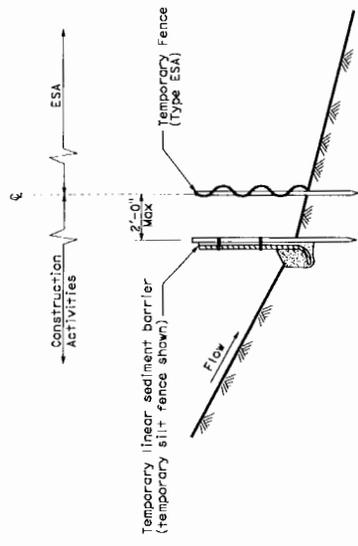
To accompany plans dated _____



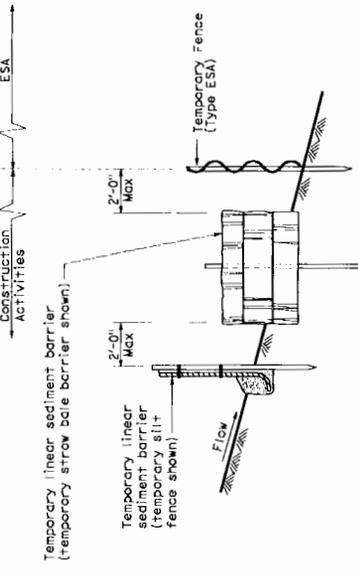
NOTE:
1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.



SECTION
TEMPORARY FENCE (TYPE ESA)



SECTION
PLACEMENT DETAIL
FOR TEMPORARY LINEAR SEDIMENT BARRIER
USED WITH TEMPORARY
FENCE (TYPE ESA)



SECTION
PLACEMENT DETAIL
FOR TEMPORARY SILT FENCE
AND TEMPORARY STRAW BALE BARRIER
USED WITH TEMPORARY FENCE (TYPE ESA)

(See Note 1.)
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS
[TEMPORARY FENCE (TYPE ESA)]

NO SCALE

NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

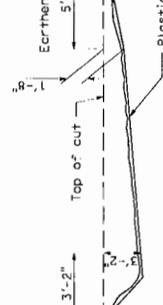
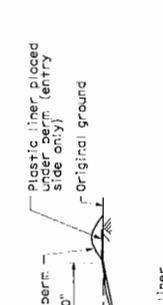
DIST. COUNTY ROUTE POST MILES TOTAL PROJECT SHEET NO. SHEETS

Robert B. Smith
 ENGINEER LICENSE NO. 10000
 CIVIL ENGINEER

MOY 1, 2006
 PLANS APPROVAL DATE

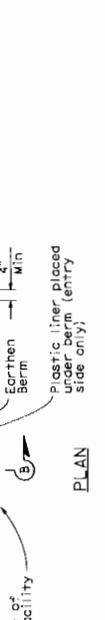
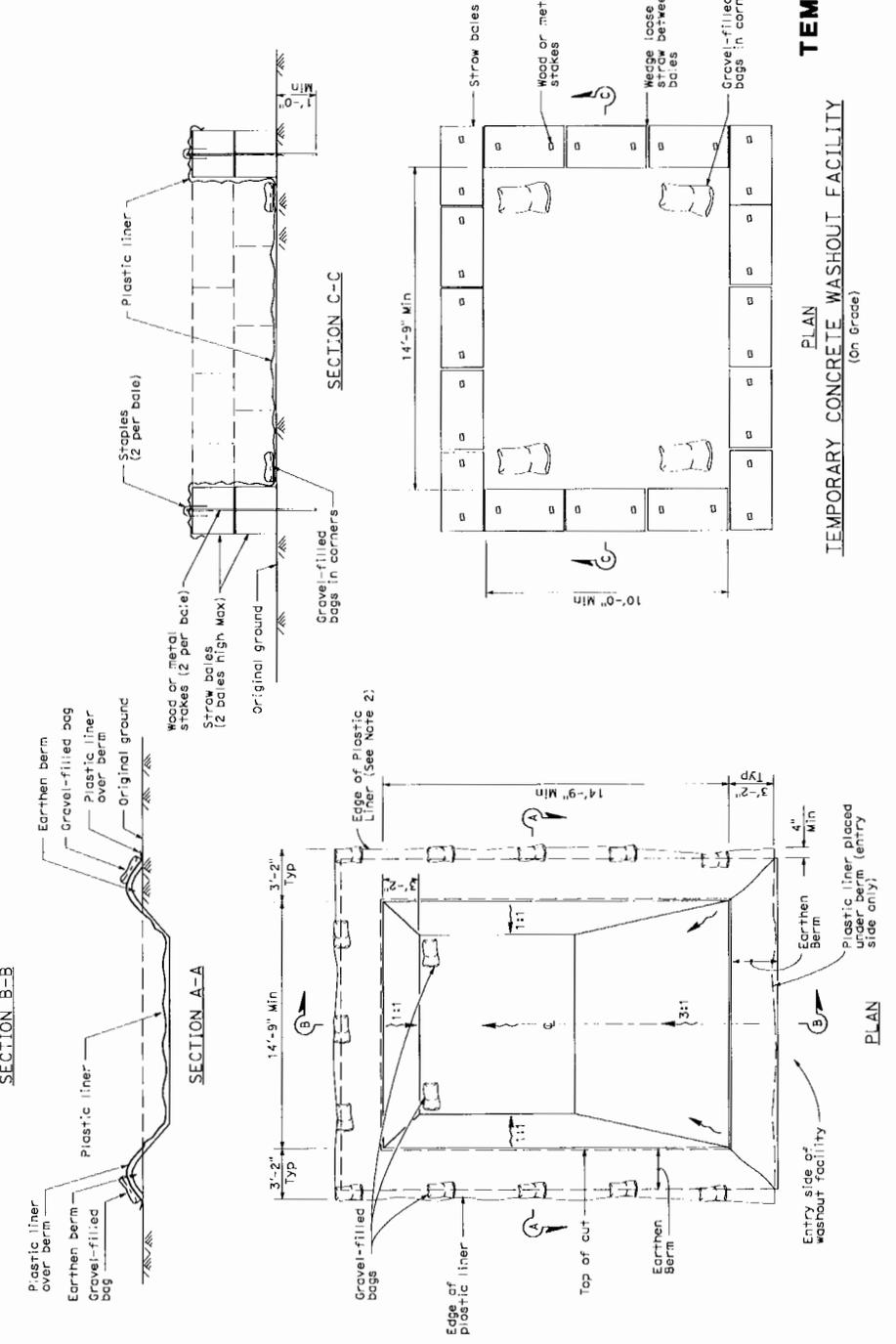
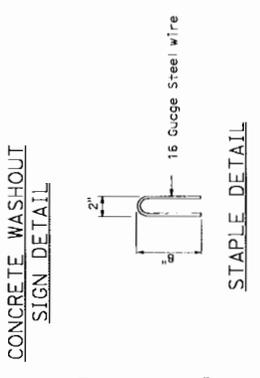
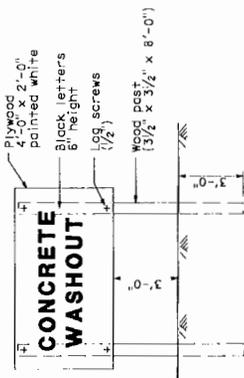
THE STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 PROJECT NO. 06R0001
 SHEET NO. 10000

To print the Contract web site, go to: <http://www.dgs.ca.gov>



NOTES:

1. The concrete washout sign shall be installed on the concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

NO. SCALE

T59

SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION, AND LIQUIDATED DAMAGES

The 1st working day is the 5th day after contract approval.

The first paragraph and second paragraph, item number 2, of Section 8-1.03 "Beginning of Work" will not apply. Submit a written notice 24 hours before beginning work.

Do not start work at the job site, except for measuring controlling field dimensions and locating utilities, until the Engineer approves your submittal for:

1. Time-scaled logic diagram (Critical Path Method).
2. Storm Water Pollution Prevention Plan (SWPPP). A Conceptual SWPPP has been prepared for this Contract as described in "Supplemental Project Information," of these special provisions. The Contractor shall adhere to the Conceptual SWPPP for all construction activities planned for the first 60 days after contract approval, or until the Contractor's SWPPP as required in "Water Pollution Control," of these special provisions is approved by the Engineer. The Contractor shall sign the "Initial SWPPP Certification," included within the Conceptual SWPPP and submit it to the Engineer. The Contractor's SWPPP shall supersede the Conceptual SWPPP upon Engineer's approval.
3. Traffic Management Plan (TMP).
4. Temporary Access Plans (TAP).

In addition to the above submittals, do not start work at the job site, except for measuring controlling field dimensions and locating utilities, until you submit:

1. Notice of Materials To Be Used.
2. Contingency plan for reopening closures to public traffic.
3. Written statement from the vendor that the order for electrical material has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.
4. Written statement from the vendor that the order for structural steel has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.

You may start work at the job site before the 5th day after contract approval if:

1. You obtain required approval for each submittal before the 5th day
2. The Engineer authorizes it in writing

The Department grants a time extension if a delay is beyond your control and prevents you from starting work at the job site on the 1st working day.

Complete the work within 550 working days.

The time limit specified for the completion of the work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. Should the Contractor fail to maintain the progress of the work in conformance with the "Progress Schedule" required in these special provisions, additional shifts will be required to the extent necessary to ensure that the progress conforms to the abovementioned schedule and that the work will be completed within the time limit specified.

The working day is defined as follows:

The working day: Time measure unit for work progress. A working day is any day except:

1. Special event days as listed in the table in this special provision.
2. A day when you cannot perform work on the controlling activity for at least 50 percent of the day with at least 50 percent of the normal labor and equipment due to any of the following:
 - 2.1. The Engineer's direction to suspend the controlling activities for reasons unrelated to your performance
 - 2.2. An unanticipated event not caused by either party such as:
 - 2.2.1. Act of God (Pub Cont Code § 7105)
 - 2.2.2. Act of a public enemy
 - 2.2.3. Epidemic
 - 2.2.4. Fire
 - 2.2.5. Flood
 - 2.2.6. Governor-declared state of emergency
 - 2.2.7. Landslide
 - 2.2.8. Quarantine restriction
 - 2.3. An issue involving a third-party, including:
 - 2.3.1. Industry or area-wide labor strike
 - 2.3.2. Material shortage
 - 2.3.3. Freight embargo
 - 2.3.4. Jurisdictional requirement of a law enforcement agency
 - 2.3.5. Workforce labor dispute of a utility or non-highway facility owner resulting in a utility or non-highway facility reconstruction not described and not solely for the Contractor's convenience

No work will performed in the Presidio on the same days where the following special events are being held in the Presidio:

Special Event Days

<u>Presidio Event</u>	<u>Date of Event</u>
<u>Special Olympic Polar Bear Run</u>	<u>4th Thursday in February</u>
<u>Emerald Nuts Across the Bay 12k</u>	<u>2nd Sunday in March</u>
<u>US Half Marathon – Spring Half</u>	<u>2nd Saturday in April</u>
<u>Girl Scout Golden Gate Bridging Ceremony</u>	<u>2nd Saturday in May</u>
<u>Annual Memorial Day Observance</u>	<u>Memorial Day</u>
<u>Anchorman Escape from Alcatraz Triathlon</u>	<u>1st or 2nd Sunday in June</u>
<u>Golden Gate Triathlon</u>	<u>3rd or 4th Sunday in June</u>
<u>Avon 2 Day Walk</u>	<u>2nd Saturday and Sunday in July</u>
<u>San Francisco Marathon</u>	<u>Last Sunday in July</u>
<u>Aloha Festival Event</u>	<u>1st Saturday and Sunday in August</u>
<u>Film in the Fog</u>	<u>Last Saturday in September</u>
<u>Susan G. Komen 3-Day Breast Cancer Walk</u>	<u>1st Friday, Saturday and Sunday in October</u>
<u>Juvenile Diabetes Walk</u>	<u>1st Saturday in October</u>
<u>KNBR Bridge to Bridge Run</u>	<u>1st Sunday in October</u>
<u>Hold for Genentech</u>	<u>3rd Friday in October</u>
<u>Fleet Week/Blue Angels Performances</u>	<u>2nd or 3rd Saturday and Sunday in October</u>
<u>Seismic Challenge</u>	<u>3rd Saturday and Sunday in October</u>
<u>Nike Marathon</u>	<u>3rd Sunday in October</u>
<u>HDSA Walkathon</u>	<u>4th Saturday in October</u>
<u>Temp-Hold Mermaid</u>	<u>2nd Saturday in November</u>
<u>Rival 10 Run</u>	<u>2nd Saturday and Sunday in November</u>
<u>US Half Marathon</u>	<u>2nd or 3rd Sunday of November</u>

Phase 1 work is defined as the work necessary to complete the full width of all structures and roadways in their final configuration on State Route 101, as shown on the plans, ready to be opened for public use without any work that requires lane closures.

Phase 2 work is defined as the remaining work to complete the contract.

For each and every calendar day's delay in completion of the Phase 1 work after the expiration of 485 working days, a disincentive deduction of \$50,000 per calendar day will be deducted from any monies due the Contractor under the contract .

For each and every calendar day, the Phase 1 work, is completed before the expiration of 485 working days, the Contractor will receive an incentive payment of \$50,000 per calendar day.

The total of all incentive payments paid to the Contractor shall not exceed \$3,000,000.

The total of all disincentive payments deducted shall not exceed \$3,000,000.

Liquidated damages shall accrue separately and independently of disincentive deductions.

Full compensation for any additional costs occasioned by compliance with the provisions in this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

5-1. SUPPLEMENTAL PROJECT INFORMATION

The Department makes the following supplemental project information available:

Supplemental Project Information

Means	Description
Included in the Information Handout	<u>Transportation Management Plan Guidelines Manual</u> <u>Non-Stormwater Information Package</u> <u>Site Investigation Report for Dolyc Drive Overcrossing</u> <u>VMS Handouts</u>
Available for inspection at the District Office	
Available for inspection at the Transportation Laboratory	
Available as specified in the Standard Specifications	Bridge as-built drawings

5-1. RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

This project lies within the boundaries of the San Francisco Bay Regional Water Quality Control Board (RWQCB).

The State Water Resources Control Board (SWRCB) has issued to the Department a permit that governs storm water and non-storm water discharges from the Department's properties, facilities, and activities. The Department's permit is entitled "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)." Copies of the Department's permit are available for review from the SWRCB, Storm Water Permit Unit, 1001 "I" Street, P.O. Box 1977, Sacramento, California 95812-1977, Telephone: (916) 341-5254, and may also be obtained at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/

The Department's permit references and incorporates by reference the current statewide general permit issued by the SWRCB entitled "Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity" that regulates discharges of storm water and non-storm water from construction activities disturbing one acre or more of soil in a common plan of development. Sampling and analysis requirements as specified in SWRCB Resolution No. 2001-46 are added to the statewide general permit. Copies of the statewide permit and modifications thereto are available for review from the SWRCB, Storm Water Permit Unit, 1001 "I" Street, P.O. Box 1977, Sacramento, California 95812-1977, Telephone: (916) 341-5254 and may also be obtained at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/

The NPDES permits that regulate this project, as referenced above, are collectively referred to in this section as the "permits."

This project shall conform to the permits and modifications thereto. The Contractor shall maintain copies of the permits at the project site and shall make them available during construction.

The Contractor shall know and comply with provisions of Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from the project site and areas of disturbance outside the project limits during construction. Attention is directed to Sections 7-1.01, "Laws to be Observed," 7-1.11, "Preservation of Property," 7-1.12, "Indemnification and Insurance," and 9-1.055, "Penalty Withholds," of the Standard Specifications.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to water pollution control work. The Contractor and the Department shall provide copies of correspondence, notices of violation, enforcement actions, or proposed fines by regulatory agencies to the requesting regulatory agency.

10-1. ___ WATER POLLUTION CONTROL

GENERAL

Water pollution control work shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, section of these special provisions entitled "Relations With California Regional Water Quality Control Board," and these special provisions.

A Conceptual Storm Water Pollution Prevention Plan (CSWPPP) has been prepared for this contract and is available as described in "Project Information" of these special provisions.

The Contractor may obtain other National Pollutant Discharge Elimination System (NPDES) permits that apply to activities and mobile operations within or outside of the project limits including hot mix asphalt batch plants, material borrow areas, concrete plants, staging areas, storage yards, or access roads.

The Contractor shall perform water pollution control work in conformance with the requirements in the "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" and its addenda in effect on the day the Notice to Contractors is dated. This manual is referred to as the "Preparation Manual." Copies of the Preparation Manual may be obtained from:

State of California
Department of Transportation
Publication Distribution Unit
1900 Royal Oaks Drive
Sacramento, California 95815
Telephone: (916) 445-3520

The Preparation Manual and other references for performing water pollution control work are available from the Department's Construction Storm Water and Water Pollution Control web site at:

<http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm>

Before the start of job site activities, the Contractor shall provide training for project managers, supervisory personnel, and employees involved with water pollution control work. The training shall include:

- A. Rules and regulations
- B. Implementation and maintenance for:
 - 1. Temporary Soil Stabilization
 - 2. Temporary Sediment Control
 - 3. Tracking Control
 - 4. Wind Erosion Control

The Contractor shall designate in writing a Water Pollution Control Manager (WPCM). The Contractor shall submit a statement of qualifications describing the training, work history, and expertise of the proposed WPCM. The qualifications shall include either:

- A. A minimum of 24 hours of Department approved storm water management training described at Department's Construction Storm Water and Water Pollution Control web site.
- B. Certification as a Certified Professional in Erosion and Sediment Control (CPESC).

The WPCM shall be:

- A. Responsible for water pollution control work.
- B. The primary contact for water pollution control work.
- C. Have authority to mobilize crews to make immediate repairs to water pollution control practices.

The Contractor may designate one manager to prepare the SWPPP and a different manager to implement the plan. The WPCP preparer shall meet the training requirements for the WPCM.

STORM WATER POLLUTION PREVENTION PLAN

The Contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) to the Engineer for approval. The SWPPP shall conform to the requirements in the Preparation Manual, the NPDES permit, and these special provisions. The SWPPP shall be submitted in place of the water pollution control program required by the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications.

The SWPPP shall include water pollution control practices:

- A. For storm water and non-storm water from areas outside of the job site related to construction activities for this contract such as:
 - 1. Staging areas.
 - 2. Storage yards.
 - 3. Access roads.
- B. Appropriate for each season as described in "Implementation Requirements" of these special provisions.
- C. For activities or mobile operations related to all NPDES permits.

The SWPPP shall include a schedule that:

- A. Describes when work activities that could cause water pollution will be performed.
- B. Identifies soil stabilization and sediment control practices for disturbed soil area.
- C. Includes dates when these practices will be 25, 50, and 100 percent complete.
- D. Shows 100 percent completion of these practices before the rainy season.

The SWPPP shall include the following temporary water pollution control practices and their associated contract items of work as shown on the plans or specified in these special provisions:

- A. Temporary Soil Stabilization
 - 1. Temporary Hydraulic Mulch (Bonded Fiber Matrix)
 - 2. Temporary Cover
 - 3. Move-In/Move-Out (Temporary Erosion Control)

4. Temporary Erosion Control Blanket
- B. Temporary Sediment Control
 1. Temporary Drainage Inlet Protection
 2. Temporary Silt Fence
 3. Temporary Gravel Bag Berm
 4. Temporary Fiber Roll
 5. Temporary Check Dam
 - C. Tracking Control
 1. Street Sweeping
 2. Temporary Construction Entrance
 3. Temporary Tire Wash System
 4. Temporary Confinement System
 - D. Wind Erosion Control
 1. Temporary Cover
 - E. Non-Storm Water Management
 1. Construction Site Management
 - F. Waste Management and Materials Pollution Control
 1. Construction Site Management
 2. Temporary Concrete Washout (Portable)
 3. Temporary Storm Water Run-On Bypass and Excavation Dewatering

The SWPPP shall include the following contract items of work for permanent water pollution control as shown on the plans or as specified in these special provisions:

- A. Erosion Control (Hydroseed)
- B. Fiber Rolls
- C. Erosion Control (Netting)
- D. Erosion Control (Compost Blanket)
- E. Move-In/Move-Out (Erosion Control)

Within 5 days after contract approval, follow this process for SWPPP approval:

1. Submit 3 copies of the SWPPP and allow 15 days for the Engineer's review. If revisions are required, the Engineer provides comments and specifies the date that the review stopped

2. Change and resubmit the SWPPP within 5 days of receipt of the Engineer's comments. The Engineer's review resumes when the complete SWPPP is resubmitted. Allow 5 days for the Engineer's second review
3. When the Engineer approves the SWPPP, submit 4 copies of the approved SWPPP. After approval, the Engineer submits one copy of the approved SWPPP to the San Francisco Bay RWQCB for their review and comment
4. If the San Francisco Bay RWQCB provides comments to the SWPPP, amend the SWPPP within 5 days

If the Engineer fails to complete the review within the time allowed and if, in the opinion of the Engineer, completion of the work is delayed or interfered with because of the Engineer's or the RWQCB's review, the Department pays you for resulting losses, and grants an extension of time.

The SWPPP shall include a copy of the US Army Corps of Engineers Permit, Clean Water Act Section 401 Water Quality Certification from the San Francisco Bay RWQCB.

The Contractor shall not perform work that may cause water pollution until the SWPPP has been approved by the Engineer. The Engineer's review and approval shall not waive any contract requirements and shall not relieve the Contractor from complying with Federal, State and local laws, regulations, and requirements.

The Contractor shall amend the SWPPP annually and shall resubmit it to the Engineer 25 days before the defined rainy season.

If there is a change in construction schedule or activities, the Contractor shall prepare an amendment to the SWPPP to identify additional or revised water pollution control practices. The Contractor shall submit the amendment to the Engineer for review within a time agreed to by the Engineer not to exceed the number of days specified for the initial submittal of the SWPPP. The Engineer will review the amendment within the same time allotted for the review of the initial submittal of the SWPPP.

If directed by the Engineer or requested in writing by the Contractor and approved by the Engineer, changes to the water pollution control work specified in these special provisions will be allowed. Changes may include addition of new water pollution control practices. The Contractor shall incorporate these changes in the SWPPP. Additional water pollution control work will be paid for as extra work in accordance with Section 4-1.03D, "Extra Work," of the Standard Specifications.

The Contractor shall keep a copy of the approved SWPPP at the job site. The SWPPP shall be made available when requested by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests from the public shall be directed to the Engineer.

SAMPLING AND ANALYSIS

The Contractor shall include a Sampling and Analysis Plan (SAP) in the SWPPP to monitor the effectiveness of the water pollution control practices. The Contractor shall prepare the SAP in conformance with the Preparation Manual.

The Contractor shall designate trained personnel to collect water quality samples. The personnel and training shall be documented in the SAP. Training shall consist of the following elements:

- A. SAP review,
- B. Health and safety review, and
- C. Sampling simulations.

In the SAP the Contractor shall describe the following water quality sampling procedures:

- A. Sampling preparation,
- B. Collection,
- C. Quality assurance and quality control,
- D. Sample labeling,
- E. Collection documentation,
- F. Sample shipping,
- G. Chain of custody,
- H. Sample numbering, and
- I. Precautions from the construction site health and safety plan.

The Contractor shall document sample collection during precipitation.

Samples to be analyzed in the field shall be taken by the Contractor's designated sampling personnel using collection and analysis methods, and equipment calibration specified by the manufacturer of the sampling equipment. Samples to be analyzed by a laboratory, shall be sampled, preserved, and analyzed by a State-certified laboratory in conformance with the requirements in 40 CFR Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants." The Contractor shall identify the State-certified laboratory, sample containers, preservation requirements, holding times, and analysis method in the SAP. A list of State-certified laboratories that are approved by the Department is available at:

<http://www.dhs.ca.gov/ps/ls/ELAP/html/lablist.htm>

Non-Visible Pollutants

This project has the potential to discharge non-visible pollutants in storm water from the construction site. The Contractor shall include in the SAP a description of the sampling and analysis strategy to be implemented on the project for monitoring non-visible pollutants.

In the SAP the Contractor shall identify potential non-visible pollutants that will be present on the construction site associated with the following:

- A. Construction materials and wastes;
- B. Existing contamination due to historical site usage; or
- C. Application of soil amendments, including soil stabilization products, with the potential to alter pH or contribute toxic pollutants to storm water.

The Contractor shall show the locations planned for storage and use of the potential non-visible pollutants on the SWPPP Water Pollution Control Drawings.

The Contractor shall include in the SAP the following list of conditions that require sampling when observed during a storm water inspection:

- A. Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions.

- B. Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but:
 - 1. A breach, leakage, malfunction, or spill is observed;
 - 2. The leak or spill has not been cleaned up before precipitation; and
 - 3. There is the potential for discharge of non-visible pollutants to surface waters or drainage system.
- C. Construction activities; such as application of fertilizer, pesticide, herbicide, methyl methacrylate concrete sealant, or non-pigmented curing compound; have occurred during precipitation or within 24 hours preceding precipitation, and have the potential to discharge pollutants to surface waters or drainage system.
- D. Soil amendments, including soil stabilization products, with the potential to alter pH levels or contribute toxic pollutants to storm water runoff have been applied, and have the potential to discharge pollutants to surface waters or drainage system (unless independent test data are available that demonstrate acceptable concentrations of non-visible pollutants in the soil amendment).
- E. Storm water runoff from an area contaminated by historical usage of the site has the potential to discharge pollutants to surface waters or drainage system.

The Contractor shall describe in the SAP the schedule for collecting a sample downhill from each non-visible pollutant source and an uncontaminated control sample, during the first 2 hours of discharge from precipitation during daylight hours that result in enough discharge for sample collection. If discharge flows to the non-visible pollutant source, a sample shall be collected immediately downhill from where the discharge enters the Department's right of way. If precipitation occurs again after at least 72 hours of dry weather the Contractor shall take new samples.

In the SAP the Contractor shall identify sampling locations for collecting downstream and control samples, and the reason for their selection. The control sampling location shall be selected so the sample does not come into contact with materials, wastes or areas associated with potential non-visible pollutants or disturbed soil areas. The Contractor shall show non-visible pollutant sampling locations on the SWPPP Water Pollution Control Drawings.

The Contractor shall identify in the SAP the analytical method to be used for downhill and control samples for potential non-visible pollutants on the project.

Analytical Results and Evaluation

The Contractor shall submit a hard copy and electronic copy of water quality analytical results, and quality assurance and quality control data to the Engineer within 5 days of sampling for field analyses, and within 30 days for laboratory analyses. The Contractor shall also provide an evaluation of whether the downhill samples show levels of the tested parameter higher than in the control sample. If downhill or downstream samples show increased levels, the Contractor will assess the water pollution control measures, site conditions, and surrounding influences to determine the probable cause for the increase. As determined by the assessment, the Contractor will repair or modify water pollution control measures to address increases and amend the SWPPP as necessary. Electronic results (in one of the following file formats: .xls, .txt, .csv, .dbs, or .mdb) shall have the following information:

- A. Sample identification number.
- B. Contract number.

- C. Constituent.
- D. Reported value.
- E. Analytical method.
- F. Method detection limit.
- G. Reported limit.

The Contractor shall maintain the water quality sampling documentation and analytical results with the SWPPP on the project site.

If construction activities or knowledge of site conditions change such that discharges or sampling locations change, the Contractor shall amend the SAP in conformance with this section, "Water Pollution Control."

IMPLEMENTATION REQUIREMENTS

The Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications.

If the Contractor or the Engineer identifies a deficiency in the implementation of the approved SWPPP, the deficiency shall be corrected immediately, unless an agreed date for correction is approved in writing by the Engineer. The deficiency shall be corrected before the onset of precipitation. If the Contractor fails to correct the deficiency by the agreed date or before the onset of precipitation, the Department may correct the deficiency and deduct the cost of correcting deficiencies from payments.

If the Contractor fails to conform to the provisions of this section, "Water Pollution Control," the Engineer may order the suspension of work until the project complies with the requirements of this section.

Year-Round

The Contractor shall monitor the National Weather Service weather forecast on a daily basis during the contract. The Contractor may use an alternative weather forecasting service if approved by the Engineer. Appropriate water pollution control practices shall be in place before precipitation.

The Contractor may discontinue earthwork operations for a disturbed area for up to 21 days and the disturbed soil area will still be considered active. When earthwork operations in the disturbed area have been completed, the Contractor shall implement appropriate water pollution control practices within 15 days, or before predicted precipitation, whichever occurs first.

