NOTICE TO ALL CONTRACTORS

You are hereby notified of the following changes, clarifications and/or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and/or previous Addenda. This Addendum shall supersede the original Contract Documents and previous Addenda wherein it contradicts the same, and shall take precedence over anything to the contrary therein. All other conditions remain unchanged.

This Addendum forms a part of the Contract Documents and modifies the original Contract Documents dated 3/30/2018. Acknowledge receipt of this Addendum in space provided on the Bid Proposal Form. Failure to acknowledge may subject Bidder to disqualification.

A. ADDITIONS/DELETIONS/CHANGES

GENERAL

1. QUESTION: Sheet C3.00. The new sheet calls for the excavation for the removal of piles at the Heath Science Bldg. The plan shows the rough grade in that area to be left at elevation 65’ at the bottom. However, Detail #2 shows it to be backfilled after excavation. Please confirm intention after pile removal as it is contradictive.


SPECIFICATIONS

1. SECTION 01500 TEMPORARY FACILITIES AND CONTROLS, Article 1.2B.4.a
ADD: At the end of the paragraph (Article 1.2B.4.a), ADD the following sentence: Contractor shall plan and include the cost to move the temporary fencing in some locations multiple times around the Health Sciences Building to comply with the various access/closure requirements to and from the Health Sciences Building, as noted in Section 01140, Article 1.3B.1 (e.g., 1.2 and 1.3).

2. SECTION 01572 STORM WATER POLLUTION PREVENTION – SITES THAT DISTURB ONE OR MORE ACRES OF LAND SURFACE
DELETE/REPLACE: DELETE the existing SECTION 01572 STORM WATER POLLUTION PREVENTION – SITES THAT DISTURB ONE OR MORE ACRES OF LAND SURFACE, and REPLACE with the attached SECTION 01572 STORM WATER POLLUTION PREVENTION – SITES THAT DISTURB ONE OR MORE ACRES OF LAND SURFACE
3. ADD: STORM WATER POLLUTION PREVENTION PLAN.
ADD the attached STORM WATER POLLUTION PREVENTION PLAN as an attachment to SECTION 01572 – STORM WATER POLLUTION PREVENTION – SITES THAT DISTURB ONE OR MORE ACRES OF LAND SURFACE
NOTE: The District shall be responsible for the Qualified SWPPP Developer (QSD) portion and the drafting of the SWPPP as shown in the SWPPP, Contractor shall be responsible to provide Qualified SWPPP Practitioner for updating of the SWPPP document during the construction.

DRAWINGS
1. Sheet No. C3.00 ROUGH GRADING AND UTILITY PLAN
DELETE/REPLACE: DELETE existing C3.00 ROUGH GRADING AND UTILITY PLAN, and REPLACE with the, attached, C3.00 ROUGH GRADING AND UTILITY PLAN, dated 5/4/2018. (Deleted detail #2; revised existing piles removal as noted; revised approximate Earthwork calculations of cuts and fills; revised stockpile location for excavation materials.)

ATTACHMENTS
- SECTION 01572 – STORM WATER POLLUTION PREVENTION – SITES THAT DISTURB ONE OR MORE ACRES OF LAND SURFACE
- Storm Water Pollution Prevention Plan
- C3.00 ROUGH GRADING AND UTILITY PLAN, dated May 4, 2018

B. For questions regarding this Addendum, please email:
   Mr. Jovan Esprit, Contracts Manager
   Contra Costa Community College District
   500 Court St., Martinez, CA 94553
   Email: jesprit@4cd.edu

All other terms and conditions of BID are to remain the same.

SMITHGROUPJJR
301 Battery Street, 7th Floor
San Francisco, Ca 94111

Architect of Record: Roxanne Malek

END OF ADDENDUM #4
SECTION 01572

STORM WATER POLLUTION PREVENTION – SITES THAT DISTURB ONE OR MORE ACRES OF LAND SURFACE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation.

1.2 RELATED DOCUMENTS SPECIFIED IN OTHER SECTIONS

A. Section 01010 – “Summary of Work”
B. Section 01050 – “Field Engineering”
C. Section 01140 – “Work Restrictions”
D. See SECTION 00700 GENERAL CONDITIONS for submittal procedures
E. NOT USED
F. Divisions 2 through 33 Sections for Storm Water Prevention Plan requirements for the work in those sections, where applicable.

1.3 BACKGROUND

A. Storm drains discharge directly to creeks and the Bay without treatment. Discharge of pollutants (any substance, material, or waste other than uncontaminated storm water) from this project into the storm drain system is strictly prohibited by the State Water Resources Control Board (SWRCB) Order 2009-0009 DWQ (Order) and California Regional Water Quality Control Board (RWQCB) Water Quality Control Plan San Francisco Bay Basin Plan (Basin Plan).

B. This specification is applicable to this Project since it will disturb (e.g., digging, trenching, grading, clearing, filling) one or more acres of land surface.

C. This specification also covers Linear Underground/Overhead Projects as regulated by the Order.

D. Area of land surface disturbance includes but is not limited to:
   1. Clearing of the land both for access (i.e. access roads) to the site as well as preparing the site for constructing the project,
   2. Constructing access roads to the Site,
   3. Grading of the Site in total,
   4. Equipment staging area, maintenance area, and construction easement if they occur atop a soil surface which has not been included in the calculation for area of soil disturbance,
   5. Material and/or soil stockpiles if atop a soil surface (not if atop an impervious surface such as concrete or asphalt),
6. Area of asphalt or concrete pavement removal if it is removed entirely to the soil surface,
7. Area that is related to demolition and removal of existing structures if that demolition and removal is to the soil surface,
8. Concrete truck clean-out areas if atop a soil surface

1.4 SUMMARY OF WORK

A. The District will provide storm water pollution prevention plan as specified and as required by appropriate regulatory authorities, complete.

B. Work in this section includes all labor, equipment, and materials necessary for the implementation, maintenance, and monitoring of the Storm Water Pollution Prevention Plan (SWPPP). Principal items of work included herein include, but are not limited to:
   1. Plan administration, maintenance, and updating.
   2. Placement of erosion/pollution control devices (where applicable).
   3. Maintenance and monitoring of control devices.
   4. Miscellaneous related work necessary for plan compliance.
   5. Reports and certificates.

C. Work under all other sections of this specification shall comply with the requirements of this section. All trades working on the Project need to be aware of and in compliance with the SWPPP.

D. All materials that can potentially enter and/or pollute storm water discharges and the generation of non-storm water discharges shall be in compliance with the SWPPP. Representative materials and procedures include erosion control of construction vehicles and equipment, and general construction debris potentially entering the storm drain system’s natural flow course.

1.5 REQUIREMENTS

A. The State Water Resources Control Board uses the Storm Water Multiple Application and Report Tracking System (SMARTS) web-based application for storm water permit processing and tracking. The Contractor shall input data and upload documents required for storm water permit compliance. The program is also responsible for processing, reviewing, updating, annual reports, and maintaining the billing status of each discharger. SMARTS has been developed to provide an online tool to assist dischargers in submitting their NOIs, NECs, NOTs, and Annual Reports, as well as, viewing/printing Receipt Letters, monitoring the status of submitted documents, and viewing their application/renewal fee statements. The system will also allow the Regional Board and State Board staff to process and track the discharger submitted documents.

SMARTS is a user account and password protected system where a valid user account and password is needed to access the system. The District will prepare and submit the Permit Registration Documents. The Contractor’s QSP shall submit any required changes to the documentation electronically to the District at least 15 working days prior to the land surface disturbance at the Site. Once the documents are approved, the Contractor shall upload the required data and documents to the SMARTS web site.
B. Contractor shall provide a Qualified Storm-Water Pollution Prevention Plan (SWPPP) Practitioner (QSP) for SWPPP development and implementation as defined in the Order (“Qualified” means the developer and/or practitioner possesses the necessary professional license, i.e. Professional Engineer, Geologist, etc. and has passed any exam(s) required to obtain the QSD/QSP certification. Refer to the specific requirements as shown within the SWRCB General Construction Permit and regulations). The QSP shall input and maintain data and documents in the SMARTS web site to ensure compliance with the state storm permit at all times.