Rainy Season

The Contractor shall provide soil stabilization and sediment control practices during the rainy season between October 15 and April 15.

The Contractor shall implement soil stabilization and sediment control practices a minimum of 10 days before the start of the rainy season.

During the defined rainy season, the active disturbed soil area of the project site shall be not more than 5 acres. The Engineer may approve expansions of the active disturbed soil area limit if requested in writing. The Contractor shall maintain soil stabilization and sediment control materials on site to protect disturbed soil areas.

Rain Event Action Plan

The contractor shall prepare a written Rain Event Action Plan (REAP) as part of the SWPPP. The REAP must describe work to be done to protect exposed areas of the jobsite before predicted storms.

The REAP must include:

1. Title sheet
2. Table of contents
3. Description of the storm event requiring the mobilization of crews and protection of exposed areas:
 - 3.1. Precipitation predicted by the National Weather Service to occur within 72 hours and have one of the following:
 - 3.1.1. Probability of at least 40 percent
 - 3.1.2. Quantity of at least 0.25 inches
4. Pre-storm activities including:
 - 4.1. Responsibilities of the WPC manager
 - 4.2. Responsibilities of the crew and crew size
 - 4.3. Stabilization for active and inactive disturbed soil areas
 - 4.4. Stockpile management
5. Activities to be done during storm events including:
 - 5.1. Responsibilities of the WPC manager
 - 5.2. Responsibilities of the crew and crew size
 - 5.3. Stabilization for active and inactive disturbed soil areas
 - 5.4. Stockpile management
 - 5.5. BMP maintenance
6. Diagram showing drainage patterns including:
 - 6.1. Surface flow and subsurface drainage systems
 - 6.2. Run-on flows to the jobsite
 - 6.3. Flows to drainage inlets and other drainage facilities
 - 6.4. Modifications to existing surface and subsurface drainage systems
 - 6.5. Impacts of current work and construction phase
7. Coordination with subcontractors
8. Description of flood contingency measures

The REAP must be revised whenever the SWPPP is amended:

1. At the start of the rainy season
2. When there is a change in the construction schedule or activities

The WPC manager must implement the REAP including mobilizing crews to complete activities before precipitation occurs.

INSPECTION AND MAINTENANCE

The WPCM shall inspect the water pollution control practices identified in the SWPPP as follows:

- A. Before a forecasted storm,
- B. After precipitation that causes site runoff,
- C. At 24-hour intervals during extended precipitation,
- D. On a predetermined schedule, a minimum of once every 2 weeks outside of the defined rainy season, and
- E. On a predetermined schedule, a minimum of once a week during the defined rainy season.

The WPCM shall oversee the maintenance of the water pollution control practices.

The WPCM shall use the Storm Water Quality Construction Site Inspection Checklist provided in the Preparation Manual or an alternative inspection checklist provided by the Engineer. A copy of the completed site inspection checklist shall be submitted to the Engineer within 24 hours of finishing the inspection.

REPORTING REQUIREMENTS

If the Contractor identifies discharges into surface waters or drainage systems causing or potentially causing pollution, or if the project receives a written notice or order from a regulatory agency, the Contractor shall immediately inform the Engineer. The Contractor shall submit a written report to the Engineer within 7 days of the discharge, notice or order. The report shall include the following information:

- A. The date, time, location, and nature of the operation, type of discharge and quantity, and the cause of the notice or order.
- B. The water pollution control practices used before the discharge, or before receiving the notice or order.
- C. The date of placement and type of additional or altered water pollution control practices placed after the discharge, or after receiving the notice or order.
- D. A maintenance schedule for affected water pollution control practices.

Annual Certifications

By June 15 of each year, the Contractor shall complete and submit to the Engineer an Annual Certification of Compliance, as contained in the Preparation Manual.

PAYMENT

During each estimate period the Contractor fails to conform to the provisions in this section, "Water Pollution Control," or fails to implement the water pollution control practices shown on the plans or specified elsewhere in these special provisions as items of work, the Department will withhold 25 percent of the progress payment.

Withholds for failure to perform water pollution control work will be in addition to all other withholds provided for in the contract. The Department will return performance-failure withholds in the progress payment following the correction of noncompliance.

The contract lump sum price paid for prepare storm water pollution prevention plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing, obtaining approval of, and amending the SWPPP and inspecting water pollution control practices as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Payments for prepare storm water pollution prevention plan will be made as follows:

- A. After the SWPPP has been approved by the Engineer, 50 percent of the contract item price for prepare storm water pollution prevention plan will be included in the monthly progress estimate.
- B. Forty percent of the contract item price for prepare storm water pollution prevention plan will be paid over the life of the contract.
- C. After acceptance of the contract in conformance with the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, payment for the remaining 10 percent of the contract item price for prepare storm water pollution prevention plan will be made in conformance with the provisions in Section 9-1.07A, "Payment Prior to Proposed Final Estimate."

Storm water sampling and analysis will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications. No payment will be made for the preparation, collection, analysis, and reporting of storm water samples where appropriate water pollution control practices are not implemented before precipitation or if a failure of a water pollution control practice is not corrected before precipitation.

Implementation of water pollution control practices in areas outside the highway right of way not specifically provided for in the SWPPP or in these special provisions will not be paid for.

Water pollution control practices for which there are separate contract items of work will be measured and paid for as those contract items of work.

10-1. TEMPORARY STORM WATER RUN-ON BYPASS AND EXCAVATION DEWATERINGS **Summary**

This work includes temporary diversion of storm water run-on around work areas; and excavation dewatering as described in this section.

This work includes designing, implementing, monitoring, maintaining, and later removing the temporary storm water run-on bypass system and the temporary non-storm water treatment system (TNSWTS) in conformance with "Water Pollution Control" and "Construction Site Management" of these special provisions and this special provision. Maintenance includes disposal of sediments and other material removed from the collection, conveyance and treatment systems.

TEMPORARY STORM WATER RUN-ON BYPASS

The Contractor shall furnish all tools, equipment, materials, and supplies, and shall perform all labor as required to divert storm water in order to prevent run-on entering work areas including, but not limited to, tunnel excavations, structure excavations for footings, walls, excavations for storm drain systems, sanitary sewer systems, structure demolition, utilities and appurtenances to complete the work. Storm water run-on being bypassed shall not be allowed to mix with non-storm water.

Storm water Run-on Bypass Plan (SRBP)

The Contractor shall submit to the Engineer, as provided in "Working Drawings," of these special provisions, a Storm water Run-on Bypass Plan (SRBP) within the Dewatering and Discharge Plan (DDP), described elsewhere in this section. The SRBP shall include:

1. Identification and description of all major sources of storm water run-on discharges that are expected to enter work areas.
2. Water pollution control drawings that show temporary bypass measures for bypassing storm water run-on from above, and around the work areas at the project site. The drawings shall show how natural run-on shall be diverted and prevented from entering into work areas and show the storm drain discharge location and receiving water.
3. Description of the best management practices (BMPs) with information on the sizing and installation of the conveyance system including pipes, pumps, and their inspection and maintenance procedures to ensure that no storm water runon discharges enter the work areas.

Temporary Bypass Measures

The Contractor shall select and deploy temporary bypass measures or BMPs that shall consist of a system of structures and measures that intercept storm water run-on discharges upstream of work areas, transport it around the work area, and discharge it downstream with minimal water quality degradation from either construction activities or the construction of the BMPs. The temporary bypass measures shall be designed to divert and convey storm water run-on in a manner that does not cause erosion and scour, and shall not result in discharge of sediment at the discharge location to the storm drain system.

The Contractor's selection of temporary BMPs shall conform to the Department's "Construction Site Best Management Practices (BMPs) Manual," including addenda to the Manual issued up to and including the date of advertisement of this contract. Copies of this Manual may be obtained from the Department of Transportation, Material Operations Branch,

Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445 3520, and may also be obtained from the Department's Internet website at:

http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf.

Temporary BMPs including but not limited to any or all of following components shall be employed in conformance with this Manual:

1. Earth Dikes/Drainage Swales & Lined Ditches (SS-9)
2. Outlet Protection/Velocity Dissipation Devices (SS-10)
3. Slope Drains (SS-11)
4. Check Dam (SC-4)

Any substance used to assemble or maintain diversion structures, or to minimize seepage underneath diversion structures, such as grout, shall be non-toxic, non-hazardous.

The size and type of temporary culverts or pipes to be installed shall be capable of conveying the 10 year, 24 hour storm event. Pipe joints for temporary culverts or pipes shall be watertight in conformance with the provisions in Section 61-1.02, "Performance Requirements for Culvert and Drainage Pipe Joints," of the Standard Specifications. The Contractor shall be responsible for incorporating any required fittings or appurtenances to ensure that the temporary bypass measures can be placed without inducing stresses that could damage the pipes used to convey the bypass flow.

The material, size and type of supports for temporary culverts shall be at the option of the Contractor; however, supports shall be constructed in a manner that will provide adequate supports for the culvert.

The Contractor shall be responsible for preventing, at Contractor's expense, any leakage in the temporary storm water run-on bypass measures. Any portion of the temporary storm water run-on bypass measures that is damaged from any cause during the progress of the work shall be repaired or replaced by the Contractor at the Contractor's expense. If during the progress of work for a particular section it becomes necessary to reposition, relocate portions or reconstruct the temporary drainage bypass measures, the work shall be done at the Contractor's expense.

When no longer required for the work as determined by the Engineer, temporary run-on bypass measures shall be removed. Removed facilities shall become the property of the Contractor and shall be disposed of outside the highway right of way in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Inspection and Maintenance

The Contractor shall conduct a daily inspection of storm water run-on bypass equipment, when in use, and ensure that all components are functional and routinely maintained. If any component of the equipment is damaged so that the performance of the equipment is diminished below allowable operational levels, the component shall be immediately repaired or replaced with substitute equipment. Bypassed storm water run-on that mixes with non-storm water or storm water runoff from high risk areas shall be treated prior to disposal as described within "Collection and Conveyance System" and "Treatment Systems" in this section. Inspection reports shall be submitted to the Engineer along with the Daily Inspection Report (DIR) described elsewhere in this section.

EXCAVATION DEWATERINGAccumulated precipitation and groundwater encountered in all excavations shall be considered as non-storm water. This work includes dewatering, collection, conveyance, treatment, and disposal of non-storm water encountered in all excavations including, but not limited to tunnel excavations, structure excavations for footings, walls, excavations for storm drain systems, sanitary sewer systems, utilities and appurtenances to complete the work.

Concrete washout water from delivery trucks and shotcrete spraying equipment used in the construction of the tunnel shall not be allowed to mix with non-storm water. Disposal of concrete washout water shall be in accordance with "Temporary Concrete Washout Bin" of these special provisions.

The Department's "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" (Preparation Manual) is available at:

http://www.dot.ca.gov/hq/construc/SWPPP_WPCP_Preparation.pdf

The "Field Guide to Construction Site Dewatering" (Dewatering Guide) provides guidance on this work. and is available at:

<http://www.dot.ca.gov/hq/construc/stormwater/DewateringGuide.htm>

Discharge non-storm water using any of the following methods:

1. Discharge into a Publicly Owned Treatment Works (POTW) facility (sanitary sewer) under a batch discharge permit. Apply for and comply with the provisions contained in the permit and pay all fees assessed by the POTW facility in connection with the discharge.
2. Discharge into a storm drain system in compliance with general waste discharge requirements for Order No. R2-2006-0075, NPDES General Permit No. CAG912002, issued by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) for "Discharge Or Reuse Of Extracted and Treated Groundwater polluted by Fuel Leaks and Other Related Wastes at Service Stations and Similar Sites and these special provisions. This permit is hereafter referred to as the "Order No. R2-2006-0075" in this section, and can be obtained from the SFBRWQCB. Attention is directed to "Relations With California Regional Water Quality Control Board," for discharges to the storm drain system. If the discharge is to the storm drain system, comply with the provisions of Order No. R2-2006-0075 and pay all fees in connection with obtaining coverage under the Order No. R2-2006-0075.
3. Use water treated under Order No. R2-2006-0075 for dust control.
4. Percolate water treated under Order No. R2-2006-0075 into soil in inactive work areas.

Maintain copies of the permits at the job site and make them available during construction.

Submittals

Before discharging submit:

1. Dewatering and Discharge Plan (DDP).
2. POTW permit including sampling and analysis data for the non-storm water to be discharged to the sanitary sewer.

3. Notice of Intent (NOI) of discharge under Order No. R2-2006-0075.
4. A report certifying the adequacy of each component of the planned TNSWTS and an Operation and Maintenance Manual in conformance with Order No. R2-2006-0075 and these special provisions.

Dewatering and Discharge Plan

The dewatering and discharge plan (DDP) must include:

1. Title sheet;
2. Table of contents;
3. Certification and approval sheet (Section 100 of the Preparation Manual);
4. Amendment log and format (Section 200 of the Preparation Manual);
5. Storm Water Run-On Bypass Plan (SRBP);
6. Description and schedule of the dewatering and discharge operations;
7. Discharge alternatives, including dust control, percolation, storm sewers, and surface waters;
8. Treatment system description, components;
9. Coagulant Prevention Plan for chemical coagulants and/or flocculants used in the treatment system, that describes the best management practices (BMPs) to prevent accidental spillage, overfeeding into the treatment system, or other mishandling of coagulant agents; and, a monitoring plan for all coagulants to be used; description of the agent (chemical and trade name description); Pure product freshwater and/or marine aquatic toxicity data for the agent; Monitoring proposal to detect residual agent at concentrations at or below established freshwater and/or marine acute toxicity levels for that agent;
10. Anticipated flow rates;
11. Operation and system maintenance procedures and example maintenance log;
12. Field-recorded data, visual inspection, and calibration procedures and example logs;
13. Measuring equipment descriptions; and
14. Working drawings of dewatering and discharge operations showing:
 - 14.1. Section and plan views of storm water effluent treatment systems;
 - 14.2. Location of sampling points for water quality measurements;
 - 14.3. Flow path and placement of pipes, hoses, pumps, holding tanks, and other equipment used to convey water;
 - 14.4. General position of treatment dewatering and discharge components relative to excavations or other operations requiring dewatering; and
 - 14.5. Point of non-storm water discharge.
15. Permit applications, NOI and Permits authorizing discharge to storm drain system and/or sanitary sewer.

Within 10 days after contract approval, follow this process for DDP approval:

1. Submit 3 copies of the DDP and allow 15 days for the Engineer's review. If revisions are required, the Engineer provides comments and specifies the date that the review stopped
2. Change and resubmit the DDP within 5 days of receipt of the Engineer's comments. The Engineer's review resumes when the complete DDP is resubmitted. Allow 5 days for the Engineer's second review

3. Revise and resubmit within 5 days of the Engineer's second review
When the Engineer accepts the DDP as complete, the Engineer will submit the DDP to the San Francisco Bay RWQCB for their review and approval
5. If the San Francisco Bay RWQCB provides comments to the DDP, the contractor shall incorporate these comments within 5 days of the receipt. The contractor shall submit four (4) copies of the final DDP upon notification of final approval
6. Construction activities shall begin no sooner than 30 days after the Engineer approves the DDP
7. After 30 days, the Engineer may conditionally approve the DDP while minor revisions are being completed

If the Engineer fails to complete the review within the time allowed and if, in the opinion of the Engineer, completion of the work is delayed or interfered with because of the Engineer's or the RWQCB's review, the Department pays you for resulting losses, and grants an extension of time.

A Non-Stormwater Information Package (Information Package) has been prepared for this contract and is available as described in "Supplemental Project Information" of these special provisions. This Information Package includes:

1. Estimated groundwater seepage rates in the project area.
2. Web site address where a copy of the RWQCB General Waste Discharge Requirements for Order No. R2-2006-0075, NPDES General Permit No. CAG912002 can be obtained
3. Local POTW facility information.
4. Final Environmental Groundwater Investigation Report, September 2009 prepared for the Doyle Drive Replacement Project, San Francisco, California.

Temporary Non-Storm Water Treatment System (TNSWTS)

Design and implement an appropriate water treatment system for the site conditions and anticipated flow rate to achieve and maintain compliance with receiving water limitations and discharge effluent limitations. System components may include:

1. Treatment system.
2. Collection and conveyance system.
3. Temporary holding tanks.
4. Discharge attenuator.

Design the TNSWTS to remove pollutants expected or introduced by the Contractor's construction methods and materials employed, in the non-storm water influent to achieve and maintain compliance with the effluent limitations and receiving water limitations listed in the Order No. R2-2006-0075.

Treatment Systems

Treatment systems must be designed to remove turbidity-producing suspended solids and other constituents found in the non-storm water, constituents found in groundwater that are listed in the Final Environmental Groundwater Investigation Report, September 2009 prepared for the Doyle Drive Replacement Project, San Francisco, California.

Attention is directed to "Supplemental Project Information," of these special provisions for obtaining a copy of the Site Investigation Report.

If settling tanks alone do not provide sufficient sediment removal to meet the water quality limits for turbidity, use other control measures to meet discharge standards. Primary and secondary treatment may be required, or the design of the treatment system may require combined use of the various treatment components in series to achieve effective treatment. Ensure that the treatment system components are steam cleaned to remove any residual contaminants. Treatment system components may include:

1. Desilting basins,
2. Weir tanks,
3. Settling tanks,
4. Sediment traps,
5. Gravity bag filters,
6. Sand media filters,
7. Pressurized bag filters,
8. Cartridge filters,
9. In-line chemical coagulants and/or flocculants,
10. Activated clay filters,
11. Activated carbon filters, or
12. A combination of these systems to provide primary and secondary treatment.

Chemical coagulants and/or flocculants proposed for use in the treatment of groundwater must be approved by the RWQCB. You are fully and solely responsible for securing approval from the RWQCB. Written approval from the RWQCB must be submitted to the Engineer for review prior to any use of flocculants on this project. The Information Package includes an outline of the information required by the RWQCB for approval of the chemical coagulants and/or flocculants for use in the Treatment System.

Disposal of sediments removed during maintenance of the Treatment System must comply with Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

If necessary, treat water discharged to surface water or storm water drainage systems to adjust the pH and dissolved oxygen. Treatment for water with high pH may include the addition of carbon dioxide, sulfuric acid, phosphoric acid, citric acid, or nitric acid in conformance with the supplier's specifications. Treatment for water with low pH may include filtration through a limestone bed or the addition of sodium hydroxide. Treatment for water with low dissolved oxygen may include aeration.

Attention is directed to "Supplemental Project Information," in these special provisions for "Log of Test Borings," and the "Non-Stormwater Information Package," for estimating the groundwater seepage (flow rate) in the area to design the treatment facilities to accommodate anticipated flow rates. Continuous pumping from well points outside the excavation is prohibited.

The various components must be maintained to prevent leaks and provide proper function. If a component of the dewatering equipment is not functioning properly, the dewatering operation must be discontinued and the component must be repaired or replaced.

Collection and Conveyance System

You may divert the water pumped during dewatering operations from one footing excavation to another footing excavation. Prior to backfilling the excavation, the remaining groundwater must be pumped from the excavation and treated prior to discharge.

Provide all pumps and piping to convey the water to temporary holding tanks and the point of discharge.

Use a flow meter, as described in "Flow Rate Monitoring" of this section, to measure all discharges from dewatering operations.

Materials shall conform to the provisions in Section 6, "Control of Materials," Section 7-1.16, "Contractor's Responsibility for the Work and Materials," and Section 74-2, "Drainage Pumping Equipment," of the Standard Specifications and these special provisions.

Temporary Holding Tanks

Water pumped during dewatering operations that is not diverted to other excavations must be stored in temporary holding tanks placed at the work area for treatment to remove sediment.

Use temporary holding tanks including transportable closed top holding tanks or tanker trucks. A sufficient number of holding tanks shall be provided based on the following:

1. Anticipated flow rates,
2. Pumping rates,
3. Capacity inefficiencies due to sediment retention within the holding tanks,
4. Sediment settling rates
5. Sediment removal frequency
6. Anticipated water loss or reuse rates.

Provide temporary holding tanks with a holding capacity sufficient to handle the water removed from dewatering operations, and prevent delay of work.

Each temporary holding tank must have an inlet and outlet capable of receiving and discharging flows at a sufficient rate to dewater the excavation.

Maintain a minimum freeboard of 1 foot in each of the temporary holding tanks at all times. Clean the holding tanks when 25 percent of the tank's volume is filled with sediments.

Discharging Water

Use treated non-storm water or uncontaminated ground or surface water for dust control in active work areas when possible, or discharge the water to an inactive area where the grade prevents sheet flow and the soil will allow percolation. The discharge point in the inactive area must include a velocity dissipator. The discharge volume must not exceed the area's capacity for percolation.

The Contractor may propose to reuse treated non-storm water from the TNSWTS as a water supply source for the tire wash system described in "Temporary Tire Wash System," of these special provisions.

Do not discharge into a body of water where erosion, scour, or sedimentary deposits could occur that impact natural bedding or aquatic life. Monitor the water at the discharge point using water quality measurements and visual observation in conformance with the regulatory permit and these special provisions.

Storm water must be diverted away from excavations that would require dewatering in conformance with the SRBP.

MONITORING AND REPORTING PROGRAM (MRP)

Monitoring Locations and Parameters

The Contractor shall be responsible for fully implementing the "Monitoring and Reporting Program (MRP)" as described in Attachment E and Attachment G of the Order No. R2-2006-

0075. The Contractor shall propose and identify site specific monitoring locations in the MRP for the Engineer's approval.

Certified Technician(s)

The Contractor shall furnish Certified Technician(s) with the qualifications described in this section to operate the TNSWTS. The Contractor shall submit to the Engineer a statement of qualifications, describing the training, previous work history and expertise of the individual(s) selected to serve as Certified Technician(s). The Certified Technician(s) shall be certified through an approved Operator's Training Program. The Certified Technician shall provide written proof of operator certification training to the Engineer; Provide names and contact information for all individuals involved with the site design, installation process, maintenance, operation of, and monitoring of the TNSWTS. Operator certification shall consist of a Grade II or Grade III Wastewater Treatment Plant Operator certification issued by the State of California Water Resources Control Board, Office of Operator Certification (OOC) or a Department approved equivalent. The Contractor shall retain competent staff to carry out the tasks listed in provisions VI.C.6, VI.C.7, VI.C.8 and VI.C.9 in the Order No. R2-2006-0075. Valid technician certificate(s) shall be posted onsite.

The Certified Technician shall have the following specific levels of training:

1. Operators shall have training specific to using an TNSWTS and liquid coagulants for storm water discharges in California.
2. The training shall be in the form of a formal class with a certificate and requirements for testing and certificate renewal.
3. Training shall include a minimum of eight hours classroom and 32 hours field training.

The course shall cover the following topics:

- a. Coagulation Basics –Chemistry and physical processes
- b. TNSWTS System Design and Operating Principles
- c. TNSWTS Control Systems
- d. Coagulant Selection – Jar testing, dose determination, etc.
- e. Aquatic Safety/Toxicity of Coagulants, proper handling and safety
- f. Monitoring, Sampling, and Analysis
- g. Reporting and Recordkeeping
- h. Emergency Response

Daily Inspection Report (DIR)

The Certified Technician shall be responsible for compiling the Daily Inspection Report (DIR) to be submitted to the Engineer on a weekly basis and performing other monitoring and sampling work. The DIR form shall include the following items: Physical Observations; Discharge Volume Records; Water Quality Monitoring Records described elsewhere in this section. The DIR form shall be developed as part of the NSDCP and approved by the Engineer prior to use.

All information and recorded data collected or submitted as part of the DIR shall be certified as true and accurate and signed by the Certified Technician.

Visual Inspection

During each day of discharge, perform daily inspection of the effluent at the discharge site and include, in the DIR, observations of:

1. Date and Time.
2. Weather conditions,

3. Wind direction and velocity,
4. The presence or absence of water fowl or aquatic wildlife,
5. The color and clarity of the effluent discharge, and
6. Erosion or ponding downstream of the discharge site.

The DIR must include photographs of the discharge point and areas downstream of the discharge location. These photographs must be labeled with the time, date, and location.

Flow Rate Monitoring

A flow meter that has been approved by the Engineer for exclusive use in dewatering during construction must be used to measure all excavation discharges. All calibrations must be done in conformance with the manufacturer's instructions in the presence of the Engineer.

Record the flow-meter totalizer readings and compute average daily volumes for every day that dewatering is conducted.

Penalties and Withholdings

Know and comply with provisions of Federal, State, and local regulations and requirements that govern the work and storm water and non-storm water discharges from the job site and areas of disturbance outside the project limits during construction under Section 7-1.01, "Laws to be Observed," Section 7-1.11, "Preservation of Property," and Section 7-1.12, "Indemnification and Insurance," of the Standard Specifications.

You are responsible for all penalties assessed as a result of your failure to comply with the provisions in "Water Pollution Control" of these special provisions or with the applicable provisions of the Federal, State, and local regulations and requirements.

Penalties include fines, penalties, and damages, whether proposed, assessed, or levied against the Department or you, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act, by governmental agencies or as a result of citizen suits. Penalties also include payments made or costs incurred in settlement for alleged violations of applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

The Department will withhold payment, in an amount estimated by the Department, to include the full amount of penalties and mitigation costs proposed, assessed, or levied as a result of a violation of the permits, or Federal or State law, regulations, or requirements. Funds will be withheld until final disposition of these costs has been made. You remain liable for the full amount until the potential liability is finally resolved with the entity seeking the penalties. Instead of the withhold, you may provide a suitable bond in favor of the Department to cover the highest estimated liability for any disputed penalties proposed as a result of the violation of the permits, law, regulations, or requirements.

If a regulatory agency identifies a violation of the permits and modifications thereto, or other Federal, State, or local requirements, the Department will withhold payment as follows:

1. The Department will give you 30 days notice of the Department's intention to withhold funds from payments that may become due before acceptance of the contract. After acceptance of the contract, funds will be withheld without prior notice.
2. If the amount being withheld from partial payments under Section 9-1.06, "Partial Payments," of the Standard Specifications exceeds the amount to be withheld for violations, no additional payment will be withheld.
3. If the Department withholds funds and it is subsequently determined that the State is not subject to the entire amount of the costs and liabilities assessed or proposed in connection

with the matter for which the withhold was made, the Department will return the excess amount withheld in the progress payment following the determination. If the matter is resolved for less than the amount withheld, the Department will pay interest at a rate of 6 percent per year on the excess withhold.

Notify the Engineer immediately upon request from a regulatory agency to enter, inspect, sample, monitor, or otherwise access the job site or obtain records pertaining to water pollution control work. Provide copies of correspondence, notices of violation, enforcement actions, or proposed fines by regulatory agencies to the requesting regulatory agency.

PAYMENT

The contract lump sum price paid for temporary storm water run-on bypass and excavation dewatering shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including providing power to operate all equipment, and for doing all the work involved in this section; and as directed by the Engineer.

10-1. __ TEMPORARY TIRE WASH SYSTEM

GENERAL

Summary

This work includes designing, placing, operating, monitoring, maintaining, and later removing a temporary tire wash system. The tire wash system must be portable and be used to remove sediment from tires and undercarriages of all trucks and equipment prior to exiting areas for contractor's use, and to prevent sediment from being tracked onto public roadways.

The SWPPP must describe and include the use of temporary tire wash system as a water pollution control practice for non-stormwater management and materials pollution control.

For information on documents under these special provisions, refer to the Department's "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" (Preparation Manual) and "Construction Site Best Management Practices (BMPs) Manual".

The Preparation Manual and Dewatering Guide are available from the Department's Construction Storm Water and Water Pollution Control web site at:

<http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm>

Treated non-storm water from the Temporary Non-Storm Water Treatment System (TNSWTS) as described in "Temporary Storm Water Run-on Bypass and Non-Storm Water Discharge Control" of these special provisions, may be used as a water supply source for the temporary tire wash system.

Wastewater that can no longer be recycled in the tire washing system shall be considered as non-storm water and shall be collected and conveyed to the TNSWTS for treatment and disposal. If you do not use an TNSWTS, discharge into a POTW system.

If uncontaminated groundwater, stormwater, or both are discharged to a POTW, obtain a municipal batch discharge permit. You are responsible for all costs and pre-treatment requirements related to obtaining the municipal batch discharge permit and discharging the water.

Solids removed from the tire wash system shall be disposed of in accordance with Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the standard Specifications.