C. Provide all material, labor, equipment, for installation, implementation, and maintenance of all surface-water pollution prevention measures. This work includes the following:
   1. Furnishing, placing, and installing effective measures for preventing erosion and runoff of soil, silts, gravel, hazardous chemicals or other prohibited materials defined by the SWRCB and RWQCB.
   2. Managing on-site construction materials in such a manner as to prevent said materials from contacting storm water or wash water and running off-site into the storm drain system.
   3. Complying with applicable standards and regulations for water pollution and erosion control.
   4. Include post-construction storm water pollution prevention structures in the storm water pollution prevention plan. Contractor shall use construction drawings as the reference for post-construction BMPs.

D. Contractor will not be required to maintain post-construction pollution prevention structures. However, Contractor is required to provide operations and maintenance documents to the District at the end of construction.

E. In this section, the term "storm drain system" shall include storm water conduits, storm drain inlets and other storm drain structures, street gutters, channels, watercourses, creeks, lakes, and the San Francisco Bay.

F. Sanitary sewer discharge regulations are intended to provide protection of the sanitary sewer system and appropriate municipal utility water pollution control plant. In this specification, “sanitary sewer” shall include any sanitary sewer manhole, clean-out, side sewer or other connection to the area wastewater treatment plant.

G. Contractor shall have storm drain pollution prevention measures in place and follow this specification anytime rain is predicted in the San Francisco Bay Area by the National Oceanic and Atmospheric Administration (NOAA) prediction for rain at or above 50%. It is the responsibility of the Contractor to be prepared for a rain event at all times required by the Order, to be aware of weather predictions, and to perform actions triggered by prediction of such rain events. The District is not responsible for informing the Contractor of rain predictions.

H. Construction site sanitary sewer blockage will likely result in a back-up and overflow to the storm drain system. The Contractor shall immediately notify the District and the Project Inspector of record if there is a clogged sanitary sewer, and implement a plan to re-direct sewage if an overflow of the sanitary sewer will result in sewage discharge to the storm drain.

I. Contractor shall not allow any non-storm water to enter the storm drain system. Non-storm water includes domestic supply water used to wash streets, painting and drywall equipment,
tools, equipment, or vehicles. Except for certain fire-line flushing and testing procedures, contact the District for discharge approval.

1.6 REGULATIONS AND STANDARDS

A. Contractor shall comply with the following applicable regulations:
   2. “San Francisco Bay Basin (Region 2) Water Quality Control Plan” (Basin Plan), California Regional Water Quality Control Board,
   3. California State Water Resources Control Board NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCEACTIVITIES, Order 2009-0009 DWQ (Order) and all Amendments.

B. Contractor shall comply with industry-standard guidelines on storm drain pollution prevention, such as:
   1. “Erosion and Sediment Control Field Manual” California Regional Water Quality Control Board (RWQCB)—San Francisco Bay Region.

1.7 SUBMITTALS/DELIVERABLES

A. Some or all of the following documents may be required, depending on the site Risk calculation, monitoring requirements, construction phase storm water treatment systems, and post-construction storm water treatment structures:
   1. Storm Water Pollution Prevention Plan created by the District’s QSD
   2. Site Map
   3. Post-construction water balance form
   4. Risk Calculation
   5. Active Treatment Systems plans (based on Risk Level 1)
   6. Others as may be required by the State Water Resources Control Board Order 2009-0009 DWQ.
   7. Erosion control and water pollution control drawings based on actual construction phasing and staging locations. Contractor shall use construction drawings and requirements from the construction general permit as the reference for these drawings.

B. The Notice of Intent (NOI) and the initial PRD will be completed by the District and uploaded for approval to the SMARTS web site. Once approved, any following revisions or updates during construction will be uploaded to the SMARTS web site by the Contractors’ QSP.

C. Monitoring Reports. Monitoring sampling results reports are mandated according to the Risk Level and specific characteristics of the Site as prescribed in the Order. Contractor shall determine the required monitoring reports according to the Order and submit a list of such documents to the District and the SMARTS database. When the Project is underway, the Contractor shall produce the mandated reports electronically and submit them to the District
D. Annual Reports. Contractor shall determine the required information according to the Order and electronically submit the Annual Report electronically to the District and the SWRCB via SMARTS database.

E. Notice of Termination. The District, working in conjunction with the Contractor, shall determine the required information according to the Order and electronically submit Notice of Termination documents to the District and the SWRCB via the SMARTS database for each increment separately.

F. Complete and provide the Post-Construction Water Balance Performance Standard Spreadsheet as found in Appendix 2/2.1 of the Order.

1.8 ENVIRONMENTAL ENFORCEMENT

A. State, regional, and local agencies have authority to enforce, through codified regulations, any portions of this Section that if not implemented may violate applicable regulations. Agency enforcement may include but is not limited to: citations, orders to abate, bills for cleanup costs and administration, civil suits, and/or criminal charges. Contract compliance action by the District shall not be construed to void or suspend any enforcement actions by these or other regulatory agencies.

PART 2 - MATERIALS

2.1 GENERAL

A. Provide materials as required for execution of the Work required by the approved Stormwater Pollution Prevention Plan, prepared by the District’s QSD

PART 3 - EXECUTION

3.1 GENERAL

A. Report any hazardous or unknown material spills immediately to a District Representative. If a spill occurs after hours or on a weekend, contact the campus Police Department. The Contractor is responsible for ensuring that its employees and subcontractors (if any) working on site are aware of the location of the campus phone nearest the Site. The Contractor is also responsible for creating the necessary spill reports outlined in the construction general permit and must upload them to SMARTS.

B. Adhere to the requirements of the Order.

3.2 SPILL PREVENTION AND CONTROL

A. The Contractor shall keep spill cleanup materials, such as rags or absorbents, readily accessible on-site.

B. The Contractor shall immediately contain and prevent leaks and spills from entering storm drains, and properly clean up and dispose of the waste and cleanup materials. If the waste is hazardous, the Contractor shall dispose of hazardous waste only at authorized and permitted Treatment, Storage, and Disposal Facilities, and use only licensed hazardous waste haulers to
remove the waste off-site, unless quantities to be transported are below applicable threshold limits to transportation specified in State and Federal regulations.

C. The Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.

D. The Contractor shall report any hazardous materials spill to Emergency 911.

### 3.3 DE-WATERING AND SEDIMENT MANAGEMENT AND NONHAZARDOUS MATERIAL/WASTE MANAGEMENT

A. If storm water or groundwater in site excavations or drilled holes, (e.g., trenches, pits, pier holes, footings), needs to be removed, it shall be made clean by filtering, settling, or other method capable of removing solids and suspended particles from this water prior to discharge to the storm drain system. The Contractor shall ensure that this discharge complies with all applicable provisions of the Basin Plan.

B. If excavation water is domestic supply water, or the water is contaminated with a hazardous substance, then the Contractor shall dispose of according to guidance from the District. For disposal authorization, the Contractor shall contact the District to determine the discharge requirement.

C. If the Contractor suspects the presence of contaminated groundwater, or domestic supply water, the Contractor shall immediately notify the District. The Contractor shall not attempt to pump out or treat any material suspected of containing a hazardous material or petroleum product.

D. Designated Area:
   1. The Contractor shall propose designated areas of the Site, for approval by the Engineer, suitable for material delivery, storage, and waste collection that, to the maximum extent practicable, are near construction entrances and away from catch basins, gutters, drainage courses, and creeks.

E. Granular Material:
   1. The Contractor shall store granular material at least ten feet away from catch basin and curb returns.
   2. The Contractor shall not allow granular material to enter the storm drains or creeks.
   3. When rain is forecast within 24 hours or during wet weather, the Engineer shall require the Contractor to cover granular material with a tarpaulin and to surround the material with sand bags.