Submittals

Submit the following within SWPPP for review and approval of the Engineer:

1. A description of the tire wash system including:
 - 1.1. Description of all components used in the tire wash system including, but not limited to:
 - 1.1.1. Estimated tire washes per day
 - 1.1.2. Water Supply; anticipated flow rates for wash water used per tire wash
 - 1.1.3. Control panel
 - 1.1.4. Automatic sensor
 - 1.1.5. Flocculent pump
 - 1.1.6. Vacuum truck

- 1.1.7. Wastewater recycling and disposal; anticipated wastewater flow rates conveyed to the TNSWTS
 - 1.1.8. Solids removal and disposal
 - 1.1.9. Electric power supply to operate tire wash system
 - 1.2. Description of any chemicals used in the process to recycle water for tire washing including but not limited to flocculent and polymers. The documentation and monitoring requirements in the Coagulant Prevention Plan submittal required in "Temporary Storm Water Run-on Bypass and Excavation Dewatering" of these special provisions shall fully apply to any chemicals used in the tire wash system.
 - 1.3. Operation and system maintenance procedures and example maintenance log
 - 1.4. Field-recorded data, visual inspection, and calibration procedures and example logs
 - 1.5. Working drawings for tire wash system including the wastewater and solids handling processes showing:
 - 1.5.1. Section and plan views of tire wash system
 - 1.5.2. Location of sampling points for water quality measurements
 - 1.5.3. Flow path and placement of pipes, hoses, pumps, holding tanks, and other equipment used to convey water supply and wastewater recycling and disposal to TNSWTS
 - 1.5.4. General position of tire wash and discharge components relative to operations requiring tire washing
 - 1.5.5. Point of tire wash waste water discharge
2. Daily Inspection Report. The report form must:
- 2.1. Be approved by the Engineer before use
 - 2.2. Include tire wash wastewater discharge volumes and number of trucks washed per day
 - 2.3. Date and time
 - 2.4. Photographs labeled with the time, date, and location
 - 2.5. Inspection of roadways to ensure tracking of sediment is being prevented successfully by the tire wash system
 - 2.6. Inspection of all components of the tire wash system to ensure proper functioning of these systems
3. POTW municipal batch discharge permit, if used
4. If you use chemical coagulants, in-line flocculants, or both, in the tire wash system, submit a Coagulant Prevention Plan (CPP) within the SWPP. The CPP must include:
- 4.1. Description of the best management practices (BMPs) to prevent accidental spillage, overfeeding into the treatment system, or other mishandling of coagulant agents
 - 4.2. Monitoring plan for all coagulant or flocculant agents to be used
 - 4.3. Description of the agent (chemical and trade name description)
 - 4.4. Determination of acute and chronic toxicity for aquatic organisms conforming to EPA methods for the agents

- 4.5. Monitoring proposal to detect residual agent at concentrations at or below established acute toxicity levels for freshwater and marine conditions for that agent
- 4.6. Copy of the documentation showing RWQCB approval of the CPP and approval of the chemical coagulants or in-line flocculants proposed

The CPP must be approved by the RWQCB. It is your responsibility to obtain approval of the CPP from the RWQCB. If the RWQCB does not approve your proposal to use chemical coagulants or in-line flocculants, you must propose an alternative treatment system component to comply with the receiving water and effluent discharge limitations.

Quality Control and Assurance

Retain and submit records of temporary tire wash system including:

1. Delivery and removal of temporary tire wash system components.
2. Daily inspection report that includes all information and recorded data collected. This report must be certified as true and accurate and signed by those who gather the information.

MATERIALS

Tire Wash System

Design and implement an appropriate tire wash system for the site conditions including number of truck trips per day that need tire washing, the anticipated wash water needed per tire wash, disposal of wastewater that cannot be recycled and solids generated from the system and designed to withstand the weights and widths of trucks. The tire wash system must include components including but not limited to:

1. Collection and conveyance of treated effluent from the TNSWTS that may be used as a water supply source for the tire washing system
2. Control Panel and automatic sensors to activate washers when trucks are driven through the system
3. Flocculent pump
4. Vacuum truck
5. Solids separation tank to remove the solids from the waste generated from tire washing
6. System to recycle water for tire washing
7. Scraper conveyor to automatically evacuate solids
8. Collection and conveyance system for conveying wastewater that can be no longer recycled to TNSWTS

The allowable alternatives for temporary tire wash system shall consist of one of the following or a Department approved equivalent system:

1. MAXIMUS Series – Portable Tire Wash System manufactured by Innovative Equipment Solutions 174 Cornerstone Blvd, Ste. B, Hot Springs, AR 71913. Office: 501-525-8484, Toll Free: 1-866-303-4IES (4437). Information and details can be found at : <http://www.innovativeequipment.org/portable.html>
2. Portable STB 30 Tire Wash - Portable Tire Wash System manufactured by Stanton Systems, 50 Richard Road, Ivyland, PA 18974. Toll Free: 1-800-884-9281. Information

and details can be found at: <http://www.stantonsystems.com/portable-tire-wash/portable-tire-wash.html>

3. MobyDick "Quick" 220 C+ Tire Washer - Portable Tire Wash System manufactured by InterClean Equipment, Inc., 3939 Bestech Drive Suite B, Ypsilanti, MI 48197. Phone: (734) 975-2967 or 1-800-INTERCLEAN (1-800-468-3725). Information and details can be found at: <http://www.interclean.com/>

CONSTRUCTION

Placement

Place tire wash system components at the job site:

1. Before tunnel excavation work
2. In the ingress/egress areas used by trucks as approved by the Engineer
3. Away from construction traffic or public access areas

Operation

Divert storm water away from the tire wash system to prevent mixing with tire wash wastewater.

If observations in the daily inspection report confirm tracking of sediment on roadways past the tire wash system:

1. Inspect the tire wash system immediately
 2. Notify the Engineer
 3. Start corrective measures to modify, repair, or replace the equipment used in the tire wash system, and propose alternative means to perform tire washing until the corrective measures are implemented
- After the Engineer inspects and accepts corrective measures:

1. Resume tire washing operations
 2. Start inspecting every tire washing operations every 4 hours for a 24 hour period and document the observations in the Daily Inspection Report
 3. Start regular-daily inspections
- Relocate tire washing system as needed.

Monitoring

Comply with the manufacturer's instructions for all calibrations of the flow meter. Perform calibrations in the presence of the Engineer.

While the tire wash system is operated, perform:

1. Flow rate monitoring to:
 - 1.1. Record daily discharge volumes for tire wash wastewater
 - 1.2. Compute average daily volumes

Inspection

Inspect tire washing system:

1. Daily if tire washing work occurs daily
2. Weekly if tire washing work does not occur daily

Reporting

If observations and measurements confirm that tire wash wastewater is discharged to a storm drain system:

1. Submit a Notice of Discharge Report as shown in the Preparation Manual within 3 business days
2. Document the reasons and corrective work performed to prevent a reoccurrence in the Notice of Discharge

Maintenance

Maintain the various components to prevent leaks and provide proper function. If a component of the tire wash system equipment is not functioning properly, discontinue the tire washing operation and repair or replace the component.

Removal

Backfill and repair ground disturbance, including holes and depressions, caused by the installation and removal of the temporary tire wash system. Comply with Section 15-1.02, "Preservation of Property," of the Standard Specifications.

PAYMENT

The contract lump sum price paid for the temporary tire wash system shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, for doing all the work involved in installing, operating, maintaining, and removing all components of the tire wash system, as specified in the Standard Specifications, and these special provisions, and as directed by the Engineer.

10-1. CONSTRUCTION SITE MANAGEMENT

GENERAL

Summary

This work includes controlling potential sources of water pollution before they come in contact with storm water systems or watercourses.

Control material pollution and manage waste and non-storm water at the job site by implementing effective handling, storage, use, and disposal practices.

For information on documents under these special provisions, refer to the Department's Preparation Manual, Dewatering Guide, and BMP Manual.

Preparation Manual, Dewatering Guide, and BMP Manual are available from the Department's Construction Storm Water and Water Pollution Control web site at:

<http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm>

Definitions

BMP Manual: The Department's Construction Site Best Management Practices (BMP) Manual.

Dewatering Guide: The Department's Field Guide to Construction Site Dewatering.

Minor spills: Small quantities of oil, gasoline, paint, or other material that are small enough to be controlled by a first responder upon discovery of the spill.

Preparation Manual: The Department's Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual.

Semi-significant spills: Spills that can be controlled by a first responder with help from other personnel.

Significant or hazardous spills: Spills that cannot be controlled by construction personnel.

Submittals

Submit the following:

1. Material Safety Data Sheet (MSDS) at least 5 days before material is used or stored
2. Monthly inventory records for material used or stored
3. Stormwater training:
 - 3.1. Include training dates and subject for employees and subcontractors with SWPPP or WPCP. Include dates and subject for ongoing training, including tailgate meetings.
 - 3.2. Employee training records:
 - 3.2.1. Within 5 days of SWPPP or WPCP approval for existing employees
 - 3.2.2. Within 5 days of training for new employees
 - 3.2.3. At least 5 days before subcontractors begin work for subcontractor's employees
4. Manifest forms for hazardous waste disposal within 5 days of transport and disposal
5. Copy of written approval to discharge into a sanitary sewer system at least 5 days before beginning discharge activities

Quality Control and Assurance

Train all employees and subcontractors in these subjects:

1. Material pollution prevention and control
2. Waste management
3. Non-storm water management
4. Identifying and handling hazardous substances
5. Potential dangers to humans and the environment from spills and leaks or exposure to toxic or hazardous substances

Training must take place before starting work on this job. New employees must receive the complete training before starting work on this job. Conduct weekly meetings to discuss and reinforce spill prevention and control; material delivery, storage, use, and disposal; waste management; and non-storm water management procedures.

MATERIALS

Not used.

CONSTRUCTION

Spill Prevention and Control

Implement spill and leak prevention procedures for chemicals and hazardous substances stored on the job site.

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 these procedures:

1. Contain spread of the spill
2. Recover spilled material using absorption
3. Clean contaminated area
4. Dispose of contaminated material promptly and properly

Semi-significant Spills: Clean up semi-significant spills immediately using these procedures:

1. Contain spread of the spill
2. Recover spilled material using absorption where the spill occurs on paved or an impermeable surface
3. Contain the spill with an earthen dike and dig up contaminated soil for disposal where the spill occurs on soil
4. When the spill occurs during precipitation, cover the spill with plastic or other material to prevent contaminated runoff
5. Dispose of contaminated material promptly and properly

Significant or Hazardous Spills: Immediately notify qualified personnel of significant or hazardous spills. Take these steps:

1. Construction personnel must not attempt to cleanup the spill until qualified staff have arrived
2. Notify the Engineer and follow up with a written report

3. Obtain the services of a spills contractor or hazardous material team immediately
4. Notify the local emergency response team by dialing 911 and county officials at the emergency phone numbers kept on the job site
5. Notify the Governor's Office of Emergency Services Warning Center at (805) 852-7550
6. Notify the National Response Center at (800) 424-8802 regarding spills of Federal reportable quantities under CFR Title 40, Parts 110, 119, and 302
7. Notify other agencies as appropriate, including:
 - 7.1. Fire Department
 - 7.2. Public Works Department
 - 7.3. Coast Guard
 - 7.4. Highway Patrol
 - 7.5. City Police or County Sheriff Department
 - 7.6. Department of Toxic Substances
 - 7.7. California Division of Oil and Gas
 - 7.8. Cal OSHA
 - 7.9. Regional Water Resources Control Board

Report minor, semi-significant, and significant spills to the WPC (Water Pollution Control) manager. WPC manager must notify the Engineer immediately. WPC manager must oversee and enforce proper spill prevention and control measures.

Prevent spills from entering storm water runoff before and during cleanup. Spills must not be buried or washed with water.

Keep material or waste storage areas clean, well organized, and equipped with enough cleanup supplies for the material being stored.

Material Management

General

Material must be delivered, used, and stored for this job in a way that minimizes or eliminates discharge of material into the air, storm drain systems, or watercourses.

Implement the practices described in this section while taking delivery of, using, or storing these materials:

1. Hazardous chemicals including:
 - 1.1. Acids
 - 1.2. Lime
 - 1.3. Glues
 - 1.4. Adhesives
 - 1.5. Paints
 - 1.6. Solvents
 - 1.7. Curing compounds
2. Soil stabilizers and binders
3. Fertilizers
4. Detergents
5. Plaster
6. Petroleum products including:

- 6.1. Fuel
- 6.2. Oil
- 6.3. Grease

7. Asphalt components and concrete components
8. Pesticides and herbicides

Employees trained in emergency spill cleanup procedures must be present during unloading of hazardous materials or chemicals.

If practical, use less hazardous products.

Material Storage

Use these storage procedures:

1. Store liquids, petroleum products, and substances listed in CFR Title 40, Parts 110, 117, and 302 in containers or drums approved by the United States Environmental Protection Agency, and place them in secondary containment facilities.
2. Secondary containment facilities must be impervious to the materials stored there for a minimum contact time of 72 hours.
3. Throughout the rainy season, cover secondary containment facilities during non-working days and when precipitation is predicted. Secondary containment facilities must be adequately ventilated.
4. Keep secondary containment facility free of accumulated rainwater or spills. After precipitation, or in the event of spills or leaks, collect accumulated liquid and place into drums within 24 hours. Handle these liquids as hazardous waste under "Hazardous Waste" unless testing determines them to be nonhazardous.
5. Do not store incompatible materials, such as chlorine and ammonia, in the same secondary containment facility.
6. Store materials in the original containers with the original product labels maintained in legible condition. Replace damaged or illegible labels immediately.
7. Secondary containment facility must have the capacity to contain precipitation from a 24-hour-long, 25-year storm; and 10 percent of the aggregate volume of all containers, or entire volume of the largest container within the facility, whichever is greater.
8. Store bagged or boxed material on pallets. Throughout the rainy season, protect bagged or boxed material from wind and rain during non-working days and while precipitation is predicted.
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.

Stockpile Management

Implement practices described in this section for managing stockpiles:

1. During the rainy season
2. During the non-rainy season when the National Weather Service predicts precipitation with a probability of at least 30 percent

Use these stockpile management procedures:

1. Reduce or eliminate potential air and water pollution from stockpiled material including soil, paving material, or pressure treated wood.
2. Locate stockpiles:
 - 2.1. If within the floodplain, at least 100 feet from concentrated flows of storm water, drainage courses, or inlets unless approved
 - 2.2. If outside the floodplain, at least 50 feet from concentrated flows of storm water, drainage courses, or inlets unless approved

Active and inactive soil stockpiles must be:

1. Covered with soil stabilization measures, plastic sheeting, or geosynthetic fabric
2. Surrounded with a linear sediment barrier

Portland cement concrete rubble, AC, HMA, AC and HMA rubble, aggregate base or aggregate sub-base stockpiles must be:

1. Covered with plastic sheeting, or geosynthetic fabric
2. Surrounded with a linear sediment barrier

Pressure treated wood stockpiles must be:

1. Placed on pallets
2. Covered with impermeable material

Cold mix asphalt concrete stockpiles must be:

1. Placed on impervious surface
2. Covered with impermeable material
3. Protected from run-on and runoff

If you discontinue adding or removing material for up to 21 days the stockpile is considered still active during that period.

Control wind erosion during the non-rainy season and dry weather under Section 10, "Dust Control".

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

Waste Management

Solid Waste

Do not allow litter or debris to accumulate anywhere on the job site, including storm drain grates, trash racks, and ditch lines. Pick up and remove trash and debris from the job site at least once a week. WPC manager must 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, disposal must comply with Section 7-1.13, "Disposal of Material Outside the Highway Right of Way."

Furnish enough closed-lid dumpsters of sufficient size to contain the solid waste generated by work activities. When refuse reaches the fill line, empty dumpsters. Dumpsters must be watertight. Do not wash out dumpsters at the job site. Furnish additional containers and more frequent pickup 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. Non-hazardous 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.

Hazardous Waste

Use hazardous waste management practices if waste is generated on the job site from these substances:

1. Petroleum products
2. Asphalt products
3. Concrete curing compound
4. Pesticides
5. Acids
6. Paints
7. Stains
8. Solvents
9. Wood preservatives
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

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 the Environmental Laboratory Accreditation Program (ELAP) under the California Department of Public Health (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 these 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 wastes. 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, or storm drain systems. Handle and dispose of these as hazardous waste: paints, thinners, solvents, residues, and sludges that cannot be recycled or reused. When thoroughly dry, dispose of these 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.

WPC manager must inspect these daily:

1. Storage areas for hazardous materials and wastes
2. Hazardous waste disposal and transporting activities
3. Hazardous material delivery and storage activities

Contaminated Soil

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 these 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.

Concrete Waste

Use practices to 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

Sanitary and Septic Waste

Do not bury or discharge wastewater from sanitary or septic systems within Department right of way. WPC manager must inspect sanitary or septic waste storage and monitor disposal procedures at least weekly. Sanitary facilities that discharge to the sanitary sewer system must be properly connected and free from leaks. Place sanitary facilities at least 50 feet away from storm drains, watercourse, and flow lines.

Obtain written approval from local health agency, city, county, and sewer district before discharging from a sanitary or septic system directly into a sanitary sewer system, and submit a copy to the Engineer. Comply with local health agency provisions while using an on-site disposal system.

Liquid Waste

Use practices to prevent job site liquid waste from entering storm drain systems or watercourses. Liquid wastes include the following:

1. Drilling slurries or fluids
2. Grease-free or oil-free wastewater or rinse water
3. Dredgings, including liquid waste from drainage system cleaning
4. Liquid waste running off a surface including wash or rinse water
5. Other non-storm water liquids not covered by separate permits

Hold liquid waste in structurally sound, leak proof containers such as:

1. Roll-off bins
2. Portable tanks

Liquid waste containers must be of sufficient quantity and volume to prevent overflow, spills and leaks.

Store containers:

1. At least 50 feet from moving vehicles and equipment
2. If within the floodplain, at least 100 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved
3. If outside the floodplain, at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved

Remove and dispose of deposited solids from sediment traps under "Solid Waste" unless the Engineer authorizes another method.

Liquid waste may require testing to determine hazardous material content before disposal.

Drilling fluids and residue must be disposed of outside the highway right of way.

If an approved location is available within the job site, fluids and residue exempt under California Code of Regulations, Title 23, Section 2511(g) may be dried by evaporation in a leak proof container. Dispose of remaining solid waste under "Solid Waste" of these special provisions.

Non-Storm Water Management

Water Control and Conservation

Manage water used for work activities to prevent erosion or discharge of pollutants into storm drain systems or watercourses. Obtain approval before washing anything on the job site with water that could discharge into a storm drain system or watercourse. Report discharges immediately.

If water is used at the job site, implement water conservation practices . Inspect irrigation areas. Adjust watering schedules to prevent erosion, excess watering, or runoff. 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 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.

Illegal Connection and Discharge Detection and 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.

When illegal connections, discharges, or dumping are discovered, notify the Engineer immediately. Take no further action unless ordered by the 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

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" or "Hazardous Waste" of these 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, vehicles and equipment must be cleaned or washed in an outside area:

1. Paved with AC, HMA, or portland cement concrete
2. Surrounded by a containment berm
3. Equipped with a sump to collect and dispose of wash water
4. If within the floodplain, located at least 100 feet from concentrated flows of storm water, drainage courses, watercourses, ESAs, or storm drain inlets unless approved
5. If outside the floodplain, located at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved

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.

WPC manger must inspect vehicle and equipment cleaning facilities:

1. Daily when vehicle and equipment cleaning occurs daily
2. Weekly when vehicle and equipment cleaning does not occur daily

Vehicle and Equipment Fueling and Maintenance

If practicable, perform maintenance on vehicles and equipment off the job site.

If fueling or maintenance must be done at the job site, designate a site, or sites, and obtain approval before using. Minimize mobile fueling or maintenance.

If vehicle and equipment fueling and maintenance must be done on the job site, areas for these activities must be:

1. On level ground
2. Protected from stormwater run-on
3. If within the floodplain, located at least 100 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved
4. If outside the floodplain, located at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved

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

Fueling or maintenance 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.

WPC manager must inspect vehicle and equipment maintenance and 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

WPC manager must 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.

Material and Equipment Used Over Water

Place drip pans and absorbent pads under vehicles or equipment used over water. Keep an adequate supply of spill cleanup material with the vehicle or equipment. If the vehicle or equipment will be idle for more than one hour, place drip pans or plastic sheeting under vehicles or equipment on docks, barges, or other surfaces over water.

Furnish watertight curbs or toe boards on barges, platforms, docks, or other surfaces over water to contain material, debris, and tools. Secure material to prevent spills or discharge into water due to wind.

Structure Removal Over or Adjacent to Water

Do not allow demolished material to enter storm water systems or watercourses. Use approved covers and platforms to collect debris. Use attachments on equipment to catch debris on small demolition activities. Empty debris catching devices daily and handle debris under "Waste Management" of these special provisions.

WPC manager must inspect demolition sites within 50 feet of storm water systems or watercourses daily.

Paving, Sealing, Sawcutting, and Grinding Activities

Prevent these materials from entering storm drain systems or water courses:

1. Cementitious material
2. Asphaltic material
3. Aggregate or screenings
4. Grinding or sawcutting residue
5. Pavement chunks
6. Shoulder backing
7. Methacrylate

Cover drainage inlets and use linear sediment barriers to protect downhill watercourses until paving, sealing, sawcutting, 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.

During the rainy season or when 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 when precipitation is predicted during application or curing period. Do not excavate material from existing roadways during precipitation.

Use a vacuum to remove slurry from sawcutting activities immediately after slurry is produced. Do not allow slurry to run onto lanes open to public traffic or off the pavement.

Collect residue from portland cement concrete grinding activities with a vacuum attachment on the grinding machine. Do not leave residue on pavement or allow residue to flow across pavement.

If approved, material excavated from existing roadways may be stockpiled under "Stockpile Management" of these special provisions.

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.

Thermoplastic Striping and Pavement Markers

Thermoplastic striping and preheating equipment shutoff valves must work properly at all times. Do not preheat, transfer, or load thermoplastic within 50 feet of drainage inlets or watercourses. Do not fill preheating container above a level that is 6 inches below the top. Truck beds must be cleaned daily of scraps or melted thermoplastic.

Do not unload, transfer, or load bituminous material for pavement markers within 50 feet of drainage inlets or watercourses. Release all pressure from melting tanks before removing the lid to fill or service. Do not fill melting tanks above a level that is 6 inches below the top.

Collect bituminous material from the roadway after marker removal.

Pile Driving

Keep spill kits and cleanup material at pile driving locations. Pile driving equipment must be parked over drip pans, absorbent pads, or plastic sheeting with absorbent material. When precipitation is predicted, protect pile driving equipment by parking on plywood and covering with plastic.

When not in use, store pile driving equipment:

1. On level ground
2. Protected from stormwater run-on
3. If within the floodplain, at least 100 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved
4. If outside the floodplain, at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved

If practicable, use vegetable oil instead of hydraulic fluid.

WPC manager must inspect pile driving area for leaks and spills:

1. Daily when pile driving occurs daily
2. Weekly when pile driving does not occur daily

Concrete Curing

Do not overspray chemical curing compound. Minimize drift by spraying as close to the concrete as possible. Cover drainage inlets before applying curing compound.

Minimize the use and discharge of water by using wet blankets or similar methods to maintain moisture while curing concrete.

Concrete Finishing

Collect and dispose of water and solid waste from high-pressure water blasting. Cover drainage inlets within 50 feet before sandblasting. Minimize drift of dust and blast material by keeping the nozzle close to the surface of the concrete. Blast residue may contain hazardous material.

Inspect containment structures for concrete finishing activities for damage before each day of use and before predicted precipitation. Remove liquid and solid waste from the containment structure after each work shift.

Sweeping

Sweeping must be done using hand or mechanical methods such as vacuuming.

Sweeping must be done:

1. At the end of each work shift
2. When the National Weather Service predicts precipitation with a probability of at least 30 percent
3. On paved roads at job site entrance and exit locations
4. On paved areas within the job site that flow to storm drains or water bodies

You may stockpile collected material at the job site. Dispose of collected material at least once per week. Remove collected material including sediment from paved shoulders, drain inlets, curbs and dikes, and other drainage areas.

Sediment collected from the roadway during sweeping may be disposed of within the job site. Protect disposal areas against erosion.

Remove and dispose of trash collected during sweeping under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way".

Dewatering

Dewatering consists of discharging accumulated storm water, ground water, or surface water from excavations or temporary containment facilities.

If dewatering and discharging activities are specified under another work item such as "Temporary Active Treatment System" or "Dewatering and Discharge", then perform dewatering work as specified in those sections.

If dewatering and discharging activities are not specified under another work item, then:

1. At least 10 days before starting dewatering, submit a Dewatering and Discharge Plan under Section 5-1.02, "Plans and Working Drawings," and "Water Pollution Control" of the Standard Specifications. Dewatering and Discharge Plan must include:
 - 1.1. Title sheet and table of contents
 - 1.2. Description of dewatering and discharge activities detailing locations, quantity of water, equipment, and discharge point
 - 1.3. Estimated schedule for dewatering and discharge (start and end dates, intermittent or continuous)
 - 1.4. Discharge alternatives such as dust control or percolation
 - 1.5. Visual monitoring procedures with inspection log
2. Conduct dewatering activities under the Field Guide for Construction Dewatering.

3. Ensure that dewatering discharge does not cause erosion, scour, or sedimentary deposits that impact natural bedding materials.
4. Discharge water within project limits. If water cannot be discharged within project limits due to site constraints, dispose of it in the same way specified for material in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way".
6. Do not discharge storm water or non-storm water that has an odor, discoloration other than sediment, an oily sheen, or foam on the surface. Notify the Engineer immediately upon discovering any of those conditions.
7. WPC manager must inspect dewatering activities:
 - 7.1. Daily when dewatering work occurs daily
 - 7.2. Weekly when dewatering work does not occur daily

PAYMENT

The contract lump sum price paid for construction site management includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in spill prevention and control, material management, waste management, non-storm water management, and dewatering and identifying, sampling, testing, handling, and disposing of hazardous waste, as specified in the Standard Specifications and these special provisions, and as ordered by the Engineer.

10-1. __ STREET SWEEPING

GENERAL

Summary

This work includes street sweeping.

The SWPPP must describe and include the use of street sweeping as a water pollution control practice for sediment control and tracking control.

Submittals

At least 5 business days before starting clearing and grubbing, earthwork, or other activities with the potential for tracking sediment or debris, submit:

1. Number of sweepers described in the SWPPP
2. Type of sweeper technology

Quality Control and Assurance

Retain and submit records of street sweeping including:

1. Quantity of sweeping waste disposal
2. Sweeping times and locations

CONSTRUCTION

Street Sweepers

Sweepers must use one of these technologies:

1. Mechanical sweeper followed by a vacuum-assisted sweeper
2. Vacuum-assisted dry (waterless) sweeper
3. Regenerative-air sweeper

Operation

Street sweeping must be done at:

1. Paved roads at job site entrance and exit locations
2. Paved areas within the job site that flow to storm drains or water bodies

Street sweeping must be done:

1. During clearing and grubbing activities
2. During earthwork activities
3. During trenching activities
4. During roadway structural section activities
5. When vehicles are entering and leaving the job site
6. After soil disturbing activities
7. After observing offsite tracking of material

Monitor paved areas and roadway within the jobsite. Street sweeping must be done:

1. Within 1 hour, if sediment or debris is observed during activities that require sweeping
- 2.. Within 24 hours, if sediment or debris is observed during activities that do not require sweeping

At least 1 sweeper must be on the job site at all times when sweeping work is required. The sweeper must be in good working order.

Perform street sweeping to minimize dust. If dust generation is excessive or sediment pickup is ineffective, use water or a vacuum.

You may stockpile collected material on the jobsite according to the approved SWPPP. Dispose of collected material at least once per week.

Material collected during street sweeping must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Your WPCM must inspect paved roads at job site access points:

1. Daily if earthwork and other sediment or debris generating activities occur daily
2. Weekly if earthwork and other sediment or debris generating activities do not occur daily
3. When the National Weather Service predicts precipitation with a probability of at least 30 percent

MEASUREMENT AND PAYMENT

The contract lump sum price paid for street sweeping includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in street sweeping, including disposal of collected material, as shown on the plans, as specified in the Standard Specifications, these special provisions, and as directed by the Engineer.