F. Dust Control: The Contractor shall use reclaimed water if available to control dust on a daily basis or as directed by the QSP. If reclaimed water is not available, Contractor to use domestic water.

### 3.4 HAZARDOUS MATERIAL/WASTE MANAGEMENT

A. Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with City, State and Federal regulations.

B. Store hazardous materials and wastes in secondary containment and cover them during wet weather.
C. Follow manufacturer’s application instructions for hazardous materials and do not use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.

D. Arrange for appropriate disposal of all hazardous waste.

E. See the Contract General Conditions, Article 10.4 and Division 2 specifications prepared by Terracon for more information and requirements on the removal of Hazardous Materials.

3.5 SANITARY SEWER DISCHARGE POINT IDENTIFICATION

A. If the Contractor will be disposing of water from a settling operation, or any other water approved by the District for sanitary sewer disposal, the Contractor will verify with the Buildings and Grounds Department that the manhole used for disposal is a sanitary sewer and not a storm drain. (Note: do not assume that a manhole is a sanitary sewer, even if the words “sanitary sewer” is embossed on it. Sometimes utility maps and manhole cover designations are incorrect.)

3.6 WATER MAIN AND SANITARY SEWER LINE BREAK CONTINGENCY PLAN

A. If working on or near a water main line or sanitary sewer line, the Contractor shall have a written emergency response plan that states procedures for responding to a break and release of supply water to the storm drain system. This plan shall be made part of the SWPPP. The Contractor shall meet the following requirements:

1. Water Main Work
   a. Determine the direction of water flow if the main were to break.
   b. Build a containment berm between the work area and the storm drain inlet(s) that the water would flow into. Make the containment structure large enough to hold the water so that it can be pumped to a sanitary sewer.
   c. Build this containment structure before digging.
   d. If there is a water main break, pump the water that collects in the containment structure to a sanitary sewer.
   e. If the containment fails, prevent chlorinated water from entering the storm drain system.
   f. Put in place, before digging, sediment control structures upstream of drain inlets and at drain inlets.
   g. If a break occurs, contact the District and Project Inspector of record immediately. Include in the plan the phone numbers of the District and Project Inspector contact information.

2. Sanitary Sewer Line Work.
   a. Determine where the sewage will flow if the work could cause a blockage.
   b. Build a containment structure between the work area and the storm drain inlet(s) that the sewage water would flow into. Make the containment structure large enough to hold the sewage flow so that it can be pumped to a sanitary sewer.
   c. Build the containment before working on the sewer line. Put in place, before digging, solids (toilet paper, etc.) control structures upstream of drain inlets and at drain inlets.
d. If a sewage blockage occurs, pump it to a sanitary sewer, and do not allow it to
flow into the storm drain system.

e. If the containment fails, prevent chlorinated water from entering the storm drain
system by placing dechlorination sodium sulfite tablets in the sewage according to
Attachment 2 of this Section).

f. If a sewage blockage or spill occurs contact the District and Project Inspector of
record immediately.

3. Excavation Work. This Paragraph applies to Contractors that excavate in the vicinity of
sanitary sewer lines and cause or discover a sewage spill, leak or blockage.

a. Immediately notify the District. The District will immediately notify Project
Inspector. Include in the plan the phone numbers of the District and Project
Inspector contact information.

3.7 PAVING OPERATIONS

A. Project Site Management:

1. When rain is forecast within 24 hours or during wet weather, the District or the QSP may
prevent the Contractor from paving.

2. The QSP may direct the Contractor to protect drainage courses by using control
measures, such as earth dike, straw bale, straw wattles, and sand bag, to divert runoff or
trap and filter sediment.

3. The Contractor shall place drip pans or absorbent material under paving equipment
when not in use.

4. The Contractor shall cover catch basins and manholes when paving or applying seal coat,
tack coat, slurry seal, or fog seal.

5. If the paving operation includes an on-site mixing plant, the Contractor shall comply with
the County’s General Industrial Activities Storm Water Permit requirements.