10-1. __ TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)

GENERAL

Summary

This work includes applying, maintaining, and removing temporary hydraulic mulch (bonded fiber matrix). Hydraulic mulch uses a mixture of fiber, tackifier, and water to stabilize active and nonactive disturbed soil areas.

The SWPPP must describe and include the use of temporary hydraulic mulch (bonded fiber matrix) as a water pollution control practice for soil stabilization.

Submittals

At least 5 business days before applying hydraulic mulch, submit:

1. Material Safety Data Sheet for the tackifier.
2. Product label describing the tackifier as an erosion control product.
3. List of pollutant indicators and potential pollutants for the use of temporary hydraulic mulch. Pollutant indicators are described under "Sampling and Analysis Plan for Non-Visible Pollutants" in the Preparation Manual.
4. Determination of acute and chronic toxicity for aquatic organisms conforming to EPA methods for the tackifier.
5. Composition of ingredients including chemical formulation.

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for:

1. Tackifier
2. Fiber

Quality Control and Assurance

Retain and submit records of temporary hydraulic mulch applications including:

1. Compliance with specified rates
2. Application area
3. Application time
4. Quantity

MATERIALS

Tackifier

The tackifier must be:

1. Nonflammable
2. Nontoxic to aquatic organisms
3. Free from growth or germination inhibiting factors
4. Bonded to the fiber or prepackaged with the fiber by the manufacturer
5. At least 10 percent of the weight of the dry fiber and include the weight of the activating agents and additives
6. Organic, high viscosity colloidal polysaccharide with activating agents, or a blended hydrocolloid-based binder

Fiber

Fiber must be:

1. Long strand, whole wood fibers, thermo-mechanically processed from clean, whole wood chips
2. Not made from sawdust, cardboard, paper, or paper byproducts
3. At least 25 percent of fibers 3/8 inch long
4. At least 50 percent held on a No. 25 sieve
5. Free from lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach
6. Free from synthetic or plastic materials
7. At most 7 percent ash

Coloring Agent

Use a biodegradable nontoxic coloring agent free from copper, mercury, and arsenic to ensure the hydraulic mulch contrasts with the application area.

CONSTRUCTION

Application

Apply temporary hydraulic mulch when an area is ready to receive temporary erosion control under "Move-in/Move-out (Temporary Erosion Control)."

Dilute hydraulic mulch with water to spread the mulch evenly.

Use hydroseeding equipment to apply hydraulic mulch.

Apply hydraulic mulch:

1. In the proportions indicated in the table below. Successive applications or passes may be needed to achieve the required proportion rate:

Material	Application Rate lbs/acre
Bonded Fiber (includes fiber and tackifier material)	<u>3500lbs/acre</u>

2. To form a continuous mat with no gaps between the mat and the soil surface.
3. From 2 or more directions to achieve a continuous mat.
4. In layers to avoid slumping and to aid drying.
5. During dry weather or at least 24 hours before predicted rain.

Do not apply hydraulic mulch if:

1. Water is standing on or moving across the soil surface
2. Soil is frozen
3. Air temperature is below 40 °F during the tackifier curing period unless allowed by the tackifier manufacturer and approved by the Engineer

Do not over-spray hydraulic mulch onto the traveled way, sidewalks, lined drainage channels, or existing vegetation.

Maintenance

Reapply hydraulic mulch within 24 hours of discovering visible erosion unless the Engineer approves a longer period.

Removal

Remove hydraulic mulch by mechanically blending it into the soil with track laying equipment, disking, or other approved method.

Temporary hydraulic mulch disturbed or displaced by your vehicles, equipment, or operations must be reapplied at your expense.

Cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence are not included in the cost for performing maintenance.

MEASUREMENT AND PAYMENT

Temporary hydraulic mulch (bonded fiber matrix) is measured by the square yard from measurements along the slope of the areas covered by the hydraulic mulch.

The contract price paid per square yard for temporary hydraulic mulch (bonded fiber matrix) includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in applying temporary hydraulic mulch, complete in place, including removal of hydraulic mulch, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The State and you share the cost of maintaining the temporary hydraulic mulch. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. TEMPORARY EROSION CONTROL BLANKET

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary erosion control blanket. Temporary erosion control blanket is used to cover and protect disturbed soil areas and soil from erosion by wind or water. Temporary erosion control blanket reduces channel erosion by protecting against scour created by concentrated flow.

The SWPPP must describe and include the use of temporary erosion control blanket as a water pollution control practice for soil stabilization.

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for erosion control blanket.

If you substitute the steel wire staple with an alternative attachment device, submit a sample of the device for approval at least 5 business days before installation.

MATERIALS

Erosion Control Blanket

Erosion control blanket must be:

1. Described as a rolled erosion control product (RECP)
2. Classified as temporary and degradable or long-term and non-degradable
3. Machine-made mats
4. Provided in rolled strips
5. Classified by the Erosion Control Technology Council (ECTC)

Erosion control blanket classified as temporary and degradable must be one of the following:

1. Double net excelsior blanket:
 - 1.1. Classified as ECTC Type 2D
 - 1.2. Classified as an erosion control blanket
 - 1.3. Designed to last for at least one year after installation
 - 1.4. With a Universal Soil Loss Equation (USLE) C-Factor of not more than 0.20 at a 2:1 (horizontal:vertical) slope
 - 1.5. With 80 percent of the wood excelsior fibers being 6 inches or longer
 - 1.6. Capable to withstand a maximum shear stress of 1.75 pounds per square foot under ASTM D 6460
 - 1.7. With a minimum tensile strength of 75 pounds per foot under ASTM D 5035
 - 1.8. With top and bottom surfaces covered with lightweight non-synthetic netting
2. Double net straw and coconut blanket:
 - 2.1. Classified as ECTC Type 2D
 - 2.2. Classified as an erosion control blanket
 - 2.3. Designed to last for at least one year after installation
 - 2.4. With a USLE C-Factor of not more than 0.20 at a 2:1 (horizontal:vertical) slope

- 2.5. Comprised of 70 percent straw and 30 percent coconut fiber
 - 2.6. Capable to withstand a maximum shear stress of 1.75 pounds per square foot under ASTM D 6460
 - 2.7. With a minimum tensile strength of 75 pounds per foot under ASTM D 5035
 - 2.8. With top and bottom surfaces covered with lightweight non-synthetic netting
3. Jute netting:
- 4.1. Classified as ECTC Type 3B
 - 4.2. Classified as an open weave textile and have from 14 to 20 strands per foot in each direction
 - 4.3. Designed to last for at least one year after installation
 - 4.4. With a USLE C-Factor of not more than 0.25 at a 1.5:1 (horizontal:vertical) slope
 - 4.5. Comprised of 100 percent unbleached and undyed spun yarn made of jute fiber
 - 4.6. With an average open area from 63 to 70 percent
 - 4.7. From 48 to 72 inches in width
 - 4.8. Capable to withstand a maximum shear stress of 2.0 pounds per square foot under ASTM D6460
 - 4.9. With a minimum tensile strength of 100 pounds per foot under ASTM D 5035
 - 4.10. From 0.90 to 1.20 pounds per square yard in weight
4. Coir netting:
- 4.1. Classified as ECTC Type 4
 - 4.2. Classified as an open weave textile and from 13 to 18 strands per foot in each direction
 - 4.3. Designed to last for at least three years after installation
 - 4.4. With a USLE C-Factor of not more than 0.25 at a 1:1 (horizontal:vertical) slope
 - 4.5. Comprised of 100 percent unbleached and undyed spun coir yarn made of coconut fiber
 - 4.6. With an average open area from 63 to 70 percent
 - 4.7. From 72 to 158 inches in width
 - 4.8. Capable to withstand a maximum shear stress of 2.25 pounds per square foot under ASTM D6460
 - 4.9. With a minimum tensile strength of 125 pounds per foot under ASTM D 5035
 - 4.10. From 1.20 to 1.67 pounds per square yard in weight

Erosion control blanket classified as long-term and non-degradable must:

1. Be a geosynthetic fabric
2. Comply with the specifications for rock slope protection fabric (Class 8) in Section 88-1.06, "Channel and Shore Protection," of the Standard Specifications

Staples

You may use an alternative attachment device such as a geosynthetic pins or plastic pegs to install erosion control blanket.

CONSTRUCTION

Before placing erosion control blanket, remove obstructions including rocks, clods, and debris greater than 1 inch in diameter from the ground.

If fiber rolls are to be placed in the same area as erosion control blankets, install the blankets before placing the fiber rolls.

If hydroseeding is to be done in the same area as erosion control blanket:

1. You must hydroseed before placing the double net excelsior or straw and coconut blankets
2. You may hydroseed before or after placing the jute or coir netting

If temporary erosion control blanket is installed on disturbed soil areas including embankment and excavation slopes:

1. Place the blanket loosely on the embankment or excavation slope with the longitudinal joints perpendicular to the slope contour lines
3. Place the blanket on the upper portion of the slope overlapping the blanket on the lower portion of the slope for transverse joints
4. Place the blanket on the side of the prevailing wind shall overlapping the blanket on the downwind side of the slope for longitudinal joints
2. Overlap and staple the longitudinal and transverse joints
5. Secure the ends of the blanket in key trenches

If temporary erosion control blanket is installed in area of concentrated runoff including ditches and swales:

1. Place the blanket loosely along the ditch or swale with the longitudinal edges and joints parallel to the centerline of the ditch or swale
2. Place the blanket on the upper portion of the slope overlapping the blanket on the lower portion of the slope for transverse joints
3. Secure transverse joints of blankets in intermediate joint trenches
4. Overlap and staple the longitudinal and transverse joints
5. Secure the ends of the blanket in intermediate and key trenches

MAINTENANCE

Remove sediment deposits, trash, and debris from temporary erosion control blanket as needed or when directed by the Engineer. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water. Trash and debris must be removed and disposed of as specified in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Maintain temporary erosion control blanket by:

1. Removing sediment from the surface of the blanket when it is deeper than 2 inches
2. Repairing or replacing the blanket when the area treated with temporary erosion control blanket becomes exposed or exhibits visible erosion
3. Repairing or replacing the erosion control blanket when washouts occur between joints or beneath the erosion control blanket
4. Repairing or replacing the erosion control when it becomes detached, torn, or unraveled

Repair temporary erosion control blanket within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary erosion control blanket, repair erosion control blanket at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

REMOVAL

When the Engineer determines that temporary erosion control blanket is not required, it must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary erosion control blanket must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Temporary erosion control blanket is measured by the square yard of the actual area covered excluding overlaps.

The contract price paid per square yard for temporary erosion control blanket includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing temporary erosion control blanket, complete in place, including trench excavation and backfill, and removal of temporary erosion control blanket, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The State and you share the cost of maintaining the temporary erosion control blanket. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. TEMPORARY COVER

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary cover.

The SWPPP must describe and include the use of temporary cover as a water pollution control practice for soil stabilization and stockpile management.

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for:

1. Gravel-filled bag fabric
2. Temporary cover fabric

If you substitute a material in the following list, submit a sample of the alternative material for approval at least 5 business days before installation:

1. Alternative restrainer
2. Alternative linear sediment barrier

MATERIALS

Geosynthetic Fabrics

Geosynthetic fabrics must consist of one of the following:

1. Polyester
2. Polypropylene
3. Combined polyester and polypropylene

Sample under ASTM D 4354, Procedure C.

7

Test under ASTM D 4759. All properties are based on Minimum Average Roll Value (MARV).

8

Identify, store, and handle under ASTM D 4873.

9

Protect geosynthetics from moisture, sunlight and damage during shipping and storage. Label each unit with the manufacturer's name, identifying information and product identification.

10

Gravel-filled bag fabric must comply with:

Specification	Requirements
Grab breaking load 1-inch grip, lb, min. in each direction	205
Apparent elongation percent, min., in each direction	50
Water Flow Rate max. average roll value, gallons per minute/square foot	80-150
Permittivity 1/sec., min	1.2
Apparent opening size max. average roll value, U.S. Standard sieve size	40-80
Ultraviolet Degradation percent of original unexposed grab breaking load 500 hr, minimum	70

The temporary cover fabric must be geosynthetic cover fabric, plastic sheeting, or a combination of both.

Temporary cover fabric must be either:

1. Plastic sheeting consisting of a single-ply geomembrane material, 10 mils thick, that complies with ASTM D 5199
2. Geosynthetic cover fabric that complies with the following properties:

Specification	Requirements
Grab breaking load 1-inch grip, lb, min. in each direction	200
Apparent elongation percent, min., in each direction	50
Water Flow Rate max. average roll value, gallons per minute/square foot	75-120
Permittivity 1/sec., min	0.08
Apparent opening size max. average roll value, U.S. Standard sieve size	100
Ultraviolet Degradation percent of original unexposed grab breaking load 500 hr, minimum	70

Gravel

Gravel for gravel-filled bags must be:

1. From 3/8 to 3/4 inch in diameter
2. Clean and free from clay balls, organic matter, and other deleterious materials

Gravel-filled Bags

Gravel-filled bags must:

1. Be made from gravel-filled bag fabric.
2. Have inside dimensions from 24 to 32 inches in length, and from 16 to 20 inches in width.
3. Have the opening bound to retain the gravel. The opening must be sewn with yarn, bound with wire, or secured with a closure device.
4. Weigh from 30 to 50 pounds when filled with gravel.

Restrainers

Restrainers must be used to secure the cover fabric or plastic sheeting to the surface of the slope or stockpile.

Restrainers must be one of the following:

1. Made of gravel-filled bags that are roped together and spaced no more than a 6 feet apart
2. Made of wooden lath and anchor restrainers as shown on the plans and the following:
 - 2.1 Wooden lath must be 2" x 4" x 8', made from fir or pine, and comply with Section 88-2.12, "Lumber," of the Standard Specifications
 - 2.2 Anchor restrainers must be made from steel reinforcing bars and spaced no more than 4 feet apart along the wooden lath
3. An approved alternate method

Rope

Rope must be at least 3/8 inch in diameter.

Rope must be one of the following:

1. Biodegradable, such as sisal or manila
2. Nondegradable, such as polypropylene or nylon

Linear Sediment Barrier

Linear sediment barriers consist of one or more of the following:

1. Gravel bag berm
2. Earthen berm
3. Approved alternate method

CONSTRUCTION

Temporary Cover Fabric

Install temporary cover fabric by:

1. Placing the temporary cover fabric loosely on the slope or stockpile with the longitudinal edges perpendicular to the slope contours
2. Placing the temporary cover fabric on the upper portion of the slope to overlap cover fabric on the lower portion of the slope
3. Placing the temporary cover fabric on the side of the prevailing wind to overlap the cover fabric on the downwind side of the slope
4. Anchoring the perimeter edge of the temporary cover fabric in key trenches
5. Overlapping edges of the temporary cover fabric by at least 2 feet
6. Placing restrainers at the overlap area and along the toe of the slope. Between overlaps, the restrainers must be spaced a maximum of 8 feet on center.
7. Ensuring that, if anchor restraints are used, the leg of the steel reinforcing bar pierces the temporary cover fabric and holds the wooden lath firmly against the surface of the slope or stockpile.

Linear Sediment Barrier

Protect excavation and embankment slopes with linear sediment barrier by:

1. Preventing run-on and concentrated flows from damaging the slopes
2. Placing the barrier approximately parallel to the slope contour at the toe of the slope
4. Angling the last 6 feet of the barrier up-slope

Protect stockpiles with linear sediment barrier by:

1. Preventing run-on and concentrated flows from touching the stockpiled material
2. Surrounding the stockpile with a linear sediment barrier
3. Adding more linear sediment barrier within 24 hours of adding more material to the stockpile

If earthen berms are used as a linear sediment barrier, they must be:

1. At least 8 inches high and 36 inches wide
2. Compacted by hand or mechanical method

If gravel bag berms are used as a linear sediment barrier:

1. Place gravel bags as a single layer
2. Place gravel bags end-to-end to eliminate gaps

If you need to increase the height of the gravel bag berm:

1. Increase height by adding rows of gravel-filled bags
2. Stack bags in a way that the bags in the top row overlap the joints in the lower row
3. Stabilize berm by adding rows at the bottom

If you remove the temporary cover to do other work, replace and secure temporary cover within one hour.

MAINTENANCE

Maintain temporary cover to minimize exposure of the slopes or stockpile and prevent movement of the material beyond the linear sediment barrier.

Maintain temporary cover by:

1. Relocating and securing restrainers to keep the erosion control blankets in place. Temporary cover fabric that breaks free must be immediately secured.
2. Repairing or replacing the temporary cover fabric when the area covered by temporary cover becomes exposed or exhibits visible erosion.
3. Repairing or replacing the linear sediment barrier when washouts occur between joints or beneath the linear sediment barrier.
4. Repairing or replacing the temporary cover fabric when it becomes detached, torn, or unraveled.

Repair temporary cover within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary cover, repair temporary cover at your expense.

REMOVAL

When the Engineer determines that temporary cover is not required, it must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary cover must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Temporary cover is measured by the square yard of the actual area covered excluding overlaps.

The contract price paid per square yard for temporary cover includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing temporary cover, complete in place, including restrainers and removal of temporary cover, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1. TEMPORARY CONCRETE WASHOUT (PORTABLE)

GENERAL

Summary

This work includes removal and disposal of concrete waste by furnishing, maintaining, and removing portable temporary concrete washouts.

SWPPP must describe and include the use of a portable temporary concrete washout as a water pollution control practice for waste management and materials pollution control.

Submittals

At least 5 business days before concrete activities start, submit:

1. Name and location of off-site concrete waste disposal facility to receive concrete waste
2. Copy of permit issued by RWQCB for off-site commercial disposal facility
3. Copy of license for off-site commercial disposal facility
4. Copy of permit issued by state or local agency having jurisdiction over disposal facility if disposal site is located outside of the State of California

Quality Control and Assurance

Retain and submit records of disposed concrete waste including:

1. Weight tickets
2. Delivery and removal of temporary concrete washouts

MATERIALS

Portable Temporary Concrete Washout

Portable temporary concrete washout must:

1. Be a commercially available watertight container.
2. Have sufficient capacity to contain all liquid and concrete waste generated by washout activities without seepage or spills.
3. Have at least 55-gallon capacity.
4. Be labeled for the exclusive use as a concrete waste and washout facility. Stencil "Concrete Waste material" in 3-inch high letters on white background. Top of stenciling must be 12 inches from the top of the container.

Concrete Washout Sign

Concrete washout sign must comply with the provisions in Section 12-3.06B, "Portable Signs" of the Standard Specifications and:

1. Be approved by the Engineer
2. Consist of base, framework, and sign panel
3. Be made of plywood
4. Be minimum 2' x 4' in size
5. Read "Concrete Washout" with 3 inches high black letters on white background

CONSTRUCTION

Placement

Place portable temporary concrete washouts at job site:

1. Before concrete placement activities start
2. In the immediate area of concrete work as approved by the Engineer
3. No closer than 50 feet from storm drain inlets, open drainage facilities, ESAs, or watercourses
4. Away from construction traffic or public access areas

Install a concrete washout sign adjacent to each portable temporary concrete washout location.

Operation

Use portable temporary concrete washouts for:

1. Washout from concrete delivery trucks
2. Slurries containing portland cement concrete or hot mix asphalt from sawcutting, coring, grinding, grooving, and hydro-concrete demolition
3. Concrete waste from mortar mixing stations

Relocate portable temporary concrete washouts as needed for concrete construction work.

Replace portable temporary concrete washouts when filled to capacity. Do not fill higher than 6 inches below rim.

Your WPC manager must inspect portable temporary concrete washouts:

1. Daily if concrete work occurs daily
2. Weekly if concrete work does not occur daily

Maintenance

When relocating or transporting a portable temporary concrete washout within the job site, secure it to prevent spilling of concrete waste material. If any spilled material is observed, remove spilled material and place it into portable temporary concrete washout.

Removal

Dispose of concrete waste material at a facility specifically licensed to receive solid concrete waste, liquid concrete waste, or both. When portable temporary concrete washout is full, remove and dispose of concrete waste within 2 days.

PAYMENT

The contract lump sum price paid for temporary concrete washout (portable) includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing, maintaining, and removing the portable temporary concrete washout, including removal and disposal of concrete waste, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1. __ TEMPORARY CHECK DAM

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary check dams.

The SWPPP must describe and include the use of temporary check dams as a water pollution control practice for soil stabilization in flow conveyances.

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for:

1. Fiber rolls
2. Gravel-filled bag fabric

MATERIALS

Fiber Rolls

Fiber rolls must:

1. Last for at least one year after installation
2. Be Type 1 or Type 2

If specified, Type 1 fiber rolls must be:

1. Made from an erosion control blanket:
 - 1.1. Classified by the Erosion Control Technology Council (ECTC) as ECTC 2D
 - 1.2. With a Universal Soil Loss Equation (USLE) C-Factor of not more than 0.20 at a 2:1 (horizontal:vertical) slope
 - 1.3. Capable to withstand a maximum shear stress of 1.75 pounds per square foot under ASTM D 6460
 - 1.4. With a minimum tensile strength of 75 pounds per foot under ASTM D 5035
 - 1.5. With top and bottom surfaces covered with lightweight non-synthetic netting
 - 1.6. Either of the following:
 - 1.6.1. Double net straw and coconut blanket with 70 percent straw and 30 percent coconut fiber
 - 1.6.2. Double net excelsior blanket with 80 percent of the wood excelsior fibers being 6 inches or longer
2. Rolled along the width
3. Secured with natural fiber twine every 6 feet and 6 inches from each end
4. Finished to be either:
 - 4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 0.5 pounds per linear foot
 - 4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 2 pounds per linear foot

If specified, Type 2 fiber rolls must:

1. Be filled with rice or wheat straw, wood excelsior, or coconut fiber
2. Be covered with a photodegradable plastic netting or a biodegradable jute, sisal, or coir fiber netting
3. Have the netting secured tightly at each end
4. Be finished to be either:
 - 4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 1.1 pounds per linear foot
 - 4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 3 pounds per linear foot

Wood Stakes

Wood stakes must be:

1. Untreated fir, redwood, cedar, or pine and cut from sound timber
2. Straight and free of loose or unsound knots and other defects which would render the stakes unfit for use
3. Pointed on the end to be driven into the ground

For fiber rolls, wood stakes must be at least:

1. 1" x 1" x 24" in size for Type 1 installation
2. 1" x 2" x 24" in size for Type 2 installation

Rope

For Type 2 installation, rope must:

1. Be biodegradable, such as sisal or manila
2. Have a minimum diameter of 1/4 inch

Gravel-filled Bag Fabric

Geosynthetic fabric for temporary gravel bag berm must consist of one of the following:

1. Polyester
2. Polypropylene
3. Combined polyester and polypropylene

Sample under ASTM D 4354, Procedure C.

11

Test under ASTM D 4759. All properties are based on Minimum Average Roll Value (MARV).

12

Identify, store, and handle under ASTM D 4873.

13

Protect geosynthetics from moisture, sunlight and damage during shipping and storage. Label each unit with the manufacturer's name, identifying information and product identification.

14

Gravel-filled bag fabric must comply with:

Specification	Requirements
Grab breaking load 1-inch grip, lb, min. in each direction	205
Apparent elongation percent, min., in each direction	50
Water Flow Rate max. average roll value, gallons per minute/square foot	80-150
Permittivity 1/sec., min	1.2
Apparent opening size max. average roll value, U.S. Standard sieve size	40-80
Ultraviolet Degradation percent of original unexposed grab breaking load 500 hr, minimum	70

Gravel

Gravel for gravel-filled bags must be:

1. From 3/8 to 3/4 inch in diameter
2. Clean and free from clay balls, organic matter, and other deleterious materials

Gravel-filled Bags

Gravel-filled bags must:

1. Be made from gravel-filled bag fabric.
2. Have inside dimensions from 24 to 32 inches in length, and from 16 to 20 inches in width.
3. Have the opening bound to retain the gravel. The opening must be sewn with yarn, bound with wire, or secured with a closure device.
4. Weigh from 30 to 50 pounds when filled with gravel.

CONSTRUCTION

Before placing temporary check dam, remove obstructions including rocks, clods, and debris greater than one inch in diameter from the ground.

If check dams are to be placed in the same areas as erosion control blankets, then install the blankets before placing the check dams.

Temporary check dams must be:

1. Placed approximately perpendicular to the centerline of the ditch or drainage line
2. Installed with sufficient spillway depth to prevent flanking of concentrated flow around the ends of the check dam
3. Type 1 for lashed fiber rolls, Type 2 for gravel-filled bags, or a combination:

- 3.1. If the ditch is lined with concrete or hot mix asphalt, use temporary check dam (Type 2)
- 3.2. If the ditch is unlined, you may use temporary check dam (Type 1) or (Type 2)

Temporary check dam (Type 1) must be:

1. Secured with rope and notched wood stakes.
2. Installed by driving stakes into the soil until the notch is even with the top of the fiber roll.
3. Installed by lacing the rope between stakes and over the fiber roll. Knot the rope at each stake.
4. Tightened by driving the stakes further into the soil forcing the fiber roll against the surface of the ditch or drainage line.

Temporary check dam (Type 2) must be:

1. Placed as a single layer of gravel bags
2. End-to-end to eliminate gaps

If you need to increase the height of the temporary check dam (Type 2):

1. Increase height by adding rows of gravel-filled bags
2. Stack bags in a way that the bags in the top row overlap the joints in the lower row
3. Stabilize dam by adding rows of bags at the bottom

MAINTENANCE

Maintain temporary check dams to provide sediment holding capacity and to reduce concentrated flow velocities.

Remove sediment deposits, trash, and debris from temporary check dams as needed or when directed by the Engineer. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water. Trash and debris must be removed and disposed of as specified in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Maintain temporary check dams by:

1. Removing sediment from behind the check dam when sediment is 1/3 the height of the check dam above ground
2. Repairing or adjusting the check dams when scour and other evidence of concentrated flow occur beneath the fiber roll
3. Repairing or replacing the fiber rolls or gravel-filled bags when they become split, torn, or unraveled
4. Adding stakes when the fiber rolls slump or sag
5. Replacing broken or split wood stakes

Repair temporary check dams within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary check dams, repair temporary check dams at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

REMOVAL

When the Engineer determines that temporary check dams are not required, they must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary check dams must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Temporary check dam is measured by the linear foot along the centerline of the check dams. Where temporary fiber rolls are joined and overlapped, the overlap is measured as a single installed check dam.

The contract price paid per linear foot for temporary check dams includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the temporary check dams, complete in place, including removal of materials, cleanup and disposal of retained sediment and debris, and backfilling and repairing holes, depressions and other ground disturbance, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer

The State and you share the cost of maintaining the temporary check dams. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. __ TEMPORARY FIBER ROLL

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary fiber roll.

The SWPPP must describe and include the use of temporary fiber roll as a water pollution control practice for sediment control.

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for fiber roll.

MATERIALS

Fiber Roll

Fiber roll must:

1. Last for at least one year after installation
2. Be Type 1 or Type 2

If specified, Type 1 fiber roll must be:

1. Made from an erosion control blanket:
 - 1.1. Classified by the Erosion Control Technology Council (ECTC) as ECTC 2D
 - 1.2. With a Universal Soil Loss Equation (USLE) C-Factor of not more than 0.20 at a 2:1 (horizontal:vertical) slope
 - 1.3. Capable to withstand a maximum shear stress of 1.75 pounds per square foot under ASTM D 6460
 - 1.4. With a minimum tensile strength of 75 pounds per foot under ASTM D 5035
 - 1.5. With top and bottom surfaces covered with lightweight non-synthetic netting
 - 1.6. That complies with one of the following:
 - 1.6.1. Double net straw and coconut blanket with 70 percent straw and 30 percent coconut fiber
 - 1.6.2. Double net excelsior blanket with 80 percent of the wood excelsior fibers being 6 inches or longer
2. Rolled along the width
3. Secured with natural fiber twine every 6 feet and 6 inches from each end
4. Finished to be either:
 - 4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 0.5 pounds per linear foot
 - 4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 2 pounds per linear foot

If specified, Type 2 fiber roll must:

1. Be filled with rice or wheat straw, wood excelsior, or coconut fiber
2. Be covered with a photodegradable plastic netting or a biodegradable jute, sisal, or coir fiber netting
3. Have the netting secured tightly at each end
4. Be finished to be either:
 - 4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 1.1 pounds per linear foot
 - 4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 3 pounds per linear foot

Wood Stakes

Wood stakes must be:

1. Untreated fir, redwood, cedar, or pine and cut from sound timber
2. Straight and free of loose or unsound knots and other defects which would render the stakes unfit for use
3. Pointed on the end to be driven into the ground

For fiber roll, wood stakes must be at least:

1. 1" x 1" x 24" in size for Type 1 installation
2. 1" x 2" x 24" in size for Type 2 installation

Rope

For Type 2 installation, rope must:

1. Be biodegradable, such as sisal or manila
2. Have a minimum diameter of 1/4 inch

CONSTRUCTION

Before placing fiber roll, remove obstructions including rocks, clods, and debris greater than one inch in diameter from the ground.

If fiber roll is to be placed in the same area as erosion control blanket, install the blanket before placing the fiber roll. For other soil stabilization practices such as hydraulic mulch or compost, place the fiber roll and then apply the soil stabilization practice.

Place fiber roll on slopes at the following spacing unless the plans show a different spacing:

1. 10 feet apart for slopes steeper than 2:1 (horizontal:vertical)
2. 15 feet apart for slopes from 2:1 to 4:1 (horizontal:vertical)
3. 20 feet apart for slopes from 4:1 to 10:1 (horizontal:vertical)
4. 50 feet apart for slopes flatter than 10:1 (horizontal:vertical)

Place fiber roll approximately parallel to the slope contour. For any 20 foot section of fiber roll, do not allow the fiber roll to vary more than 5 percent from level.

Type 1 and Type 2 fiber roll may be installed using installation method Type 1, Type 2, or a combination:

For installation method Type 1, install fiber roll by:

1. Placing in a furrow that is from 2 to 4 inches deep
2. Securing with wood stakes every 4 feet along the length of the fiber roll
3. Securing the ends of the fiber roll by placing a stake 6 inches from the end of the roll
4. Driving the stakes into the soil so that the top of the stake is less than 2 inches above the top of the fiber roll

For installation method Type 2, install fiber roll by:

1. Securing with rope and notched wood stakes.
2. Driving stakes into the soil until the notch is even with the top of the fiber roll.
3. Lacing the rope between stakes and over the fiber roll. Knot the rope at each stake.
4. Tightening the fiber roll to the surface of the slope by driving the stakes further into the soil.

MAINTENANCE

Maintain temporary fiber roll to provide sediment holding capacity and to reduce runoff velocities.

Remove sediment deposits, trash, and debris from temporary fiber roll as needed or when directed by the Engineer. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water. Trash and debris must be removed and disposed of as specified in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Maintain temporary fiber roll by:

1. Removing sediment from behind the fiber roll when sediment is 1/3 the height of the fiber roll above ground
2. Repairing or adjusting the fiber roll when rills and other evidence of concentrated runoff occur beneath the fiber roll.
3. Repairing or replacing the fiber roll when they become split, torn, or unraveled
4. Adding stakes when the fiber roll slump or sag
5. Replacing broken or split wood stakes

Repair temporary fiber roll within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary fiber roll, repair temporary fiber roll at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

REMOVAL

When the Engineer determines that temporary fiber roll is not required, they must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary fiber roll must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Temporary fiber roll is measured by the linear foot along the centerline of the installed roll. Where temporary fiber roll is joined and overlapped, the overlap is measured as a single installed roll.

The contract price paid per linear foot for temporary fiber roll includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the temporary fiber roll, complete in place, including removal of materials, cleanup and disposal of retained sediment and debris, and backfilling and repairing holes, depressions and other ground disturbance, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer

The State and you share the cost of maintaining the temporary fiber roll. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. TEMPORARY SILT FENCE

GENERAL

Summary

This work includes installing, maintaining, and removing temporary silt fence.

The SWPPP must describe and include the use of temporary silt fence as a water pollution control practice for sediment control.

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for silt fence fabric.

MATERIALS

Silt Fence Fabric

Geosynthetic fabric for temporary silt fence must consist of one of the following:

1. Polyester
2. Polypropylene
3. Combined polyester and polypropylene

Sample under ASTM D 4354, Procedure C.

Test under ASTM D 4759. All properties must be based on Minimum Average Roll Value (MARV).

Identify, store, and handle under ASTM D 4873.

Protect geosynthetics from moisture, sunlight, and damage during shipping and storage. Label each unit with the manufacturer's name, identifying information, and product identification.

Silt fence fabric must comply with:

Property	ASTM Designation	Specification	
		Woven	Non-woven
Grab breaking load 1-inch grip, lb, min. in each direction	D 4632	120	120
Apparent elongation percent, min., in each direction	D 4632	15	50
Water Flow Rate max. average roll value, gallons per minute/square foot	D 4491	10-50	100-150
Permittivity 1/sec., min.	D 4491	0.05	0.05
Apparent opening size max. average roll value, U.S. Standard sieve size	D 4751	30	30
Ultraviolet Degradation percent of original unexposed grab breaking load 500 hr, minimum	D 4595	70	

Posts

Posts must be wood or metal.

Wood posts must be:

1. Untreated fir, redwood, cedar, or pine and cut from sound timber
2. Straight and free of loose or unsound knots and other defects that would render the stakes unfit for use
3. Pointed on the end to be driven into the ground
4. At least 2" x 2" in size, and 4 feet long

Metal posts must:

1. Be made of steel.
2. Have a "U," "T," "L," or other cross sectional shape that can resist failure from lateral loads.
3. Be pointed on the end to be driven into the ground.
4. Weigh at least 0.75-pound per foot.
5. Be at least 4 feet long.
6. Have a safety cap attached to the exposed end. The safety cap must be orange or red plastic and fit snugly to the metal post.

CONSTRUCTION

Silt fence must be:

1. Constructed with silt fence fabric, posts, and fasteners
2. Prefabricated or assembled at the job site

Silt fence fabric must be attached to posts using these methods:

1. If prefabricated silt fence is used, posts must be inserted into sewn pockets
2. If assembled on the job site:
 - 2.1. If wood posts are used, fasteners must be staples or nails
 - 2.2. If steel posts are used, fasteners must be tie wires or locking plastic fasteners
 - 2.3. Spacing of the fasteners must be no more than 8 inches apart

Place silt fence approximately parallel to the slope contour. For any 50 foot section of silt fence, do not allow the elevation at the base of the fence to vary more than 1/3 of the fence height.

Install silt fence by:

1. Placing the bottom of the fabric in a trench that is 6 inches deep
2. Securing with posts placed on the downhill side of the fabric
3. Backfilling the trench with soil and hand or mechanically tamping to secure the fabric in the trench

If you reinforce the silt fence fabric with wire or plastic mesh, you may increase the post spacing to a maximum of 10 feet. The field-assembled reinforced silt fence must be able to retain saturated sediment without collapsing.

Connect silt fence sections by:

1. Joining separate sections of silt fence to form reaches that are no more than 500 feet long

2. Securing the end posts of each section by wrapping the tops of the posts with at least two wraps of 16-gage diameter tie wire
3. Ensuring that each reach is a continuous run of silt fence from end to end or from an end to an opening, including joined panels

If you mechanically push the silt fence fabric vertically through the soil, you must demonstrate that the silt fence fabric will not be damaged and will not slip out of the soil, resulting in sediment passing under the silt fence fabric.

MAINTENANCE

Maintain temporary silt fence to provide sediment holding capacity and to reduce runoff velocities.

Remove sediment deposits, trash, and debris from temporary silt fence as needed or when directed by the Engineer. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water. Trash and debris must be removed and disposed of as specified in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Maintain temporary silt fence by:

1. Removing sediment from behind the silt fence when sediment is 1/3 the height of the silt fence above ground
2. Repairing or adjusting the silt fence when rills and other evidence of concentrated runoff occur beneath the silt fence fabric
3. Repairing or replacing the silt fence fabric when it become split, torn, or unraveled

Repair temporary silt fence within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary silt fence, repair temporary silt fence at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

REMOVAL

When the Engineer determines that temporary silt fence is not required, remove and dispose of fence under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary silt fence must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Temporary silt fence is measured by the linear foot along the centerline of the installed fence.

The contract price paid per linear foot for temporary silt fence includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the temporary silt fence, complete in place, including removal of materials, cleanup and disposal of retained sediment and debris, and backfilling and repairing holes, depressions and other ground disturbance, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The State and you share the cost of maintaining the temporary silt fence. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. __ TEMPORARY GRAVEL BAG BERM

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary gravel bag berm.
The SWPPP must describe and include the use of temporary gravel bag berm as a water pollution control practice for sediment control.

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for gravel-filled bag fabric.

MATERIALS

Gravel-filled Bag Fabric

Geosynthetic fabric for temporary gravel bag berm must consist of one of the following:

1. Polyester
2. Polypropylene
3. Combined polyester and polypropylene

Sample under ASTM D 4354, Procedure C.

5

Test under ASTM D 4759. All properties must be based on Minimum Average Roll Value (MARV).

6

Identify, store, and handle under ASTM D 4873.

7

Protect geosynthetics from moisture, sunlight, and damage during shipping and storage. Label each unit with the manufacturer's name, identifying information, and product identification.

8

Gravel-filled bag fabric must comply with:

Specification	Requirements
Grab breaking load 1-inch grip, lb, min. in each direction	205
Apparent elongation percent, min., in each direction	50
Water Flow Rate max. average roll value, gallons per minute/square foot	80-150
Permittivity 1/sec., min	1.2
Apparent opening size max. average roll value, U.S. Standard sieve size	40-80
Ultraviolet Degradation percent of original unexposed grab breaking load 500 hr, minimum	70

Gravel

Gravel for gravel-filled bags must be:

1. From 3/8 to 3/4 inch in diameter
2. Clean and free from clay balls, organic matter, and other deleterious materials

Gravel-filled Bags

Gravel-filled bags must:

1. Be made from gravel-filled bag fabric.
2. Have inside dimensions from 24 to 32 inches in length, and from 16 to 20 inches in width.
3. Have the opening bound to retain the gravel. The opening must be sewn with yarn, bound with wire, or secured with a closure device.
4. Weigh from 30 to 50 pounds when filled with gravel.

CONSTRUCTION

Before constructing temporary gravel bag berm, remove obstructions including rocks, clods, and debris greater than 1 inch in diameter from the ground.

Temporary gravel bag berm must:

1. Be placed as a single layer of gravel bags to create a linear sediment barrier
2. Be placed end-to-end to eliminate gaps
3. Be placed approximately parallel to the slope contour
4. Have the last 6 feet of the gravel bag berm angled up-slope

If you need to increase the height of the temporary gravel bag berm:

1. Increase height by adding rows of gravel-filled bags
2. Stack bags in a way that the bags in the top row overlap the joints in the lower row
3. Stabilize berm by adding rows at the bottom

If used within shoulder area, gravel-filled bags must be placed behind temporary railing (Type K).

MAINTENANCE

Maintain temporary gravel bag berm to provide sediment holding capacity and to reduce runoff velocities.

Remove sediment deposits, trash, and debris from temporary gravel bag berm as needed or when directed by the Engineer. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water. Trash and debris must be removed and disposed of as specified in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Maintain temporary gravel bag berm by:

1. Removing sediment from behind the gravel bag berm when sediment is 1/3 the height of the gravel bag berm above ground

2. Repairing or adjusting the gravel-filled bags when rills and other evidence of concentrated runoff occur beneath the gravel-filled bags
3. Repairing or replacing the gravel-filled bags when they become split, torn, or unraveled

Repair temporary gravel bag berm within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary gravel bag berm, repair temporary gravel bag berm at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

REMOVAL

When the Engineer determines that temporary gravel bag berm is not required, they must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary gravel bag berm must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Temporary gravel bag berm is measured by the linear foot along the centerline of the installed berm.

The contract price paid per linear foot for temporary gravel bag berm includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the temporary gravel bag berm, complete in place, including removal of materials, cleanup and disposal of retained sediment and debris, and backfilling and repairing holes, depressions and other ground disturbance, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The State and you share the cost of maintaining the temporary gravel bag berm. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. __ TEMPORARY CONSTRUCTION ENTRANCE

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary construction entrance to provide temporary access.

The SWPPP must describe and include the use of temporary construction entrance as a water pollution control practice for tracking control.

Temporary construction entrance must be Type 1, Type 2, or a combination.

Submittals

Submit a Certificate of Compliance under Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for:

1. Temporary entrance fabric
2. Rock

Submit details for alternatives at least 5 business days before installation. You may propose alternatives for the following items:

1. Alternative sump
2. Alternative corrugated steel panels

If the Engineer approves, you may eliminate the sump.

MATERIALS

Temporary Entrance Fabric

Temporary entrance fabric must comply with Section 88-1.04, "Rock Slope Protection Fabric," of the Standard Specifications and be woven Type B or non-woven Type B.

Rock

Rock must be Type A or Type B.

Rock (Type A) must comply with:

1. Requirements under Section 72-2.02, "Materials," of the Standard Specifications
2. Following sizes:

Square Screen Size (inch)	Percentage Passing	Percentage Retained
6	100	0
3	0	100

Rock (Type B) must be Railway Ballast Number 25. Do not use blast furnace slag. Railway Ballast Number 25 must comply with:

1. Description in AREMA Manual for Railway Engineering.
2. Following sizes:

Nominal Size Square Opening	Percentage Passing								
	3"	2-1/2"	2"	1-1/2"	1"	3/4"	1/2"	3/8"	No. 4
2-1/2"-3/8"	100	80-100	60-85	50-70	25-50	-	5-20	0-10	0-3

3. Following properties:

Specification	Requirements
Percent material passing No. 200 sieve, max. ASTM: C 117	1.0
Bulk specific gravity, min. ASTM: C 127	2.60
Absorption, percent min. ASTM: C 127	1.0
Clay lumps and friable particles, percent max. ASTM: C 142	0.5
Degradation, percent max. ASTM: C 535	30
Soundness (Sodium Sulfate), percent max. ASTM: C 88	5.0
Flat, elongated particles, or both, percent max. ASTM: D 4791	5.0

Corrugated Steel Panels

Corrugated steel panels must:

1. Be made of steel.
2. Be pressed or shop welded
3. Have a slot or hook for connecting panels together

CONSTRUCTION

Prepare location for temporary construction entrance by:

1. Removing vegetation to ground level and clear away debris
2. Grading ground to uniform plane
3. Grading ground surface to drain
4. Removing sharp objects that may damage fabric
5. Compacting the top 1.5 feet of soil to at least 90 percent relative compaction

If temporary entrance (Type 1) is specified, use rock (Type A).

If temporary construction entrance (Type 2) is specified, use Rock (Type B) under corrugated steel panels. Use at least 6 corrugated steel panels for each entrance. Couple panels together.

Install temporary construction entrance by:

1. Positioning fabric along the length of the entrance
2. Overlapping sides and ends of fabric by at least 12 inches
3. Spreading rock over fabric in the direction of traffic
4. Covering fabric with rock within 24 hours
5. Keeping a 6 inch layer of rock over fabric to prevent damage to fabric by spreading equipment

Do not drive on fabric until rock is spread.

Unless the Engineer eliminates the sump, install a sump within 20 feet of each temporary construction entrance.

Repair fabric damaged during rock spreading by placing a new fabric over the damaged area. New fabric must be large enough to cover damaged area and provide at least 18-inch overlap on all edges.

Maintenance

Maintain temporary construction entrance to minimize generation of dust and tracking of soil and sediment onto public roads. If dust or sediment tracking increases, place additional rock unless the Engineer approves another method.

Repair temporary construction entrance if:

1. Fabric is exposed
2. Depressions in the entrance surface develop
3. Rock is displaced

Repair temporary construction entrance within 24 hours of discovering damage unless the Engineer approves a longer period.

During use of temporary construction entrance, do not allow soil, sediment, or other debris tracked onto pavement to enter storm drains, open drainage facilities, or watercourses. When material is tracked onto pavement, remove it within 24 hours unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace the temporary construction entrance, repair it at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

Removal

When the Engineer determines that temporary construction entrance is not required, remove and dispose of it under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Backfill and repair ground disturbance, including holes and depressions, caused by installation and removal of temporary construction entrance under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Temporary construction entrance is determined from actual count in place. Temporary construction entrance is measured one time only and no additional measurement will be recognized.

The contract price paid for temporary construction entrance includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing temporary construction entrance, complete in place, including removal of temporary construction entrance, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

No additional compensation will be made if the temporary construction entrance is relocated during the course of construction.

The State and you share the cost of maintaining temporary construction entrance. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. __ MOVE-IN/MOVE-OUT (TEMPORARY EROSION CONTROL)

GENERAL

Summary

This work includes moving onto the project when an area is ready to receive temporary erosion control, setting up required personnel and equipment for the application of erosion control materials, and moving out all personnel and equipment when temporary erosion control in that area is completed.

Temporary erosion control consists of any water pollution control practice for soil stabilization.

When notified by the Engineer that an area is ready for temporary erosion control, start erosion control work within 5 business days.

MEASUREMENT AND PAYMENT

Move-in/move-out (temporary erosion control) is measured as units from actual count. A move-in followed by a move-out is considered one unit.

The contract unit price paid for move-in/move-out (temporary erosion control) includes full compensation for furnishing all labor, materials (excluding temporary erosion control materials), tools, equipment, and incidentals and for doing all the work involved in moving in and removing from the project all personnel and equipment necessary for application of temporary erosion control, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1. TEMPORARY DRAINAGE INLET PROTECTION

GENERAL

Summary

This work includes constructing, maintaining, and removing temporary drainage inlet protection. Drainage inlet protection settles and filters sediment before stormwater runoff discharges into storm drainage systems.

The SWPPP must describe and include the use of temporary drainage inlet protection as a water pollution control practice for sediment control.

Provide temporary drainage inlet protection to meet the changing conditions around the drainage inlet. Temporary drainage inlet protection must be:

1. Appropriate type to meet the conditions around the drainage inlet
2. Type 1, Type 2, Type 3A, Type 3B, Type 4, Type 4B, Type 5, Type 6A, Type 6B, or a combination

Submittals

Submit a Certificate of Compliance as specified in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for:

1. Erosion control blanket
2. Fiber rolls
3. Safety cap for metal posts
4. Silt fence fabric
5. Sediment filter bag
6. Foam barrier
7. Rigid plastic barrier
8. Gravel-filled bag fabric

If you substitute the steel wire staple with an alternative attachment device, submit a sample of the device for approval at least 5 business days before installation.

MATERIALS

Geosynthetic Fabrics

Geosynthetic fabrics for temporary drainage inlet protection must consist of one of the following:

1. Polyester
2. Polypropylene
3. Combined polyester and polypropylene

Geosynthetic fabrics for temporary drainage inlet must comply with the specifications for water pollution control in Section 88-1.05, "Water Pollution Control," of the Standard Specifications.

Foam barrier must comply with:

Foam Barrier		
Property	ASTM Designation	Specification
Grab breaking load 1-inch grip, lb, min. in each direction	D 4632	200
Apparent elongation percent, min., in each direction	D 4632	15
Water Flow Rate max. average roll value, gallons per minute/square foot	D 4491	100-150
Permittivity 1/sec., min.	D 4491	0.05
Apparent opening size max. average roll value, U.S. Standard sieve size	D 4751	40
Ultraviolet Degradation percent of original unexposed grab breaking load 500 hr, minimum	D 4595	70

Sample under ASTM D 4354, Procedure C.

Test under ASTM D 4759. All properties are based on Minimum Average Roll Value (MARV).

Identify, store, and handle under ASTM D 4873.

Erosion Control Blanket

Erosion control blanket must be:

1. Described as a rolled erosion control product (RECP)
2. Classified as temporary and degradable or long-term and non-degradable
3. Machine-made mats
4. Provided in rolled strips
5. Classified by the Erosion Control Technology Council (ECTC)

Erosion control blanket classified as temporary and degradable must be one of the following:

1. Double net excelsior blanket:
 - 1.1. Classified as ECTC Type 2D
 - 1.2. Classified as an erosion control blanket
 - 1.3. Designed to last for at least one year after installation
 - 1.4. With a Universal Soil Loss Equation (USLE) C-Factor of not more than 0.20 at a 2:1 (horizontal:vertical) slope
 - 1.5. With 80 percent of the wood excelsior fibers being 6 inches or longer

- 1.6. Capable to withstand a maximum shear stress of 1.75 pounds per square foot under ASTM D 6460
 - 1.7. With a minimum tensile strength of 75 pounds per foot under ASTM D 5035
 - 1.8. With top and bottom surfaces covered with extruded photodegradable plastic netting or lightweight non-synthetic netting
2. Double net straw and coconut blanket:
- 2.1. Classified as ECTC Type 2D
 - 2.2. Classified as an erosion control blanket
 - 2.3. Designed to last for at least one year after installation
 - 2.4. With a USLE C-Factor of not more than 0.20 at a 2:1 (horizontal:vertical) slope
 - 2.5. Comprised of 70 percent straw and 30 percent coconut fiber
 - 2.6. Capable to withstand a maximum shear stress of 1.75 pounds per square foot under ASTM D 6460
 - 2.7. With a minimum tensile strength of 75 pounds per foot under ASTM D 5035
 - 2.8. With top and bottom surfaces covered with extruded photodegradable plastic netting or lightweight non-synthetic netting
3. Jute netting:
- 3.1. Classified as ECTC Type 3B
 - 3.2. Classified as an open weave textile and have from 14 to 20 strands per foot in each direction
 - 3.3. Designed to last for at least one year after installation
 - 3.4. With a USLE C-Factor of not more than 0.25 at a 1.5:1 (horizontal:vertical) slope
 - 3.5. Comprised of 100 percent unbleached and undyed spun yarn made of jute fiber
 - 3.6. With an average open area from 63 to 70 percent
 - 3.7. From 48 to 72 inches in width
 - 3.8. Capable to withstand a maximum shear stress of 2.0 pounds per square foot under ASTM D 6460
 - 3.9. With a minimum tensile strength of 100 pounds per foot under ASTM D 5035
 - 3.10. From 0.90 to 1.20 pounds per square yard in weight
4. Coir netting:
- 4.1. Classified as ECTC Type 4
 - 4.2. Classified as an open weave textile and from 13 to 18 strands per foot in each direction
 - 4.3. Designed to last for at least three years after installation
 - 4.4. With a USLE C-Factor of not more than 0.25 at a 1:1 (horizontal:vertical) slope
 - 4.5. Comprised of 100 percent unbleached and undyed spun coir yarn made of coconut fiber
 - 4.6. With an average open area from 63 to 70 percent
 - 4.7. From 72 to 158 inches in width
 - 4.8. Capable to withstand a maximum shear stress of 2.25 pounds per square foot under ASTM D6460
 - 4.9. With a minimum tensile strength of 125 pounds per foot under ASTM D 5035
 - 4.10. From 1.20 to 1.67 pounds per square yard in weight

Erosion control blanket classified as long-term and non-degradable must:

1. Be a geosynthetic fabric
2. Comply with the specifications for rock slope protection fabric (Class 8) in Section 88-1.06, "Channel and Shore Protection," of the Standard Specifications

Staples

You may use an alternative attachment device such as a geosynthetic pins or plastic pegs to install erosion control blanket.

Rock

Rock must comply with:

1. Requirements under Section 72-2.02, "Materials," of the Standard Specifications
2. Following sizes:

Square Screen Size (inch)	Percentage Passing	Percentage Retained
6	100	0
3	0	100

Rope

Rope for fiber rolls must be:

1. Biodegradable, such as sisal or manila
2. At least 1/4 inch in diameter

Fiber Rolls

Fiber rolls must:

1. Last for at least one year after installation
2. Be Type 1 or Type 2

For Type 1, fiber rolls must be:

1. Made from an erosion control blanket classified as temporary and degradable
2. Rolled along the width
3. Secured with natural fiber twine every 6'-6" from each end
4. Finished to be either:
 - 4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 0.5 pounds per linear foot
 - 4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 2 pounds per linear foot

For Type 2, fiber rolls must:

1. Be filled with rice or wheat straw, wood excelsior, or coconut fiber

2. Be covered with photodegradable plastic netting, biodegradable jute, sisal, or coir fiber netting
3. Have netting secured tightly at each end
4. Be finished to be either:
 - 4.1. From 8 to 10 inches in diameter, from 10 to 20 feet long, and at least 1.1 pounds per linear foot
 - 4.2. From 10 to 12 inches in diameter, at least 10 feet long, and at least 3 pounds per linear foot

Wood Stakes

Wood stakes must be:

1. Untreated fir, redwood, cedar, or pine and cut from sound timber
2. Straight and free of loose or unsound knots and other defects which would render the stakes unfit for use
3. Pointed on the end to be driven into the ground

For fiber rolls, wood stakes must be at least:

1. 1" x 1" x 24" in size for Type 1 installation
2. 1" x 2" x 24" in size for Type 2 installation

Posts

Posts must be wood or metal.

Wood posts must be:

1. Untreated fir, redwood, cedar, or pine and cut from sound timber
2. Straight and free of loose or unsound knots and other defects that would render the stakes unfit for use
3. Pointed on the end to be driven into the ground
4. At least 2" x 2" in size, and 4 feet long

Metal posts must:

1. Be made of steel.
2. Have a "U," "T," "L," or other cross sectional shape that can resist failure from lateral loads.
3. Be pointed on the end to be driven into the ground.
4. Weigh at least 0.75-pound per foot.
5. Be at least 4 feet long.
6. Have a safety cap attached to the exposed end. The safety cap must be orange or red plastic and fit snugly to the metal post.

Silt Fence

Silt fence must be:

1. Constructed with silt fence fabric, posts, and fasteners
2. Prefabricated or assembled at the job site

Silt fence fabric must be attached to posts using these methods:

1. If prefabricated silt fence is used, posts must be inserted into sewn pockets
2. If assembled on the job site:
 - 2.1. If wood posts are used, fasteners must be staples or nails
 - 2.2. If steel posts are used, fasteners must be tie wires or locking plastic fasteners
 - 2.3. Spacing of the fasteners must be at least 8 inches

Gravel-filled Bags

Gravel-filled bags must:

1. Be made from fabric.
2. Have inside dimensions from 24 to 32 inches in length, and from 16 to 20 inches in width.
3. Have the opening bound to retain the gravel. The opening must be sewn with yarn, bound with wire, or secured with a closure device.
4. Weigh from 30 to 50 pounds when filled with gravel.