B. Paving Waste Management: The Contractor shall not sweep or wash down excess sand (placed
as part of a sand seal or to absorb excess oil) into gutters, storm drains, or creeks. Instead, the
Contractor shall, either collect the sand and return it to the stockpile, or dispose of it in a trash
container. The Contractor shall not use water to wash down fresh asphalt concrete pavement.

3.8 SAW CUTTING

A. During saw cutting, the Contractor shall cover or barricade catch basins using control
measures, such as filter fabric, straw bales, sand bags, and fine gravel dams, to keep slurry out
of the storm drain system. When protecting a catch basin, the Contractor shall ensure that the
entire opening is covered.

B. The Contractor shall vacuum saw cut slurry and pick up the waste prior to moving to the next
location or at the end of each working day, whichever is sooner.

C. If saw cut slurry enters catch basins, the Contractor shall remove the slurry from the storm
drain system immediately.
3.9 CONTAMINATED SOIL MANAGEMENT
   A. The Contractor shall look for contaminated soil as evidenced by site history, discoloration, odor, differences in soil properties, abandoned underground tanks or pipes, or buried debris. If the Project is not within an area of known soil contamination and no evidence of soil contamination is found, then testing of the soil shall only be required if directed by the District.
   B. If the Project is within an area of known soil contamination or evidence of soil contamination is found, then soil from grading or excavation operations shall be tested by the District’s testing agency. The soil shall be managed as required by designated agency.

3.10 CONCRETE, GROUT, AND MORTAR WASTE MANAGEMENT
   A. Material Management: The Contractor shall store concrete, grout, and mortar away from drainage areas and ensure that these materials do not enter the storm drain system.
   B. Concrete Truck/Equipment Wash Out:
      1. The Contractor shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks.
      2. The Contractor shall perform washout of concrete trucks or equipment off-site.

3.11 PERSONNEL TRAINING
   A. The Contractor shall train its employees working on the Site on the requirements contained in this Section. The Contractor shall document this training in writing. District representatives for the Site will request to see the training materials and records at the onset of work.
   B. The Contractor shall inform all subcontractors (if any) of the water pollution prevention requirements contained in this specification and include appropriate subcontract provisions to ensure that these requirements are met.

3.12 LIST OF CONTRACTORS DESIGNATED SWPPP CONTACTS AND PHONE NUMBERS
   A. Provide a list of employees that will be responsible for preparing, implementing and updating the SWPPP, including, but not limited to, the name of the Contractor’s QSP.
Storm Water Pollution Prevention Plan

For:
Contra Costa College
New Science Building
2600 Mission Bell Drive
San Pablo, California  94806
APN: 416-140-021

Grading Permit No:  TBD

Discharger:
Ray Pile
500 Court Street
Martinez, CA  94553

Contractor:
TBD

Qualified SWPPP Practitioner (QSP)
TBD (By Contractor)

Qualified SWPPP Developer (QSD)
Dayne Johnson
BKF Engineers
1646 N. California Blvd, Suite 400
Walnut Creek, California  94596
(925) 940-2200

SWPPP Preparation Date:
April 25, 2018
BKF # 20175092

Estimated Project Phased Dates:
Increment 0: From approximately July 9, 2018 through January 31, 2019.
Increment 1: From approximately February 1, 2019 through June 30, 2019
Increment 2: From approximately July 1, 2019 through August 31, 2021.

WDID No.:____TBD_____
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APPENDIX R EROSION CONTROL PLAN

APPENDIX S CONTRACTOR ACTIVITIES LOCATION MAP
SWPPP Certification Statement by Qualified SWPPP Developer (QSD)

Project Name: Contra Costa College New Science Building

City Permits: Not Applicable – No local agency permit required - Project under jurisdiction of Division of the State Architect

BKF Project Number: 20175092

“This document and all attachments were prepared under my direction or supervision as a Qualified SWPPP Developer. To the best of my knowledge and belief, the information submitted is true, accurate, and complete.”