Gravel for gravel-filled bags must be:

1. From 3/8 to 3/4 inch in diameter
2. Clean and free from clay balls, organic matter, and other deleterious materials

Sediment Filter Bag

Sediment filter bag must:

1. Be made of fabric
2. Be sized to fit the catch basin or drainage inlet
3. Include a high-flow bypass

Sediment filter bag may include a metal frame. Sediment filter bags that do not have a metal frame and are deeper than 18 inches must:

1. Include lifting loops and dump straps
2. Include a restraint cord to keep the sides of the bag away from the walls of the catch basin

Foam Barriers

Foam barriers must:

1. Be filled with a urethane foam core
2. Have a geosynthetic fabric cover and flap
3. Have a triangular, circular, or square shaped cross section
4. Have a vertical height of at least 5 inches after installation

5. Have a horizontal flap of at least 8 inches in width
6. Have a length of at least 4 feet per unit
7. Have the ability to interlock separate units into a longer barrier so that water does not flow between the units
8. Be secured to:
 - 8.1. Pavement with 1-inch concrete nails with 1-inch washers and solvent-free adhesive
 - 8.2. Soil with 6-inch nails with 1-inch washers

Rigid Plastic Barriers

Rigid plastic barriers must:

1. Have an integrated filter
2. Have a formed outer jacket of perforated high density polyethylene (HDPE) or polyethylene terephthalate (PET)
3. Have a flattened tubular shaped cross section
4. Be made from virgin or recycled materials
5. Be free from biodegradable filler materials that degrade the physical or chemical characteristics of the finished filter core or outer jacket
6. Have a length of at least 4 feet per unit
7. Have the ability to interlock separate units into a longer barrier so that water does not flow between the units
8. Be secured to:
 - 8.1 Pavement with 1-inch concrete nails with 1-inch washers and solvent-free adhesive, with gravel-filled bags, or a combination
 - 8.2 Soil with 6-inch nails with 1-inch washers and wood stakes

9. Comply with the following properties:

Specification	Requirements
Grab tensile strength of outer jacket material, pounds/square inch, min. in each direction ASTM D 4632*	4000
Break strength of outer jacket, pounds/square inch ASTM D 4632*	1300
Permittivity of filter core, 1/sec., min. ASTM D 4491	0.38
Flow rate of filter core, gallons per minute per square foot, ASTM D 4491	100 min. 200 max.
Filter core aperture size, max., Average Opening Size (AOS), microns	425
Ultraviolet stability (outer jacket & filter core), percent tensile strength retained after 500 hours, min. ASTM D 4355 (xenon-arc lamp and water spray weathering method)	90

* or appropriate test method for specific polymer

If used at a curb inlet without a grate, rigid plastic barriers must:

1. Have a horizontal flap of at least 6 inches with an under-seal gasket to prevent underflows
2. Include a high-flow bypass

3. Have a vertical height of at least 7 inches after installation
4. Be sized to fit the catch basin or drainage inlet

If used at a grated catch basin without a curb inlet, rigid plastic barriers must:

1. Cover the grate by at least 2 inches on each side and have an under-seal gasket to prevent underflows
2. Include a high-flow bypass
3. Have a vertical height of at least 1.5 inches after installation
4. Be sized to fit the catch basin or drainage inlet

If used at a curb inlet with a grate, rigid plastic barriers must:

1. Have a horizontal flap that covers the grate by at least 2 inches on the 3 sides away from the curb opening and have an under-seal gasket to prevent underflows
2. Include a high-flow bypass
3. Have a vertical section that covers the curb opening by at least 5 inches after installation
4. Be sized to fit the catch basin or drainage inlet

If used as a linear sediment barrier, rigid plastic barriers:

1. Must have an installed height of at least 6 inches
2. May have a horizontal flap of at least 4 inches

Linear Sediment Barrier

Linear sediment barriers must consist of one or more of the following:

1. Silt fence
2. Gravel-filled bags
3. Fiber roll
4. Rigid plastic barrier
5. Foam barrier

Flexible Sediment Barrier

Flexible sediment barriers consist of one or more of the following:

1. Rigid plastic barrier
2. Foam barrier

CONSTRUCTION

For drainage inlet protection at drainage inlets in paved and unpaved areas:

1. Prevent ponded runoff from encroaching on the traveled way or overtopping the curb or dike. Use linear sediment barriers to redirect runoff and control ponding.
2. Clear the area around each drainage inlet of obstructions including rocks, clods, and debris greater than one inch in diameter before installing the drainage inlet protection.
3. Install a linear sediment barrier up-slope of the existing drainage inlet and parallel with the curb, dike, or flow line to prevent sediment from entering the drainage inlet.

Erosion Control Blanket

To install erosion control blanket and geosynthetic fabric:

1. Secure blanket or fabric to the surface of the excavated sediment trap with staples and embed in a trench adjacent to the drainage inlet
2. Anchor the perimeter edge of the erosion control blanket in a trench

Silt Fence

If silt fence is used as a linear sediment barrier:

1. Place fence along the perimeter of the erosion control blanket, with the posts facing the drainage inlet
2. Install fence with the bottom edge of the silt fence fabric in a trench. Backfill the trench with soil and compact manually

Gravel Bag Berm

If gravel bag berm is used as a linear sediment barrier:

1. Place gravel-filled bags end-to-end to eliminate gaps
2. Stack bags in a way that the bags in the top row overlap the joints in the lower row

If gravel bag berms are used for Type 3A and Type 3B:

1. Place gravel-filled bags end-to-end to eliminate gaps
2. Stack bags in a way that the bags in the top row overlap the joints in the lower row
3. Arrange bags to create a spillway by removing one or more gravel-filled bags from the upper layer

If used within shoulder area, place gravel-filled bags behind temporary railing (Type K).

Fiber Rolls

If fiber rolls are used as a linear sediment barrier:

1. Place fiber rolls in a furrow.
2. Secure fiber rolls with stakes installed along the length of the fiber rolls. Stakes must be installed from 6 to 12 inches from the end of the rolls.

If fiber rolls are used as a linear sediment barrier for Type 4A, place them over the erosion control blanket.

Foam Barriers

If foam barriers are used as a linear sediment barrier:

1. Install barriers with the horizontal flap in a 3 inch deep trench and secured with nails and washers placed no more than 4 feet apart
2. Secure barriers with 2 nails at the connection points where separate units overlap
3. Place barriers without nails or stakes piercing the core

Flexible Sediment Barriers

If flexible sediment barriers are used:

1. Secure barriers to the pavement with nails and adhesive, gravel-filled bags, or a combination
2. Install barriers flush against the sides of concrete, asphalt concrete, or hot mix asphalt curbs or dikes
3. Place barriers to provide a tight joint with the curb or dike and anchored in a way that runoff cannot flow behind the barrier

If flexible sediment barriers are used for Type 4B:

1. Secure barriers to the pavement according to the angle and spacing shown on the plans
2. Place barriers to provide a tight joint with the curb or dike. Cut the cover fabric or jacket to ensure a tight fit

Rigid Sediment Barriers

If rigid sediment barriers are used at a grated catch basin without a curb inlet:

1. Place barriers using the gasket to prevent runoff from flowing under the barrier
2. Secure barriers to the pavement with nails and adhesive, gravel-filled bags, or a combination

If rigid sediment barriers are used for linear sediment barriers:

1. Install barriers in a trench. Backfill the trench with soil and compact manually
2. Place barrier with separate units overlapping at least 4 inches
3. Reinforce barriers with a wood stake at each overlap
4. Fasten barriers to the wood stakes with steel screws, 16 gauge galvanized steel wire, or with UV stabilized cable ties that are from 5 to 7 inches in length

Sediment Filter Bags

Install sediment filter bags for Type 5 by:

1. Removing the drainage inlet grate
2. Placing the sediment bag in the opening
3. Replacing the grate to secure the sediment filter bag in place

MAINTENANCE

Maintain temporary drainage inlet protection to provide sediment holding capacity and to reduce runoff velocities.

Remove sediment deposits, trash, and debris from temporary drainage inlet protection as needed or when directed by the Engineer. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water. Trash and debris must be removed and disposed of as specified in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Maintain temporary drainage inlet protection by removing sediment from:

1. Behind flexible sediment barriers when sediment exceeds 1 inch in depth
2. Surface of the erosion control blanket when sediment exceeds 1 inch in depth
3. Sediment trap for Type 2 when the volume has been reduced by approximately one-half
4. Behind silt fence when the sediment is 1/3 the height of the silt fence fabric above ground
5. Sediment filter bags when filled or when the restraint cords are no longer visible

If rills and other evidence of concentrated runoff occur beneath the linear sediment barrier, repair or adjust the barrier.

If silt fence fabric becomes split, torn, or unraveled, repair or replace silt fence.

If geosynthetic fabric becomes split, torn, or unraveled, repair or replace foam barriers.

Repair or replace sagging or slumping linear sediment barriers with additional stakes.

Replace broken or split wood stakes.

Reattach foam barriers and rigid plastic barriers that become detached or dislodged from the pavement.

Repair split or torn rigid plastic barriers with 16 gauge galvanized steel wire or UV stabilized cable ties that are from 5 to 7 inches in length.

For sediment filter bags without metal frames, empty by placing one inch steel reinforcing bars through the lifting loops and then lift the filled bag from the drainage inlet. For sediment filter bags with metal frames, empty by lifting the metal frame from the drainage inlet. Rinse before replacing in the drainage inlet. When rinsing the sediment filter bags, do not allow the rinse water to enter a drain inlet or waterway.

Repair temporary drainage inlet protection within 24 hours of discovering damage unless the Engineer approves a longer period.

If your vehicles, equipment, or activities disturb or displace temporary drainage inlet protection, repair temporary drainage inlet protection at your expense.

The Department does not pay maintenance costs for cleanup, repair, removal, disposal, or replacement due to improper installation or your negligence.

REMOVAL

When the Engineer determines that the temporary drainage inlet protection is not required, it must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary drainage inlet protection must be backfilled and repaired under Section 15-1.02, "Preservation of Property," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Quantities of temporary drainage inlet protection will be determined from actual count in place. The protection will be measured one time only and no additional measurement will be recognized.

The contract unit price paid for temporary drainage inlet protection includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the temporary drainage inlet protection, complete in place, including removal of materials, cleanup and disposal of retained sediment and debris, and backfilling and repairing holes, depressions and other ground disturbance, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

No additional compensation will be made if the temporary drainage inlet protection is relocated during the course of construction.

The State and you share the cost of maintaining the temporary drainage inlet protection. The State determines the maintenance cost under Section 9-1.03, "Force Account Payment," of the Standard Specifications and pays you one-half of that cost.

10-1. DISPOSAL OF PORTLAND CEMENT CONCRETE (PCC) PAVEMENT GROOVING AND GRINDING RESIDUES

Disposal of portland cement concrete (PCC) pavement grooving and grinding residues shall be in conformance with the provisions in Section 42, "Groove and Grind Pavement," of the Standard Specifications and these special provisions.

The Contractor shall include water pollution control measures to address the handling of the grinding pavement residue within the Storm Water Pollution Prevention Plan or Water Pollution Control Program, as specified in "Water Pollution Control" of these special provisions.

Temporary storage of PCC pavement grooving and grinding residues shall not be allowed within the highway right of way. The Contractor may transport liquid PCC pavement grooving and grinding residues to an offsite drying location if the Engineer provides written approval. The offsite drying location shall be identified and protected in conformance with "Water Pollution Control" of these special provisions.

Temporary storage locations shown on the plans for PCC pavement grooving and grinding residues within the highway right of way may be used to dry the material before disposal outside the highway right of way. Temporary storage facilities for PCC pavement grooving and grinding residues shall be in conformance with WM-8, Concrete Waste Management in the Construction Site BMPs Manual or "Temporary Concrete Washout Facility" of these special provisions.

A Materials Information Handout is not available for disposal of PCC pavement grooving or grinding residues. The Contractor shall dispose of PCC pavement grooving and grinding residues in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside of the Right of Way," of the Standard Specifications. The facilities listed below were permitted by Regional Water Quality Control Board (RWQCB) or other agencies that may accept PCC pavement grinding and grooving residues as of July 1, 2004. If the Contractor is planning to use one of these sites, the Contractor shall determine if the facility has a current permit to accept PCC pavement grooving and grinding residues and if the facility can accept the waste at the time of generation.

Site Name	Location	Telephone	Waste Types / Restrictions
Clean Harbors Environmental Services Buttonwillow	2500 West Lokern Road Buttonwillow, CA	(562) 432-5445	Hazardous Solids and Non-Hazardous Liquids and Solids
Clean Harbors Environmental Services San Jose	1021 Berryessa San Jose, CA	(408) 451-5000	Hazardous and Non-Hazardous Liquids
Crosby & Overton, Inc.	1610 W. 17th Street Long Beach, CA	(562) 432-5445	Hazardous and Non-Hazardous Liquids
D/K Environmental	3650 East 26th Street Vernon, CA	(323) 268-5056	Hazardous and Non-Hazardous Liquids and Solids
DeMenno-Kerdoon	200 N. Alameda Street Compton, CA	(323) 268-5057 (310) 537-7100	Hazardous and Non-Hazardous Liquids and Solids
Filter Recycling Services, Inc.	180 West Monte Avenue Rialto, CA	(909) 424-1630	Hazardous and Non-Hazardous Liquids
K-Pure Water Works	8910 Rochester Ave Rancho Cucamonga, CA	(909) 476-2308	Non-Hazardous Liquids
Liquid Waste Management McKittrick	56533 Highway 58 McKittrick, CA	(559) 386-6104	Non-Hazardous Liquids and Solids
Onyx Environmental Services LLC	1704 W. First Street Azusa, CA	(626) 334-5117	Hazardous and Non-Hazardous Liquids and Solids
Phibro-Tech, Inc.	8851 Dice Road Santa Fe Springs, CA	(562) 698-8036	Hazardous and Non-Hazardous Liquids and Solids
Romic Environmental Technologies Corporation	2081 Bay Road East Palo Alto, CA	(650) 324-1638	Hazardous and Non-Hazardous Liquids
Seaport Environmental	700 Seaport Boulevard Redwood City, CA	(650) 364-8154	Non-Hazardous Liquids
Southwest Treatment Systems, Inc.	4120 Bandini Boulevard Los Angeles, CA	(800) 900-3366	Non-Hazardous Liquids
US Filter Recovery Services, Inc.	5375 S. Boyle Avenue Vernon, CA	(323) 277-1495	Hazardous and Non-Hazardous Liquids and Solids
Waste Management Kettleman City	35251 Old Skyline Road Kettleman City, CA	(559) 386-6104	Hazardous and Non-Hazardous Liquids and Solids

If the Contractor disposes of PCC pavement grooving and grinding residues at locations not listed above, the disposal shall be in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications, and the following:

- A. If the disposal facility is located within the State of California, the facility must be permitted by the RWQCB or other applicable agency, or the Contractor must obtain written approval from the RWQCB or other applicable agency.
- B. If located outside of the State of California, the facility must be permitted by the applicable local, state, or federal agencies, or the Contractor must obtain written approval from the applicable local, state, or federal agencies.

The following shall be delivered to the Engineer at least 5 days before disposal of PCC pavement grooving and grinding residues:

- A. The name, address, and telephone number of the disposal facility.
- B. If the facility is not listed above:
 1. Copy of the facility's RWQCB or other applicable agency permit, or

2. RWQCB's or other applicable agency's approval, or
3. Copy of the applicable agency permit if the final disposal location is located outside of the State of California.

The Contractor shall deliver landfill receipts and weight ticket of disposal of residues from PCC pavement grooving and grinding to the Engineer within 5 days of completing of PCC pavement grooving and grinding activities.

The Contractor shall make all arrangements and agreements for the disposal at the time of bidding. Costs related to obtaining approval for disposal within the State of California from the RWQCB or other applicable agency, or the applicable agency if the disposal location is located outside of the State of California, shall be borne by the Contractor and no additional payment shall be made therefore. Full compensation for all costs involved in disposing of PCC pavement grooving or grinding residues as specified in this section, including all costs of handling, temporary storage, hauling and disposal fees, shall be considered as included in the price paid for the contract item of work involving PCC pavement grooving or grinding residues and no additional compensation will be allowed therefore.

Attachment C

Amendments

SWPPP Amendment No. _____

Project Name:

Caltrans Contract Number: _____

To Be Completed by Contractor

"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 ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or ~~persons who manage the system or those persons directly responsible for gathering the information,~~ to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Contractor's Signature

Date

Contractor's Name and Title

Contractor's Telephone Number



For Use When Local Agency / Private Entity
is Administering Project

For Local Agency / Private Entity Use Only
**Resident Engineer's Approval and
Local Agency / Private Entity Certification of the
Stormwater Pollution Prevention Plan
or Water Pollution Control Plan
Amendment**

"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 ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Resident Engineer's Signature

Date

Resident Engineer's Name

Resident Engineer's Telephone
Number

For Caltrans Use Only
**Caltrans Oversight Engineer's Approval and
Caltrans Certification of the
Stormwater Pollution Prevention Plan Amendment**

"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 ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Oversight Engineer's Signature

Date

Oversight Engineer's Name

Oversight Engineer's Telephone
Number



Contract 4 CSWPPP - Attachment D

Run-Off Coefficient Weighted Average	
A. Existing	
Total construction area =	47.2 acres
Existing pavement =	32.0 acres
Existing pervious =	15.2 acres
Runoff coefficient paved =	0.95
Runoff coefficient unpaved =	0.44
$C = ((32.0 * 0.95) + (15.2 * 0.44)) / 47.2 = \mathbf{0.79}$	
B. Proposed	
Total construction area =	47.2 acres
Impervious area @ completion =	34.4 acres
final pervious area =	12.8 acres
Runoff coefficient paved =	0.95
Runoff coefficient unpaved =	0.44
$C = ((34.4 * 0.95) + (12.8 * 0.44)) / 47.2 = \mathbf{0.81}$	

ATTACHMENT E

Storm Water Flow Calculation

Q: Water Quality Flow, cu ft/sec

i: rainfall intensity for region 2-SF Bay, 2 in/hr

A: Total Costruction Site Area, 47.2 Acre

C: average runoff coefficient at construction completion, 0.70 (see attachment D)

$$Q=C*i*A = 0.70*0.2*47.2 = 6.61 \text{ cu ft/sec}$$

Q: Water Quality Flow, cu ft/sec

i: 1.86 in/hr (rainfall intensity value (10-yr, 15-minute)

A: run-on area

Coefficient of runoff: 0.44 (Unpaved Area from Storm Drainage Report, Section 2.1.3)

	Area (ft2)	Area (ac)	C	i	Q-CiA
A1	1,313	0.030142	0.44	1.86	0.02
A2	7,221	0.165771	0.44	1.86	0.14
A3	47,082	1.080854	0.44	1.86	0.88
A4		0	0.44	1.86	0.00
A5		0	0.44	1.86	0.00
A6		0	0.44	1.86	0.00

Attachment F

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

Attachment G

Maintenance, Inspection, and Repair of Construction Site BMPs

<i>SWPPP Inspection, Maintenance and Repair Program</i>			
BEST MANAGEMENT PRACTICES (BMPs)	INSPECTION FREQUENCY		MAINTENANCE/REPAIR PROGRAM
	Rainy	Non-Rainy	
TEMPORARY SOIL STABILIZATION BMPs			
			■
			■
			■
			■
TEMPORARY SEDIMENT CONTROL BMPs			
			■
			■
			■
			■
			■
			■
			■
WIND EROSION CONTROL BMPs			
TRACKING CONTROL BMPs			
			■
			■
NON-STORM WATER MANAGEMENT BMPs			
			■
			■
			■
			■
			■

SAMPLE



Attachment G

Sample Maintenance, Inspection and Repair of Construction Site BMPs

SWPPP Inspection, Maintenance and Repair Program			
BEST MANAGEMENT PRACTICES (BMPs)	INSPECTION FREQUENCY		MAINTENANCE/REPAIR PROGRAM
	Rainy	Non-Rainy	
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs			
			<ul style="list-style-type: none"> ■ ■ ■ ■ ■
			<ul style="list-style-type: none"> ■ ■ ■ ■ ■ ■

Site inspections shall be conducted by the Contractor's WPCM or other Caltrans approved 24-hour trained staff at the following minimum frequencies:

- Prior to a forecast storm;
- After a rain event that causes runoff from the construction site;
- At 24-hour intervals during extended rain events;
- Daily inspections within the Lake Tahoe Hydrologic Unit;
- Weekly during the rainy season;
- Every 2 weeks during the non-rainy season; and
- At any other time(s) or intervals of time specified in the Contract Special Provisions.

Completed inspection checklists shall be submitted to the Resident Engineer within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs.



Attachment H

Stormwater Quality Construction Site Inspection Checklist

GENERAL INFORMATION				
Project Name				
Caltrans Contract No.				
Contractor				
Inspector's Name				
Inspector's Title				
Signature				
Date of Inspection				
Inspection Type (Check Applicable)	<input type="checkbox"/> Prior to forecast rain			<input type="checkbox"/> After a rain event
	<input type="checkbox"/> 24-hr intervals during extended rain			<input type="checkbox"/> Other _____
Season (Check Applicable)	<input type="checkbox"/> Rainy			<input type="checkbox"/> Non-Rainy
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

PROJECT AREA SUMMARY AND DISTURBED SOIL AREA (DSA) SIZE LIMITS FROM SPECIAL PROVISIONS			
Total Project Area	_____ Hectares	_____ Acres	
Rainy Season DSA Limit	_____ Hectares	_____ Acres	
Field Estimate of Non-Active DSAs	_____ Hectares	_____ Acres	
Field Estimate of Active DSAs	_____ Hectares	_____ Acres	



OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Preservation of Existing Vegetation				
Is temporary fencing provided to preserve vegetation in areas where no construction activity is planned?				
Location:				
Temporary Soil Stabilization				
Does the applied temporary soil stabilization provide 100% coverage for the required areas?				
Are any non-vegetated areas that may require temporary soil stabilization?				
Is the area where temporary soil stabilization required free from visible erosion?				
Location:				
Temporary Linear Sediment Barriers				
Are temporary linear sediment barriers properly installed in accordance with the details, functional and maintained?				
Are temporary linear sediment barriers free of accumulated litter?				
Is the built-up sediment less than 1/3 the height of the barrier?				
Are cross barriers installed where necessary and properly spaced?				
Are fiber rolls installed and maintained on required slopes in accordance with the details, functional and maintained?				
Location:				
Storm Drain Inlet Protection				
Are storm drain inlets internal to the project properly protected with either Type 1, 2 or 3 inlet protection?				
Are storm drain inlet protection devices in working order and being properly maintained?				
Location:				



OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Location:				
Desilting Basins				
Are basins maintained to provide the required retention/detention?				
Are basin controls (inlets, outlets, diversions, weirs, spillways, and racks) in working order?				
Location:				
Stockpiles				
Are all locations of temporary stockpiles, including soil, hazardous waste, and construction materials in approved areas?				
Are stockpiles protected from run-on, run-off from adjacent areas and from winds?				
Are stockpiles located at least 50 ft from concentrated flows, downstream drainage courses and storm drain inlets?				
Are required covers and/or perimeter controls in place?				
Location:				
Concentrated Flows				
Are concentrated flow paths free of visible erosion?				
Location:				
Tracking Control				
Are points of ingress/egress to public/private roads inspected, swept, and vacuumed daily?				
Are all paved areas free of visible sediment tracking or other particulate matter?				
Is rock at Temporary Construction Entrance(s) 12-inches or more in thickness?				
Does sediment need to be removed from the rock, or does the rock need to be replaced?				
For Type 2 Construction Entrance, does sediment need to be removed from ribbed plates?				
Location:				
Location:				
Location:				



Attachment H
Stormwater Quality Construction Site Inspection Checklist

OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Location:				
Wind Erosion Control				
Is dust control implemented in conformance with Section 10 of the Standard Specifications?				
Location:				
Dewatering Operations				
Is dewatering handled in conformance with the dewatering permit issued by the RWQCB?				
Is required treatment provided for dewatering effluent?				
Location:				
Vehicle & Equipment Fueling, Cleaning, and Maintenance				
Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material?				
Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas?				
If no, are drip pans used?				
Are dedicated fueling, cleaning, and maintenance areas located at least 15 m away from downstream drainage facilities and watercourses, and protected from run-on and runoff?				
Is wash water contained for infiltration/ evaporation and disposed of outside the highway right of way?				
Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)?				
On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired?				
Location:				
Waste Management & Materials Pollution Control				
Are material storage areas and washout areas protected from run-on and runoff, and located at least 50 ft from concentrated flows and downstream drainage facilities?				
Are all material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies?				



OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities?				
Are bagged and boxed materials stored on pallets?				
Are hazardous materials and wastes stored in appropriate, labeled containers?				
Are proper storage, clean-up, and spill-reporting procedures for hazardous materials and wastes posted in open, conspicuous and accessible locations adjacent to storage areas?				
Are temporary containment facilities free of spills and rainwater?				
Are temporary containment facilities and bagged/boxed materials covered?				
Are temporary concrete washout facilities designated and being used?				
Are temporary concrete washout facilities functional for receiving and containing concrete waste and are concrete residues prevented from entering the drainage system?				
Do temporary concrete washout facilities provide sufficient volume and freeboard for planned concrete operations?				
Are the temporary concrete washout facilities' PVC liners free from punctures and holes?				
Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities?				
Are spills from mobile equipment fueling and maintenance properly contained and cleaned up?				
Is the site free of litter?				
Are trash receptacles provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods?				
Is litter from work areas within the construction limits of the project site collected and placed in watertight dumpsters?				
Are waste management receptacles free of leaks?				
Are the contents of waste management receptacles properly protected from contact with storm water or from being dislodged by winds?				
Are waste management receptacles filled at or beyond capacity?				
Location:				
Temporary Water Body Crossing or Encroachment				
Are temporary water body crossings and encroachments constructed as shown on the plans or as approved by the engineer?				
Does the project conform to the requirements of the 404 permit and/or 1801 agreement?				
Location:				
Location:				
Location:				

Attachment H
Stormwater Quality Construction Site Inspection Checklist

OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Location:				
Illicit Connection/Illegal Discharge Detection and Reporting				
Is there any evidence of illicit discharges or illegal dumping on the project site?				
If yes, has the Engineer been notified?				
Location:				
Discharge Points				
Are discharge points and discharge flows free from noticeable pollutants?				
Are discharge points free of any significant erosion or sediment transport?				
Location:				
WPCP/SWPPP Update				
Do the WPCP/SWPPP, Project Schedule/Water Pollution Control Schedule and WPCDs adequately reflect the current site conditions and contractor operations?				
Are all BMPs shown on the WPCDs installed in the proper location(s) and according to the details for the plan?				
Location:				
General				
Are there any other potential water pollution control concerns at the site?				
Location:				
Storm Water Monitoring				
Does storm water discharge directly to a water body listed as impaired for sediment/sedimentation or turbidity in the General Construction Activity Permit?				
If yes, were samples for sediment/sedimentation or turbidity collected pursuant to the sampling and analysis plan, if required, during rain events?				



OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Were there any BMPs not properly implemented, or breaches, malfunctions, leakages or spills observed, which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Were soil amendments (e.g., gypsum) used on the project?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Did storm water contact stored materials or waste and resulted in a discharge from the construction site? (Materials not in watertight containers, etc.)				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				



Attachment I

Trained Contractor Personnel Log

Stormwater Management Training Log

Project Name: _____

Caltrans Contract Number: _____

Storm Water Management Topic: (check as appropriate)

- Temporary Soil Stabilization Temporary Sediment Control
- Wind Erosion Control Tracking Control
- Non-storm water management Waste Management and Materials Pollution Control
-
- Storm Water Sampling

Specific Training Objective: _____

Location: _____

Date: _____

Instructor: _____

Telephone: _____

Course Length (hours): _____

Attendee Roster (attach additional forms if necessary)

Name	Company	Phone

Attachment I
Trained Contractor Personnel Log Sheet

Name	Company	Phone

COMMENTS:



Attachment J

Subcontractor Notification Letter (Sample) and Notification Log

SWPPP Notification

ABC Construction Inc,
123 Sunset Blvd., Suite 456
Hollywood, CA 90000

Dear Sir/Madam,

Please be advised that the California State Water Resources Control Board has adopted the NPDES Statewide Storm Water Permit (Permit) to the State of California, Department of Transportation (Caltrans) in 1999 (CAS000003, Order No. 99-06-DWQ); and the General Permit (General Permit) for Storm Water Discharges Associated with Construction Activity (CAS000002, Order No. 99-08-DWQ), and modifications thereto. The goal of these permits is prevent the discharge of pollutants associated with construction activity from entering the storm drain system, ground and surface waters.

[Contractor] has developed a Storm Water Pollution Prevention Plan (SWPPP) in order to implement the requirements of the Permits.

As a subcontractor, you are required to comply with the SWPPP and the Permits for any work that you perform on site. Any person or group who violates any condition of the Permits may be subject to substantial penalties in accordance with state and federal law. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP and the Permits. A copy of the Permits and the SWPPP are available for your review at the construction office. Please contact me if you have further questions.

Sincerely,

John Doe
Project Superintendent



Attachment K

Notice of Discharge

INSTRUCTIONS

- This form will be used to report instances of discharges. The completed form will be submitted to the Resident Engineer within 7 days (3 days for Districts 7 and 11), or as specified by the Special Provisions, of the assessment of discharge, written notice or orders from a regulatory agency.
- Submit photographs (before and after the discharge) with this report.

To: Name of Caltrans Resident Engineer

Date: Insert Date

Subject: Notice of Discharge

Project Name: Insert Project Name

Caltrans Contract Number: contract number

In accordance with the Caltrans NPDES Statewide Permit for Storm Water Discharges Associated with Construction Activity, the following instance of discharge is noted:

Date, time, and location of discharge

Insert description and date of event

Nature of the operation that caused the discharge

Insert description of operation

Initial assessment of any impact caused by the discharge

Insert assessment

Existing BMP(s) in place prior to discharge event

List BMPs in place

Date of deployment and type of BMPs deployed after the discharge.

BMPs deployed after the discharge (with dates)

Steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Insert steps taken to prevent recurrence

Implementation and maintenance schedule for any affected BMPs

Insert implementation and maintenance schedule

If further information or a modification to the above schedule is required, notify the contact person below.

Name of Contact Person

Title

Company

Telephone Number

Signature

Date

ATTACHMENT L

(Intentionally Left Blank)

Attachment M

Annual Certification of Compliance Form

Annual Certification of Compliance for the Construction Contractor

Project Name: _____

Caltrans Contract Number: _____

Contractor Company Name: _____

Contractor Address: _____

Annual Certification Inspection Date: _____

Description of Work:

description of work

Work Now in Progress:

work in progress

Work Planned for Next 12 Months:

work planned

Water Pollution Control Manager Findings

I, and/or personnel acting under my direction and supervision, have inspected the project site and the work described above and certify:

1. YES NO Stormwater pollution control measures are being implemented in accordance with the SWPPP approved for the project.

2. YES NO The project site and activities thereon are in compliance with the Caltrans Statewide NPDES Permit No. CAS000003, the NPDES General Permit No. CAS000002, or local NPDES permits, which ever is applicable.

Approval by the Resident Engineer for the Annual Certification of Compliance

Resident Engineer's Findings

I, and/or personnel acting under my direction and supervision, have inspected the project site and the work described above and find as follows:

1. YES NO Stormwater pollution control measures are being implemented in accordance with the SWPPP approved for the project.

2. YES NO The project site and activities thereon are in compliance with the Caltrans Statewide NPDES Permit No. CAS000003, the NPDES General Permit No. CAS000002, or local NPDES permits, which ever is applicable.

When both 1 and 2 above are checked "yes", the resident engineer must complete the annual certification below.

If either 1 or 2 above are checked "no", the resident engineer must:

- File a notice of non-compliance within 30 days of identification of the noncompliance;
- Document follow up actions below;
- Notify the contractor; and
- Initiate corrective actions in accordance with the contract.

Is a Local Agency administering the project?

Yes No

Resident Engineer's Follow up Actions:

Attachment M
Annual Certification of Compliance

I, and or personnel acting under my direction and supervision, have reviewed and approved of the Contractor's Annual Certification of Compliance. However, the Contractor remains responsible and liable at all times for compliance with applicable requirements for which compliance is ultimately determined by the Regional Water Quality Control Board and/or the State Water Resources Control Board, and/or the EPA.

CERTIFICATION BY CALTRANS OR LOCAL AGENCY / PRIVATE ENTITY RESIDENT ENGINEER

Resident Engineer's Name and Signature

Date

CERTIFICATION BY CALTRANS OVERSIGHT ENGINEER (IF LOCAL AGENCY / PRIVATE ENTITY IS ADMINISTERING PROJECT)

Caltrans Oversight Engineer's Name and Signature

Date

Attachment N

Other Plans/Permits/Agreements

INSTRUCTIONS

- Include in this attachment a copy of the Caltrans Statewide Permit CAS000003.
- Include in this attachment a copy of the Construction General Permit CAS000002.
- Also include copies of other local, state, and federal plans, permits, and agreements. List of other plans, permits, and agreements shall be included in Section 400 of the SWPPP. Examples include:
 - RWQCB Waiver of Clean Water Act Section 401 Water Quality Certification.
 - US Army Corps of Engineers, Clean Water Act Section 404, Nationwide Permit 26-authorization letter.
 - California Department of Fish and Game Streambed Alteration Agreement II 564-xx.
- Copies of the above documents shall also be included in the Resident Engineer's file.





Making San Francisco Bay Better

June 12, 2009

California Department of Transportation
111 Grand Avenue
P.O. Box 23660
Oakland, California 94623-0660

ATTENTION: Jeff Jensen, Office Chief

AND

San Francisco County Transportation Authority
100 Van Ness Avenue, 25th Floor
San Francisco, California 94102

ATTENTION: Leroy L. Saage, PE, Doyle Drive Project Manager

SUBJECT: Consistency Determination No. CN 2-08

Ladies and Gentlemen:

~~On February 14, 2008, the California Department of Transportation and the San Francisco~~
County of Transportation submitted a description of the project and requested that the
Commission concur that the proposed project is consistent with its Amended Coastal Zone
Management Program for San Francisco Bay. The Commission concurs with the determination
of the California Department of Transportation and the San Francisco County of Transportation
that seismically retrofit, use and maintain the roadway along an approximately 1.6-mile-long,
105-foot-wide section of Doyle Drive/Highway 101, at the southern approach to the Golden
Gate Bridge, between the Merchant Road and Girard Road access ramps, in the Golden Gate
National Recreation Area's Presidio, in the City and County of San Francisco, is consistent with
the Commission's Amended Management Program for San Francisco Bay.

The Commission's Letter of Agreement for the subject consistency determination is
attached. If you should have any questions regarding the attached Letter of Agreement or need
any further assistance, please contact Karen Wolowicz of my staff at 415/352-3669 or
karenw@bcdca.gov.

Sincerely,

WILL TRAVIS
Executive Director

WT/KW/ra

Enc.

cc: U.S. Army Corps of Engineers, Attn: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn: Certification Section
Environmental Protection Agency
Federal Highway Administration, Attn: Lanh Phan
Presidio Trust, Attn: Michael Boland



Making San Francisco Bay Better

LETTER OF AGREEMENT FOR CONSISTENCY
DETERMINATION NO. CN 2-08

June 12, 2009

California Department of Transportation
111 Grand Avenue
P.O. Box 23660
Oakland, California 94623-0660

ATTENTION: Jeff Jensen, Office Chief

AND

San Francisco County Transportation Authority
100 Van Ness Avenue, 25th Floor
~~San Francisco, California 94102~~

ATTENTION: Leroy L. Saage, PE, Doyle Drive Project Manager

Ladies and Gentlemen:

I. Agreement

A. The San Francisco Bay Conservation and Development Commission agrees with the determination of the California Department of Transportation and the San Francisco County Transportation Authority that the following project is consistent with the Commission's Amended Management Program for San Francisco Bay:

Location: Along an approximately 1.6-mile-long, 105-foot-wide section of Doyle Drive/Highway 101, at the southern approach to the Golden Gate Bridge, between the Merchant Road and Girard Road access ramps, in the Golden Gate National Recreation Area's (GGNRA) Presidio, a Waterfront Park/ Beach Priority Use Area as designated by Bay Plan Map No. Four, in the City and County of San Francisco.

Description: Seismically retrofit, use and maintain the roadway to include the following: (1) an approximately 1,804-foot-long, at-grade roadway, East of the Golden Gate Bridge toll plaza; (2) an approximately 1,279-foot-long, 66- to 115-foot-high viaduct located between the Park Presidio Interchange and the San Francisco National Cemetery; (3) an approximately 213-foot-long at-grade roadway; (4) an approximately 853-foot-long Battery Tunnel with landscaping above the tunnel; (5) an approximately 1,214-foot-long, at-grade roadway with a 13- to 26-foot-high berm along the north side to shield the roadway from park visitors; (6) an approximately 1,017-foot-long Main Post Tunnel with landscaping above the tunnel; (7) an approximately 394-foot-long, 10-foot-high causeway; (8) an approximately 1,460-foot-long, at-grade roadway; and (6) reconfiguration of the Park Presidio

Interchange at the west end of Doyle Drive and the South Doyle Drive exit. The northbound roadway will consist of two 11-foot-wide lanes, one 12-foot-wide lane, one 10-foot-wide outside shoulder, and one 4-foot-wide inside (along the median) shoulder in both directions. The southbound roadway would be configured similarly and include an additional 11-foot-wide lane from the Park Presidio Interchange to Lyon Street. An approximately 122- to 146-foot-wide median will be between the north- and south-bound roadways.

B. This agreement is given based on the information submitted by or on behalf of the Department of Transportation and the San Francisco County of Transportation in their letter dated February 14, 2008.

II. Special Conditions

The authorization made herein shall be subject to the following special conditions:

A. Specific Plans and Plan Review

1. **Plan Review.** No work whatsoever shall be commenced pursuant to this authorization until final precise site, demolition, engineering, architectural, grading, public access, landscaping, and best management practices plans and any other relevant criteria, specifications, and plan information for that portion of the work have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required will be determined by the staff. To save time, preliminary drawings should be submitted and approved prior to final drawings.

- a. **Site, Architectural, Grading, and Landscaping Plans.** Site, demolition, architectural, grading, public access, and landscaping plans shall include and clearly label property lines, grading, details showing the location, types, dimensions, and materials to be used for all structures, irrigation, landscaping, drainage, seating, parking, signs, lighting, fences, paths, trash containers, utilities and other improvements.
- b. **Engineering Plans.** Engineering plans shall include a complete set of contract drawings and specifications and design criteria. The design criteria shall be appropriate to the nature of the project, the use of any structures, soil and foundation conditions at the site, and potential earthquake-induced forces. Final plans shall be signed by the professionals of record and be accompanied by:
 - (1) Evidence that the design complies with all applicable codes; and
 - (2) Evidence that a thorough and independent review of the design details, calculations, and construction drawings has been made.
- c. **Preliminary and Final Plans.** Plans submitted shall be accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon:

- (1) completeness and accuracy of the plans in showing the features required above, particularly property lines, existing and proposed public access improvements, and any other criteria required by this authorization;
- (2) consistency of the plans with the terms and conditions of this authorization;
- (3) the provision of the amount and quality of public access to and along the shoreline and in and through the project to the shoreline required by this authorization;
- (4) consistency of the plans with the recommendations of the Design Review Board;
- (5) assuring that appropriate provisions have been incorporated for safety in case of seismic event; and
- (6) assuring that appropriate elevations have been met to prevent overtopping, flooding, and 100-year storm events in all public access areas.

Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed.

- ~~2. **Conformity with Final Approved Plans.** All work, improvements, and uses shall conform to the final approved plans. Prior to any use of the facilities authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No noticeable changes shall be made thereafter to any final plans or to the exterior of any constructed structure, outside fixture, lighting, landscaping, signage, landscaping, or parking area, without first obtaining written approval of the change(s) by or on behalf of the Commission.~~
3. **Discrepancies between Approved Plans and Special Conditions.** In case of any discrepancy between final approved plans and Special Conditions of this authorization or legal instruments approved pursuant to this authorization, the Special Condition or the legal instrument shall prevail. The permittees are responsible for assuring that all plans accurately and fully reflect the Special Conditions of this authorization and any legal instruments submitted pursuant to this authorization.
4. **Appeals of Plan Review Decisions.** Any plan approval, conditional plan approval or plan denial may be appealed by the permittees or any other interested party to the Design Review Board or, if necessary, subsequently to the Commission. Such appeals must be submitted to the Executive Director within 30 days of the plan review action and must include the specific reasons for appeal. The Design Review Board shall hold a public hearing and act on the appeal within 60 days of the receipt of the appeal. If subsequently appealed to the Commission, the Commission shall hold a public hearing and act on the appeal within 90 days of the receipt of the subsequent appeal.

B. Public Access Areas and Trails

1. **Restoring Access Areas and Paths.** At project completion, all public access trails existing as of the date of this consistency shall be maintained, replaced, or enhanced to conditions that are equal to or better than those existing at the time of issuance of

this consistency determination. Adequate signage shall be installed to inform park users of all new and existing public access areas and trails.

2. **Minimizing Construction Interruptions.** The Department of Transportation shall make every effort to minimize closures and impacts to existing public access areas adjacent to Doyle Drive during project construction. Every effort shall be made to keep the existing public access areas affected by work described in the consistency determination open to the public after 5 p.m. and on weekends, whenever possible. The existing public access areas affected by authorized work may be closed temporarily to the public during part or all of the construction for public safety. Any public paths closed temporarily due to construction activities authorized shall be clearly identified on signs notifying the public of suitable detour(s). In addition, signs shall be installed at all affected public access entrances informing the public of why the road or path is closed, when the road or path is open, possible detours, and when project construction will be completed.

C. Construction Best Management Practices

1. **Debris Removal.** All construction debris shall be removed and disposed at an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee, its assigns, or successors in interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement.
2. **Construction Operations.** All construction operations shall be performed to prevent construction materials from falling into the Bay and Crissy Marsh. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittee shall immediately retrieve and remove such material at its expense.

III. Findings and Declarations

A. On February 14, 2008, the Department of Transportation and the San Francisco County Transportation Authority submitted a description of the project and requested that the Commission concur that the project is consistent with its Amended Coastal Zone Management Program for San Francisco Bay.

The project to seismically retrofit Doyle Drive will be funded by the Federal Highway Administration and involves a similar activity, as defined by Commission Regulation Section 10601(e)(3) to the placement of small amounts of inert inorganic fill that would not have a significant adverse effect on present or possible future maximum feasible public access to the Bay or on the environment as defined by Commission Regulation Section 10601(b)(1). Overall, the project will preserve existing recreational opportunities at and to the waterfront. Additionally, the retrofitted highway would pass partly underground, reducing the highway's impact on the Presidio and providing an opportunity to develop a new, approximately 6.0-acre public park area above the proposed Main Post Tunnel. This new 6.0-acre park area will provide a direct pedestrian connection from the Presidio's Main Post area to Crissy Field. The retrofitted project will also result in extending public transit (bus) bays along both sides of Richardson Avenue.

At project completion, access between areas separated by Doyle Drive will be different but equal to existing access between these areas, yet a variety of vehicle roads and recreational trails in the vicinity of the project will be closed for varying lengths of time during project construction. The Construction Traffic Management Plan has not yet been completed, but the Department of Transportation intends to keep the public informed about construction-related vehicle traffic impacts (e.g., road closures and detours) using outreach tools, e.g., press releases, websites, signage, and public service announcements. According to the Department of Transportation, recreational trails would experience short-term, intermittent closures during low traffic periods only, and alternative recreational trail routes would be provided. Special Conditions have been included to ensure that all roadway and trail closures are adequately signed and noticed, that alternative routes are provided, that once construction is complete that similar or superior public access areas and trails to those existing at the date of this consistency determination are provided, and that best construction management practices are used.

According to the Department of Transportation, the park experience will be enhanced, as portions of the roadway will be in tunnels or shielded from view by berms. Views of the Bay for vehicles driving through the proposed tunnels and along the at-grade roadway (between the tunnels) where a berm alongside the north-edge shoulder will be constructed will be obstructed, but the Department of Transportation maintains that the benefits of road reconfiguration to park users outweighs the loss of views from vehicles on Doyle Drive, that the road will be much safer than the existing Doyle Drive, and that the newly configured Doyle Drive will also afford superb view.

B. An environmental review conducted by the Department of Transportation to seismically repair, maintain and use the approximately 1.6 mile long section of Doyle Drive resulted in approval of an Environmental Impact Report/ Statement under the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA) on October 14, 2008.

C. The Commission, pursuant to the Coastal Zone Management Act of 1972, as amended (16 USC Section 1451), and the implementing Federal Regulations in 15 CFR Part 930, is required to review Federal projects within San Francisco Bay and agree or disagree with the Federal agency's determination that the project is consistent with the Commission's Amended Coastal Zone Management Program for San Francisco Bay. This letter constitutes such review and comment.

D. Pursuant to Regulation Section 10620, the project was listed with the Commission on May 7, 2009.

Executed in San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.



WILL TRAVIS
Executive Director
San Francisco Bay Conservation and
Development Commission

LETTER OF AGREEMENT FOR CONSISTENCY
DETERMINATION NO. CN 2-08
California Department of Transportation and
San Francisco County Transportation Authority
June 12, 2009
Page 6

cc: U.S. Army Corps of Engineers, Attn: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn: Certification Section
Environmental Protection Agency
Federal Highway Administration, Attn: Lanh Phan
Presidio Trust, Attn: Michael Boland



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

June 3, 2009
CIWQS Place No. 728683 (BT)
401 Database Site No. 02-38-C0122

Sent via electronic mail: No hard copy to follow

California Department of Transportation
Attn: Mr. Nidal Tuquan
Nidal_Tuquan@dot.ca.gov
111 Grand Ave.
Oakland, CA 94612-3717

**Subject: Water Quality Certification for the Doyle Drive Golden Gate Bridge South
Access-Project, San Francisco, San Francisco County**

Department Project No.: EA 04-16370

Dear Mr. Tuquan:

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 for and received a U.S. Army Corps of Engineers (Corps) Nationwide Permit No. 14, *Linear Transportation*, 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 replace the seismically-deficient, existing viaduct structure that carries traffic to and from the Golden Gate Bridge through the Presidio (Doyle Drive). The existing structure will be replaced with a six-lane facility and a southbound auxiliary lane between the Park Presidio Interchange and the new Presidio access at Girard Road. The Project involves construction of eight sections, listed here sequentially from west to east: an at-grade roadway, the "Presidio" elevated viaduct, another at-grade roadway, the "Battery Tunnel," another section of an at-grade roadway, the "Marina Boulevard Tunnel," a low causeway, and an at-grade roadway near the Palace of Fine Arts.

Impacts: Project implementation will permanently fill approximately 0.81 acres of jurisdictional seasonal freshwater wetlands and due to construction access and staging, temporarily impact approximately 0.16 acres of jurisdictional seasonal freshwater wetlands. Project implementation will also result in approximately 1,391 linear feet (0.11 acres) of

temporary impacts to jurisdictional waters as a result of restoration activities in Dragonfly Creek, the Battery East bluffs, and at Tennessee Hollow.

Project implementation would result in added impervious area. Stormwater runoff from impervious areas may contain hydrocarbons, metals, volatile organic compounds, trash, and sediment at levels that may significantly impact waters of the State if left untreated.

Construction of the Project tunnel(s) may disrupt the flow of groundwater resulting in indirect impacts to approximately 1.77 acres of down-gradient wetlands that are sustained by groundwater (wetlands 4, 6d, and 7, upon the Battery-Blaney bluffs—the bluffs are north of Doyle Drive and south of Crissy Field).

Future Project-Related Impacts: Prior to Project completion, two existing outfalls shall be upgraded to provide drainage to San Francisco Bay from the Project area. The new outfalls may have larger diameters and be lengthened into the Bay to prevent sand drifts from blocking the outlets. At the time of issuance of this certification, the Department did not yet have design plans ~~beyond the conceptual level and therefore, impact information was not available. This~~ certification does not certify construction of these new outfall structures. The outfall structures must be certified in the future, either as a modification to this certification, or as a new certification.

Mitigation: To mitigate for permanent impacts to jurisdictional wetlands, the Department shall provide wetland creation, and wetland and riparian restoration and enhancement on National Park Service land and land subject to Presidio Trust's jurisdiction within the Presidio. Because the Department is receiving economic stimulus funding for the Project and on an accelerated schedule, the Final Mitigation and Monitoring Plans (MMPs) are not yet available and will be submitted subsequent to certification issuance. As such, exact levels of compensatory mitigation available at each mitigation location will not be available until the Final MMPs are completed.

The Department shall mitigate for the 0.81 acres of permanent impacts to jurisdictional wetlands by creating 1.6 acres of freshwater seasonal or perennial wetlands, or, restoring 2.4 acres of freshwater seasonal or perennial wetlands, or, restoring 2.4 acres of riparian habitat by removing creeks from culverts. A combination of these creation and restoration may be approved provided restoration activities are provided in greater quantities than creation.

Mitigation activities are proposed at the following locations:

- Upper Dragonfly Creek: Dragonfly Creek is a perennial stream. The Department proposes to restore approximately 0.78 acres of freshwater wetland and willow/oak riparian habitats. Invasive species removal at this location began in 2006 in anticipation of the Project.
- Middle Dragonfly Creek: Dragonfly Creek is currently underground at this location. The Department proposes to create approximately 0.41 acres of willow/oak riparian habitat at this location.

- Lower Dragonfly Creek: The Department proposes to create approximately 0.64 acres of willow riparian habitat and enhance approximately 0.26 acres of freshwater wetland. Planting of native riparian plantings have already commenced at this location.
 - Quartermaster Reach Connection: The Department proposes to create approximately 0.17 acres of willow riparian habitat and restore the creek by day-lighting 280 feet of the creek.
 - North Fort Scott: The Department proposes to enhance approximately 0.44 acres of freshwater wetland meadow at this location.
 - West Crissy Bluffs: The Department proposes to enhance approximately 0.19 acres of freshwater wetland at this location.
 - Battery East/Marine Drive: The Department proposes to enhance approximately 0.62 acres of freshwater wetland at this location.
-
- Tennessee Hollow: At this location, the Department proposes to restore by day-lighting approximately 800 linear feet of the eastern tributary of Tennessee Hollow and restore an additional 250 linear feet of a degraded creek section.

Temporary impacts to wetlands shall be mitigated by in-kind, in-place restoration after construction. Because riparian habitats shall be restored and/or enhanced, mitigation for temporary impacts at these locations is not required.

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 (26.9 acres). Additionally, the Department shall provide permanent stormwater treatment for an additional 0.4 acres of Project impervious area to compensate for absence of treatment during the operation of the 4.1 acre temporary detour structure.

The Department shall implement a long-term hydrogeologic and biological monitoring plan to evaluate potential impacts to the hydrogeology and biological resources at wetlands 4, 6d, and 7 as a result of any up-gradient disturbance of groundwater flow. Impacts to wetlands shall be subject to additional mitigation requirements.

CEQA Compliance: An Environmental Impact Report was prepared and approved for this project pursuant to the provisions of the California Environmental Quality Act by the San Francisco Transportation Authority (SFTA). The SFTA filed a Notice of Determination on December 17, 2008 (SCH No. 2000032006).

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 Department 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 Department shall adhere to the Standard conditions imposed by Nationwide Permit No. 14, issued to the Department by the Corps;
2. All jurisdictional wetlands and waters temporarily impacted by construction activities shall be immediately returned to pre-construction or improved conditions upon cessation of construction activities in these locations. Native seed and plantings shall be used for all revegetation activities, except where the Presidio Trust mandates certain plant varieties;
3. The Department shall provide post-construction treatment of stormwater runoff from no less than 27.3 acres of impervious area within the Project limits using vegetation-based treatment systems (e.g., biofiltration strips, biofiltration swales);
4. All permanent stormwater treatment controls shall be fully operational by the completion of Contract #7 which will build the Northbound High Viaduct, Northern Park Presidio Interchange and Northbound roadway to Merchant Road;
5. The Department shall submit, acceptable to the Executive Officer, a long-term hydrogeologic and biological monitoring plan to evaluate the extent of impacts to the hydrogeology and biological resources at wetlands 4, 6d, and 7, no later than July 15, 2009. The plan shall include a minimum monitoring period of five years. Any long-term hydrogeologic and biological impacts to wetlands 4, 6d, and/or 7 shall be subject to additional mitigation requirements;
6. The Department shall submit, subject to acceptance by the Executive Officer, final, post-construction stormwater treatment plans including details on design, installation, regular

inspections, and long-term operation and maintenance for Contract No. 3 (Southbound High Viaduct/Southern Park Presidio Interchange), no later than August 1, 2009;

7. The Department shall submit, subject to acceptance by the Executive Officer, final, post-construction stormwater treatment plans including details on design, installation, regular inspections, and long-term operation and maintenance for Contract Nos. 4-7 (Southbound Battery Tunnel; Girard Road Under-Crossing/Main Post Tunnels/Low Viaduct; Northbound Battery Tunnel; Northbound High Viaduct/Northern Park Presidio Interchange/Northbound Roadway to Merchant Road), no later than November 1, 2009;
8. The Department shall mitigate for the 0.81 acres of permanent impacts to jurisdictional wetlands by creating 1.6 acres of freshwater seasonal or perennial wetlands, or, restoring 2.4 acres of either freshwater seasonal or perennial wetlands, or riparian habitat by means of day-lighting culverted portions of creek within the Presidio. A combination of creation and restoration mitigation may be approved by the Executive Officer. All required mitigation shall be fully constructed by completion of the final roadway construction contract, ~~“Contract #7: Northbound Presidio Viaduct, Northern Park Presidio Interchange, Northbound Roadway to Merchant Road.”~~ Failure to construct the abovementioned level of mitigation, by the abovementioned deadline, shall result in additional mitigation requirements and/or enforcement action by the Water Board;
9. Final MMPs for the following mitigation projects shall be submitted by the following dates:
 - Battery East/Marine Drive: October 1, 2009
 - West Crissy Bluffs: October 1, 2009
 - Upper, Middle, and Lower Dragonfly Creek: April 1, 2010
 - North Fort Scott: July 1, 2010
 - Quartermaster Reach Connection: July 1, 2011
 - Tennessee Hollow: October 1, 2011

Final MMPs shall be subject to the acceptance of the Executive Officer. Any of the proposed mitigation areas identified in this certification may be replaced or complemented with another project on land subject to the jurisdiction of the Presidio Trust, subject to the acceptance of the Executive Officer. Failure to fully implement mitigation by the dates and at the amounts noted in the Final, Water Board Executive Officer-accepted MMP, shall result in enforcement action and/or additional mitigation requirements from the Water Board. Because the Final MMPs have not yet been reviewed and accepted by the Executive Officer, there is a possibility the proposed mitigation may not be considered acceptable. In

the event that all, or any portion of the Final MMPs are not accepted by the Executive Officer, the Department shall still be required to fully comply with condition number 8 of this certification;

10. Construction of the following mitigation projects shall be completed by whichever occurs first; either the dates listed below, or by completion of the final roadway construction contract (see certification condition 8):

- Upper, Middle, and Lower Dragonfly Creek: April 1, 2011;
- North Fort Scott: April 1, 2011;
- Quartermaster Reach Connection: April 1, 2012;
- Tennessee Hollow: April 1, 2013 and,
- Battery East/Marine Drive and West Crissy Bluffs: Mitigation construction has been completed at these two mitigation sites. Adequacy of the mitigation shall be determined by the Executive Officer upon submission of the Final Mitigation and Monitoring Plans.

Any delays in mitigation construction shall be subject to additional mitigation requirements and/or enforcement action by the Water Board.

11. All Final MMPs shall include:

- a. Detailed success criteria;
- b. Final success criteria shall not be considered achieved until ten years have passed from the time of completion of mitigation construction;
- c. A proposal to implement contingency measures if mitigation monitoring data demonstrates mitigation goals have not been met;
- d. A time schedule for submittal of periodic monitoring reports to the Water Board;
- e. Pre-established photographic monitoring points be marked on a map and used during the monitoring period, with color photos included in every monitoring report;
- f. Planting plans incorporating native plant species, using locally-gathered nursery stock when available; and,
- g. Grading details based on survey data for all areas where wetland creation and creek realignment or day-lighting is proposed.

12. The discharge of sediment to San Francisco Bay, or to areas where sediment may discharge to San Francisco Bay, is prohibited. The Department shall implement all appropriate sediment and erosion control construction best management practices;

13. The Department is required to use the standard Wetland Tracker form to provide Project information describing impacts and mitigation/restoration measures no later than November 1, 2010. 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;
14. 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 Department 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 State waters;
15. 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;
16. 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;
17. 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 waters of the State is prohibited. Any of these materials placed within or where they may enter waters of the State 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 waters of the State. 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;
18. This Certification applies to the Project as proposed in the application materials. Please be advised that failure to implement the Project as proposed is a violation of this water quality certification;

19. 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);
20. 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,
21. 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 \$2869.00 on May 26, 2009.

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.

Conditions 5-7, 9, 13, and 14 are requirements for submission of a report. 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.

We anticipate no further action on this request. 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 at (510) 622-2506, or via e-mail to BThompson@waterboards.ca.gov.

Sincerely,

 acting for

Bruce H. Wolfe
Executive Officer

California Department of Transportation
Mr. Nidal Tuqum

- 9 -

Doyle Drive Golden Gate Bridge South Access Project
EA No.:16370
CIWQS Place No.: 728683

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, Fish and Game, Yountville
Mr. Hardeep Takhar, Caltrans
Ms. Jayshree Chauhan, Caltrans
Mr. David Smith, USEPA



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1398

MAY 14 2009

REPLY TO

Regulatory Division

SUBJECT: File Number SPN-2006-30009 S

Mr. Jeffery Jensen
Division of Biological Sciences and Permits
California Department of Transportation
111 Grand Avenue
PO Box 23660
Oakland, California 94623-0660

Dear Mr. Jensen:

~~This letter is written in response to your submittal of February 2, 2009, concerning Department of the Army authorization for the Doyle Drive Project. The project is located on Highway 101, south of the Golden Gate Bridge, in the Presidio of San Francisco, San Francisco County, California.~~

The proposed project would replace Doyle Drive (a segment of Highway 101) with a new roadway facility, the Presidio Parkway. The Presidio Parkway would include a high-viaduct between the Highway 101/Park Presidio Interchange and the San Francisco National Cemetery. Shallow cut-and-cover tunnels would extend from the cemetery to east of Battery Blaney. The facility would then continue towards the Main Post in the Presidio with an open at-grade roadway with a wide, heavily landscaped median. A retaining wall would be constructed along the south side of the facility between the Battery and Main Post tunnels. A landscaped berm would be constructed along the north side of the facility to shield park visitors from the proposed facility. From Building 106 in the Presidio, cut-and-cover tunnels would extend east of Halleck Street. The facility would then rise slightly on a low causeway and then pass over Girard Road. East of Girard Road, the new facility would then return to an existing grade north of the Gorgas warehouses where it would connect to Richardson Avenue.