QSD’s Signature: ____________________________  Date of SWPPP Preparation: April 25, 2018

Dayne Johnson, Project Manager  QSD’s name and title: ____________________________  Telephone Number: (925) 940-2200

OSP/QSD #C61408  QSD’s Qualifying Professional Registration: ____________________________
SWPPP Certification Statement by Discharger

Discharger (Owner or Legally Responsible Person - LRP)
Certification of the Storm Water Pollution Prevention Plan

Project Name: Contra Costa College New Science Building

City Permits: Not Applicable – No local agency permit required - Project under jurisdiction of Division of the State Architect

BKF Project Number: 20175092

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

__________________________________________   ______________________________
Discharger (LRP)’s Signature                  Date

__________________________________________   ______________________________
Ray Pile, Authorized Representative          Discharger’s name and title     Telephone Number
Section 1  SWPPP Requirements

1.1 Introduction

This SWPPP has been prepared to comply with the California’s General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit) - State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ under NPDES No. CAS000002 and modified by 2010-0014-DWQ and 2012-006-DWQ.

The Contractor shall designate a Qualified SWPPP Practitioner (QSP) to implement the provisions of the SWPPP and the Construction Site Monitoring Program (CSMP), and shall comply with the narrative effluent standards listed below:

• Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

• Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT (Best “economically” Available Technology) for toxic and non-conventional pollutants and BCT (Best Conventional “pollution control” Technology) for conventional pollutants.

The contractor shall notify the Owner if the QSP is no longer associated with the work. The Owner shall be notified within 24 hours and a qualified replacement named within 72 hours. The replacement QSP shall meet the Permit certification requirements.

The QSP shall have the training described in Section 5 of this SWPPP and shall be listed on the SMARTS system prior to the start of construction. The Legally Responsible Person (LRP) shall ensure that SWPPPs for all traditional project sites are developed and amended or revised by a Qualified SWPPP Developer (QSD).

The QSP is responsible for erosion control on the site and shall supplement the erosion control plan shown on Construction Documents where the facilities shown on the Construction Documents are not preventing erosion. The QSP shall make corrective measures as soon as erosion is observed and shall report these measures to the QSD by e-mail within 24 hours.

This SWPPP has been designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled.

2. Where not otherwise required to be under a Regional Water Quality Control Board (RWQCB) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated.

3. Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard.

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

5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.
6. Identify post-construction BMPs, which are those measures to be installed during construction that are intended to reduce or eliminate pollutants after construction is completed. See Section 3.4 for post-construction BMPs.

7. Identify and provide methods to implement BMP inspection, visual monitoring, and Construction Site Monitoring Program (CSMP) requirements to comply with the General Permit.

### 1.2 Permit Registration Documents

The LRP must electronically file Permit Registration Documents (PRDs) prior to the commencement of construction activity. PRDs are to be submitted to the Storm Water Multiple Application and Report Tracking System (SMARTS). Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the Clean Water Act and the California Water Code. See Appendix B for submitted Permit Registration Documents.

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<thead>
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<th>Date of Preparation</th>
<th>Date of Online Submittal</th>
</tr>
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<tbody>
<tr>
<td>Notice of Intent (NOI)</td>
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<td>May 2018</td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>4/25/2018</td>
<td>April 2018</td>
</tr>
<tr>
<td>Site Map</td>
<td>4/25/2018</td>
<td>April 2018</td>
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<tr>
<td>SWPPP</td>
<td>4/25/2018</td>
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<tr>
<td>Annual Fee</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Signed Certification Statement</td>
<td>April 2018</td>
<td>May 2018</td>
</tr>
</tbody>
</table>

### 1.3 SWPPP Availability and Implementation

The QSP is responsible for making available the original SWPPP at the construction site during working hours while construction is occurring. The SWPPP shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle, and is not currently at the construction site, current copies of the BMPs and map/drawing shall be left with the field crew, and the original SWPPP shall be made available via a request by radio/telephone.

This SWPPP shall be implemented concurrently with the start of ground disturbing activities and remain in effect until a Notice of Termination for the site is approved by the Regional Water Quality Control Board.