Constructing the new roadway facility would result in direct impacts to 0.35 acres of waters of the U.S. These permanent impacts would occur as a result of fill from constructing the new viaduct and at-grade roadway.

Based on a review of the information you submitted, your project qualifies for authorization under Department of the Army Nationwide Permit 14 for 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 plans and drawings titled "Preferred Alternative Refined Presidio Parkway" Layout sheets L-1

through L-4, dated January 2009, and "Figure 1, Project and Existing Wetland Locations, Doyle Drive Replacement", dated March 23, 2009.

The project must be in compliance with the General Conditions cited in Enclosure 2 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.

This authorization will not be effective until you have obtained a Section 401 water quality certification from the San Francisco Bay Regional Water Quality Control Board (RWQCB) and concurrence from the S.F. Bay Conservation and Development Commission (BCDC) that your project complies with the Coastal Zone Management Act. You shall submit a copy of the RWQCB 401 water quality certification and the BCDC consistency determination to the Corps prior to the commencement of work.

To ensure compliance with this Nationwide Permit authorization, the following special conditions shall be implemented:

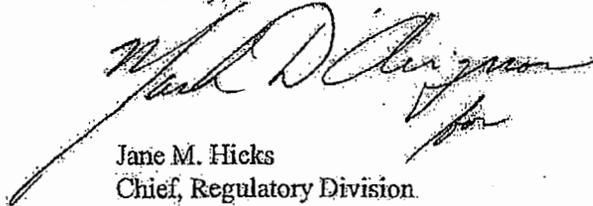
1. A Detailed Final Mitigation Plan, including information on the proposed Tennessee Hollow restoration work, shall be submitted to our office prior to the start of construction. The plan must be reviewed and approved by our office before the start of construction.
2. Compensation for unavoidable impacts to waters of the U.S., including wetlands, within the project area shall be conducted pursuant to the Conceptual Mitigation Plan. Specifically:
 - a. You shall revegetate the 0.001 acres of temporarily impacted intermittent stream/emergent wetland at Battery Howe-Wagner.
 - b. To mitigate for direct/permanent impacts to 0.02 acres of the wetland at Battery Howe-Wagner, 0.18 acres of W-2, and 0.15 of W-3, you shall restore 0.23 acres of perennial stream/riparian wetland at Middle Dragonfly Creek, Lower Dragonfly Creek, and Quartermaster Reach as shown on "Figure 2-1, Proposed Mitigation Sites in Project Study Area", and listed in "Table 201, Proposed Mitigation Sites",

in the Conceptual Mitigation Plan. You shall also restore 800 feet of Tennessee Hollow that is currently underground in a culvert south of Lover's Lane Bridge and under Morton Street Field as shown on "Figure 4-2, Tennessee Hollow Eastern Tributary", in the Conceptual Mitigation Plan. You shall also enhance areas along Upper Dragonfly Creek, Lower Dragonfly Creek, the wetland at North Fort Scott, the willow scrub wetland at West Crissy bluffs, and the willow scrub wetland at Battery East/Marina Drive as shown on Figure 2-1, in the Conceptual Mitigation Plan.

- c. Work on these mitigation areas shall be done concurrently with project construction.
 - d. The restoration and enhancement areas would be deemed successful when tree and shrub plantings provide at least 80% total cover and herbaceous species provide 75% total cover on the sites.
 - e. The mitigation areas shall be monitored for success for 10 years. Monitoring reports shall be submitted annually to our office to determine if mitigation is succeeding. At the end of the ten-year monitoring period, you shall submit a final monitoring report to our office to determine if the above success criteria have been met.
-
3. Environmentally sensitive areas (ESA) shall be clearly delineated on the construction plans and demarcated in the field with high-visibility fencing prior to commencement of construction activities. ESA fencing shall be properly maintained throughout the duration of the project. The ESA shall be off limits to construction activity and personnel at all times.
 4. All project staging and equipment storage shall be limited to the staging areas shown in "Exhibit 2-44, Construction Staging Areas - Preferred Alternative", in the "South Access to the Golden Gate Bridge - Doyle Drive FEIS/FEIR", dated September 2008.
 5. 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.
 6. 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. The primary Corps point of contact for notification of unanticipated discoveries is Richard Stradford. His phone number is 415-503-6845.

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,

A handwritten signature in black ink, appearing to read "Jane M. Hicks", with a long, sweeping underline that extends to the left and under the text below.

Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copy furnished without enclosures:

US EPA, San Francisco, CA
CA-DEG, Napa, CA
CA RWQCB, Oakland, CA
SF BCDC, San Francisco, CA

Enclosure 3

Permittee:

Mr. Jeffery Jensen
Division of Biological Sciences and Permits
California Department of Transportation
111 Grand Avenue
PO Box 23660
Oakland, California 94623-0660

File Number: SPN-2006-30009-S

**Certification of Compliance
for
Nationwide Permit**

"I hereby certify that the work authorized by the above referenced File Number and all required mitigation have been completed in accordance with the terms and conditions of this Nationwide Permit authorization."

(Permittee)

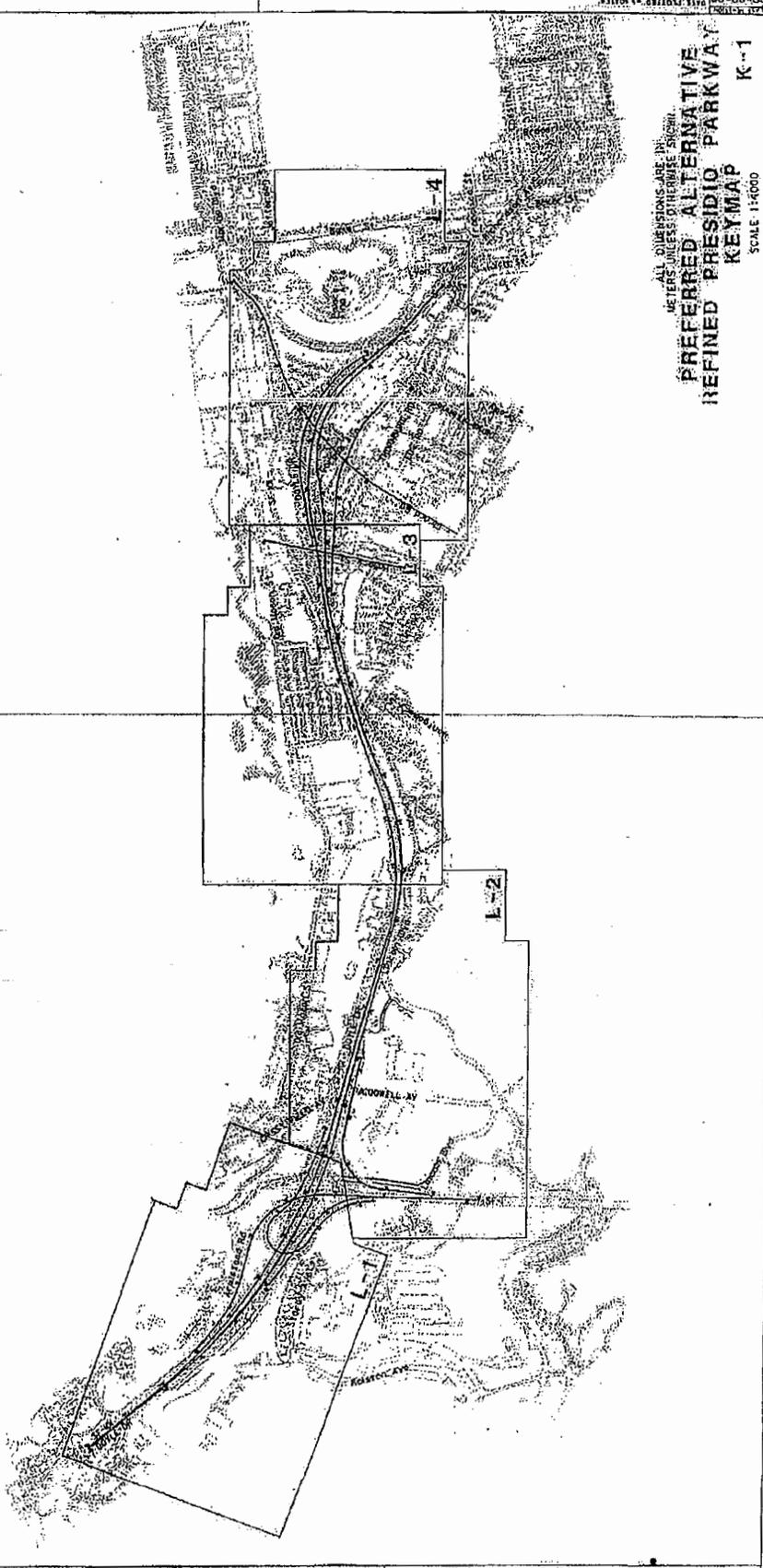
(Date)

Return to:

Andrea Meier
U.S. Army, Corps of Engineers
San Francisco District
Regulatory Division, CESP/CR-R
1455 Market Street
San Francisco, CA 94103-1398

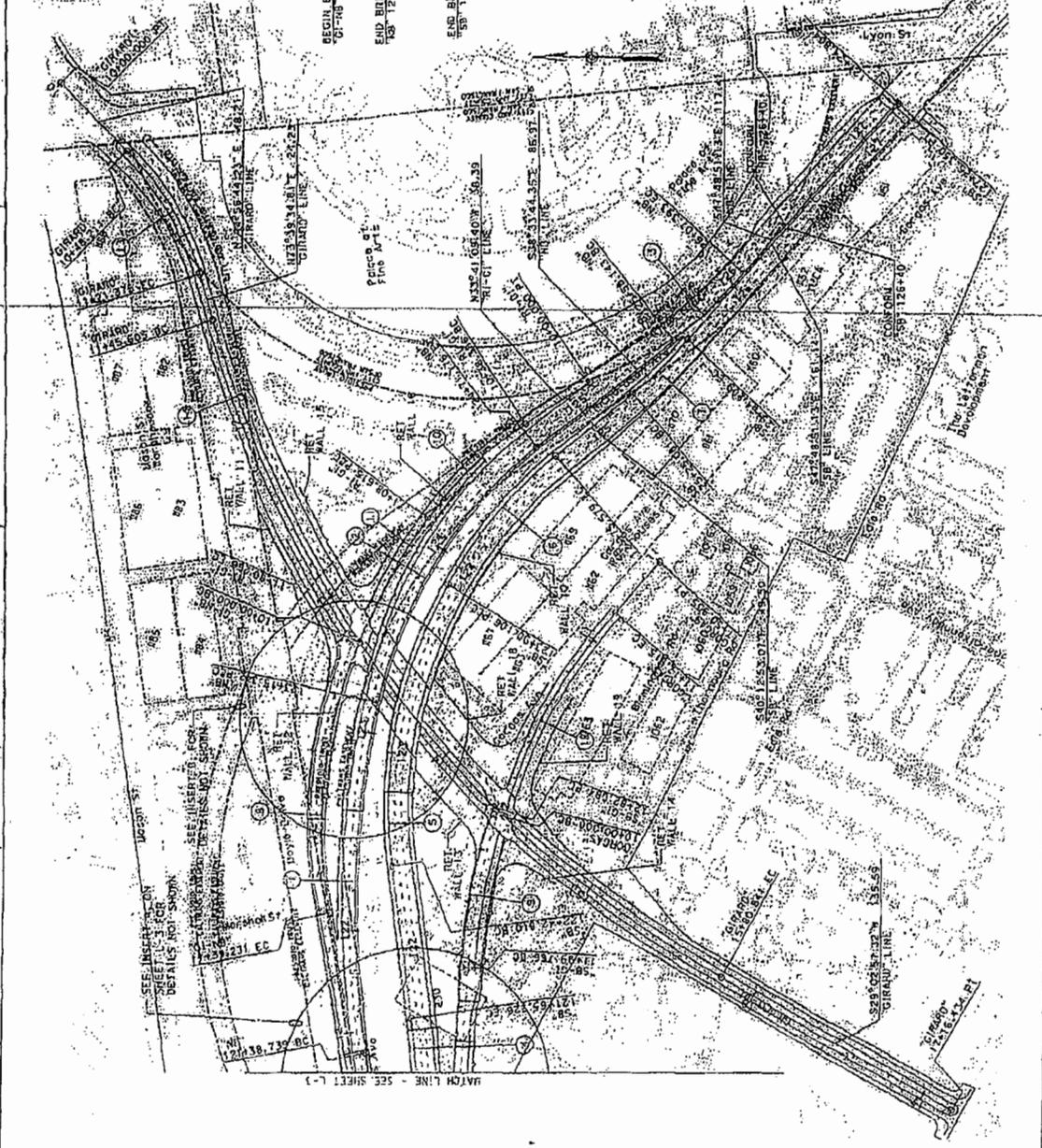
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
Edwards PROJECT DEVELOPMENT
 DESIGN OVERSIGHT
 CALCULATED BY: E. LAW
 CHECKED BY: J. KAHN
 DATE REVISOR BY: []
 DATE REVISOR BY: []

DIST: COUNTY: ENGINE: DATE: SHEET NO. OF SHEETS
 4: 2: 84-05-081: 15: 153-1134
 REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE: []
 REGISTERED CIVIL ENGINEER: []
 345 LUBNER STREET, SUITE 200
 SAN FRANCISCO, CA 94103



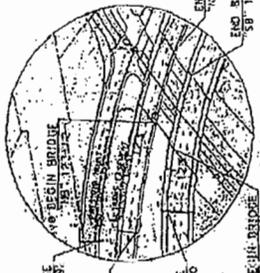
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
**PREFERRED ALTERNATIVE
 REFINED PRESIDIO PARKWAY
 KEYMAP**
 SCALE 1:14000
 K-1

RU 04242 EA 163700
 RELATIVE GRAPHIC SCALE
 1:50000 METERS
 1:157480 FEET



CURVE DATA

NO.	A	B	C	D	E	F	G	H	I	J	K	L
1	440.00	325.5148	89.751	175.60								
2	232.00	36.2308	80.39	155.53								
3	305.00	33.1507	24.68	49.25								
4	310.00	2.10751	29.14	58.18								
5	220.00	38.2622	76.70	147.60								
6	552.00	19.2600	43.15	85.47								
7	295.00	7.5558	19.59	39.19								
8	240.80	33.1420	71.64	139.23								
9	303.68	15.3214	41.42	82.35								
10	206.80	20.0292	55.48	70.23								
11	300.80	13.4103	36.00	71.65								
12	260.00	25.5348	59.78	117.51								



EA Alternatives
 REGISTERED CIVIL ENGINEER
 PLANS EXPIRES DATE: 12/31/2011
 801 MARCE STREET, SUITE 210
 SAN FRANCISCO, CA 94102

**PREFERRED ALTERNATIVE
 PRESIDIO PARKWAY
 LAYOUT**
 L-4
 SCALE 1:1000
 ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

EA 163700
 RD 04242

SCALE 1:1000
 0 10 20 30 40 50 60 70 80 90 100
 METERS
 0 10 20 30 40 50 60 70 80 90 100
 FEET

Attachment P

Notice of Completion of Construction / Notice of Termination

INSTRUCTIONS

- **Caltrans Administered Projects:** The Notice of Completion of Construction (NCC) form shown in the following page is a blank form. The completed (NCC) will be provided by Caltrans for inclusion in this attachment.
- **Local Agency / Private Entity Administered Projects:** The Notice of Termination (NOT) will be provided by the Local Agency / Private Entity. The NOT shall be inserted into this attachment.



This page intentionally left blank.

Attachment R

Sampling Activity Log and Chain-of-Custody Forms

INSTRUCTIONS

- Use this form to log sampling activities.
- Maintain completed chain-of-custody forms in this attachment.

RAIN EVENT GENERAL INFORMATION				
Project Name				
Caltrans Contract N°				
Contractor				
Sampler's Name				
Signature				
Date of Sampling				
Season (Check Applicable)	<input type="checkbox"/> Rainy		<input type="checkbox"/> Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

For rainfall information: <http://cdec.water.ca.gov/weather.html> or <http://www.wr1.noaa.gov/wrhc/nwspage.html>

SAMPLE LOG		
Sample Identification	Sample Location	Sample Collection Date and Time

Specific sample locations descriptions may include: 30m upstream from discharge at eastern boundary, runoff from northern waste storage area, downgradient of Inlet 57 at kilometer post 36, etc.

FIELD ANALYSIS		
	Yes	No
Sample Identification	Test	Result



Attachment S

Pollutant Testing Guidance Table

INSTRUCTIONS

- The following Table will be updated periodically as more information becomes available.
-



Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory	
Asphalt Products (Sections 37, 39, 92, 93, 94, and Special Provisions)	Hot Asphalt	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required	Visually Observable - No Testing Required		
	Asphalt Emulsion					
	Liquid Asphalt (tack coat)					
	Cold Mix					
	Crumb Rubber	Yes - Black, solid material	Visually Observable - No Testing Required			
	Asphalt Concrete (Any Type)	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required			
Cleaning Products	Acids	No	pH Acidity Anions (acetic acid, phosphoric acid, sulfuric acid, nitric acid, hydrogen chloride)	pH Meter Acidity Tes: Kit	EPA 150.1 (pH) SM 2310B (Acidity)	
	Bleaches	No	Residual Chlorine	Chlorine	EPA 300.0 (Anion) SM 4500-CL G (Res. Chlorine)	
	Detergents	Yes - Foam		Visually Observable - No Testing Required		
	TSP	No	Phosphate	Phosphate	EPA 365.3 (Phosphate)	
	Solvents	No	VOC	None	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	None	EPA 625 (SVOC)



Attachment S
Pollutant Testing Guidance Table 1

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses ³ Field	Laboratory	
Portland Concrete Cement & Masonry Products (Section 27, 28, 29, 40, 41, 42, 49, 50, 51, 53, 63, 65, 72, 73, 80, 81, 83, 90, and Special Provisions)	Portland Cement (PCC)	Yes - Milky Liquid	Visually Observable - No Testing Required	None	None	
	Masonry products	No	pH Alkalinity	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH) SM 2320 (Alkalinity)	
	Sealant (Methyl Methacrylate - MMA)	No	Methyl Methacrylate Cobalt Zinc	None	EPA 625 (SVOC) EPA 200.8 (Metal)	
	Incinerator Bottom Ash Bottom Ash Steel Slag Foundry Sand Fly Ash Municipal Solid Waste	No	Aluminum Calcium Vanadium Zinc	Calcium Test	EPA 200.8 (Metal) EPA 200.7 (Calcium)	
	Mortar	Yes - Milky Liquid	Visually Observable - No Testing Required	None	None	
	Concrete Rinse Water	Yes - Milky Liquid	Visually Observable - No Testing Required	None	None	
	Non-Pigmented Curing Compounds	No	Acidity	pH Meter Alkalinity or Acidity Test Kit	None	SM 2310B (Acidity)
			Alkalinity			SM 2320 (Alkalinity)
			pH			EPA 150.1 (pH)
			VOC			EPA 601/602 or EPA 624 (VOC)
		SVOC			EPA 625 (SVOC)	

Attachment S
Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory	
Landscaping and Other Products (Section 20, 24, and Special Provisions)	Aluminum Sulfate	No	Aluminum	TDS Meter Sulfate	EPA 200.8 (Metal)	
			TDS		EPA 160.1 (TDS)	
	Sulfur-Elemental	No	Sulfate	Sulfate	EPA 300.0 (Sulfate)	
			Sulfate		EPA 300.0 (Sulfate)	
	Fertilizers-Inorganic ⁴	No	Nitrate	Nitrate	EPA 300.0 (Nitrate)	
			Phosphate		Phosphate	EPA 365.3 (Phosphate)
			Organic Nitrogen		None	EPA 351.3 (TKN)
			Potassium		None	EPA 200.8 (Metal)
	Fertilizers-Organic	No	TOC	Nitrate	EPA 415.1 (TOC)	
			Nitrate		EPA 300.0 (Nitrate)	
			Organic Nitrogen		EPA 351.3 (TKN)	
			COD		EPA 410.4 (COD)	
	Natural Earth (Sand, Gravel, and Topsoil)	Yes - Cloudiness and turbidity	Visually Observable - No Testing Required			
	Herbicide	No	Herbicide	None	Check lab for specific herbicide or pesticide	
Pesticide	Pesticide					
Lime		Alkalinity	pH Meter Alkalinity or Acidity Test Kit	SM 2320 (Alkalinity)		
		pH		EPA 150.1 (pH)		

Attachment S
Pollutant Testing Guidance Table 1

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
Painting Products (Section 12-3.08, 20-2.32, 50-1.05, 59, 91, and Special Provisions)	Paint	Yes	Visually Observable - No Testing Required	None	EPA 601/602 or EPA 624 (VOC)
	Paint Strippers	No	VOC	None	EPA 625 (SVOC)
			SVOC	None	
	Resins	No	COD	None	EPA 410.4 (COD)
			SVOC	None	EPA 625 (SVOC)
	Sealants	No	COD	None	EPA 410.4 (COD)
			COD	None	EPA 410.4 (COD)
	Solvents	No	VOC	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	EPA 625 (SVOC)
	Lacquers, Varnish, Enamels, and Turpentine	No	COD	None	EPA 410.4 (COD)
			VOC	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	EPA 625 (SVOC)
Thinners	No	VOC	None	EPA 601/602 or EPA 624 (VOC)	
		COD	None	EPA 410.4 (COD)	
Portable Toilet Waste Products	Portable Toilet Waste	Yes	Visually Observable - No Testing Required	None	EPA 410.4 (COD)

Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory	
Contaminated Soil ⁵	Aerially Deposited Lead ³	No	Lead	None ³	EPA 200.8 (Metal)	
	Petroleum	Yes - Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required			
	Mining or Industrial Waste, etc.	No	Contaminant Specific	Contaminant Specific - Check with laboratory	Contaminant Specific - Check with laboratory	
Line Flushing Products	Chlorinated Water	No	Total chlorine	Chlorine	SM 4500-CL G (Res. Chlorine)	
Adhesives	Adhesives	No	COD	None ³	EPA 410.4 (COD)	
			Phenols	Phenol		EPA 420.1 (Phenol)
			SVOC	None ³		EPA 625 (SVOC)
			Chloride	Chloride		EPA 300.0 (Chloride)
Dust Palliative Products (Section 18)	Salts (Magnesium Chloride, Calcium Chloride, and Natural Brines)	No	TDS	TDS Master	EPA 160.1 (TDS)	
			Cations (Sodium, Magnesium, Calcium)	None ³	EPA 200.7 (Cations)	
			Visually Observable - No Testing Required			
• Vehicle	Antifreeze and Other Vehicle Fluids	Yes - Colored Liquid	Visually Observable - No Testing Required			
	Batteries	No	Sulfuric Acid	None ³	EPA 300.0 (Sulfate)	
			Lead	None ³	EPA 200.8 (Metal)	
			pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)	
Fuels, Oils, Lubricants	Yes - Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required				

Attachment S
Pollutant Testing Guidance Table 1

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
Soil Amendment/Stabilization Products	Polymer/Copolymer ^{6,7}	No	Organic Nitrogen	None	EPA 351.3 (TKN)
			BOD	None	EPA 405.1 (BOD)
			COD	None	EPA 410.4 (COD)
			DOC	None	EPA 415.1 (DOC)
			Nitrate	Nitrate	EPA 300.0 (Nitrate)
			Sulfate	Sulfate	EPA 300.0 (Sulfate)
			Nickel	None	EPA 200.8 (Metal)
	Straw/Mulch	Yes - Solids	Visually Observable - No Testing Required		
	Lignin Sulfonate	No	Alkalinity	Alkalinity	SM 2320 (Alkalinity)
	Psyllium	No	TDS	TDS Meter	EPA 160.1 (TDS)
			COD	None	EPA 410.4 (COD)
			TOC	None	EPA 415.1 (TOC)
	Guar/Plant Gums	No	COD	None	EPA 410.4 (COD)
			TOC	None	EPA 415.1 (TOC)
			Nickel	None	EPA 200.8 (Metal)
Gypsum	No	pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)	
		Calcium	Calcium	EPA 200.7 (Calcium)	
		Sulfate	Sulfate	EPA 300.0 (Sulfate)	
		Aluminum			
		Barium			
		Manganese	None	EPA 200.8 (Metal)	
		Vanadium			



Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
Treated Wood Products (Section 58, 80-3.01B(2), and Special Provisions)	Ammoniacal-Copper-Zinc-Arsenate (ACZA)	No	Arsenic	Total Chromium	EPA 200.8 (Metal)
	Copper-Chromium-Arsenic (CCA)		Total Chromium		
	Ammoniacal-Copper-Arsenate (ACA)		Copper		
	Copper Naphthenate		Zinc		
	Creosote	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required		

Notes:

1. If specific pollutant is known, analyze only for that specific pollutant. See MSDS to verify.
2. For each construction material, test for one of the pollutant indicators. Bolded pollutant indicates lowest analysis cost or best indicator. However, the composition of the specific construction material, if known, is the first criterion for selecting which analysis to use.
3. See www.hach.com, www.lamotte.com, www.ysi.com and www.chemetrics.com for some of the test kits
4. If the type of inorganic fertilizer is unknown, analyze for all pollutant indicators listed.
5. Only if special handling requirements are required in the Standard Special Provisions for aerially deposited lead (ADL)
6. If used with a dye or fiber matrix, it is considered visually observable and no testing is required.
7. Based upon research conducted by Caltrans, the following copolymers/polymers do not discharge pollutants and water quality sampling and analysis is **not** required: Super Tak™, M-Binder™, Fish Stik™, Pro40dc™, Fisch-Bond™, SoilMaster WR™, and EarthGuard™.

Acronyms:

BOD – Biochemical Oxygen Demand
COD – Chemical Oxygen Demand
DOC – Dissolved Organic Carbon
EPA – Environmental Protection Agency
HACH – Worldwide company that provides advanced analytical systems and technical support for water quality testing.
SM – Standard Method
SVOC – Semi-Volatile Organic Compounds
TDS – Total Dissolved Solids
TKN – Total Kjeldahl Nitrogen
TOC – Total Organic Carbon
TSP – Tri-Sodium Phosphate
VOC - Volatile Organic Compounds

References:

Construction Storm Water Sampling and Analysis Guidance Document, California Stormwater Quality Task Force, October 2001.
Environmental Impact of Construction and Repair Materials on Surface and Ground Waters, Report 448, National Cooperative Highway Research Program, 2001
Soil Stabilization for Temporary Slopes, Environmental Programs, California Department of Transportation, October 1, 1999.
Statewide Storm Water Management Plan, Division of Environmental Analysis, California Department of Transportation, April 2002.
Statewide Storm Water Quality Practice Guidelines, Environmental Program, California Department of Transportation, August 2000.
Soil Stabilization for Temporary Slopes and District 7 Erosion Control Pilot Study, June 2000.
Stormwater Monitoring Protocols, Guidance Manual, California Department of Transportation, May 2000.

Attachment T

Sampling Data Reporting Form

RAIN EVENT GENERAL INFORMATION				
Project Name				
Caltrans Contract N°				
Contractor				
Sampler's Name				
Signature				
Date of Sampling				
Season (Check Applicable)	<input type="checkbox"/> Rainy		<input type="checkbox"/> Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

SAMPLE LOG		
Sample Identification	Sample Location	Sample Collection Date and Time

Specific sample locations descriptions may include: 30m upstream from discharge at eastern boundary, runoff from northern waste storage area, downgradient of inlet 57 at kilometer post 36, etc.

FIELD ANALYSIS		
	Yes	No
Sample Identification	Test	
	Result	

"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 ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I



am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Contractor's Signature

Date

Contractor's Name and Title

Contractor's Telephone Number