### 1.4 SWPPP Amendments

All amendments proposed or implemented to the SWPPP shall be approved and signed by the QSD. Amendments are to be dated, included in the SWPPP in Appendix C, and logged in Appendix C.

### 1.5 Retention of Records

The QSP is required to maintain a paper or electronic copy of all required records throughout construction, and provide copies of these reports to the LRP when requested during the job and at the
end of the job. The LRP shall retain a copy of all required records for three years from the date generated or the date submitted to the State Water Board or Regional Water Boards, whichever is the latter. A copy of these records must be available at the construction site and within Appendix O of this SWPPP until construction is complete. The LRP shall furnish the RWQCB, SWRCB, or US Environmental Protection Agency (EPA) any requested information to determine compliance with this General Permit within a reasonable time.

1.6 Required Non-Compliance Reporting

The QSP is required to properly document reportable discharges or other violations of the General Permit. Please see Section 2.3 for potential impacts to SWPPP requirements. As discussed in the CSMP in Appendix S, the QSP shall submit all sampling reports and all field or laboratory analytical data electronically using the SMARTS system, as part of the Annual Report, including but not limited to the following:

- Any discharge violations or to comply with RWQCB enforcement actions.
- Discharges which contain a hazardous substance in excess of reportable quantities established in 40 CFR §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

Documentation of all reportable exceedances shall be included in this SWPPP under Appendix D.

1.7 Annual Report

The QSP is responsible for preparing and electronically submitting an Annual Report, which must be certified by the LRP no later than September 1st of each year. Reporting requirements are identified in Section XVI of the General Permit and include (but are not limited to) providing a summary of:

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

The LRP is responsible for certifying the Annual Report via SMARTS, and is required to retain paper copies of all submitted documents for a period of 3 years after the Notice of Termination is accepted.

1.8 Changes to Permit Coverage

The Construction General Permit allows a permittee to reduce or increase the total acreage covered under the General Permit when a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is sold to a different entity; or when new acreage is added to the project. To change the acreage covered, the permittee must electronically file modifications to PRDs (revised NOI, site map, SWPPP revisions as appropriate, and certification that new landowners have been notified of applicable requirements to obtain permit coverage, including name, address, phone number, and e-mail address of new landowners) in accordance with requirements of the General Permit within 30 days of a reduction or increase in total disturbed area.

Include any updates to PRDs submitted via SMARTS in Appendix E. Document any related SWPPP revisions/amendments in Appendix C.
1.9 Construction Site Monitoring Program

The QSP is to implement the Construction Site Monitoring Program (CSMP) in accordance with the requirements found in Appendix A. The CSMP is included in this SWPPP in Appendix N.

1.10 Notice of Termination

To terminate coverage under the General Permit, a Notice of Termination (NOT) must be submitted electronically via SMARTS. A “final site map” and photos are required to be submitted with the NOT. Filing a NOT certifies that all General Permit requirements have been met. The NOT is submitted when the construction project is complete, and within 90 days of meeting all General Permit requirements for termination and final stabilization including:

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

The NOT must demonstrate through photos that the project meets all of the requirements of Section II.D.1 of the General Permit by the 70% final cover method (no computational proof required)

1.11 Contractor Activities Location Map

Locations of storage areas for waste, vehicles, service, loading/unloading of materials, access (entrance/exits) points to construction site, fueling, and water storage, water transfer for dust control and compaction practices shall be shown on this map and updated regularly by the QSP. All updates of the Contractor Activities Location Map shall be included in Appendix S.

1.12 Other Plans/Permits

The following list indicates other local, state, and federal permits that are known to be associated with this project, as well as other pertinent reports and investigations. Information regarding these permits, approvals, reports or investigations may be obtained through the owner of the project and may be included in Appendix P ~ Agency Approvals and Miscellaneous Documents.

- “Geotechnical Engineering Investigation Report, C-4016 New Allied Science Building, Contra Costa College, 2600 Mission Bell Drive, San Pablo, California.” Kleinfelder Project No.: 20181569.001A, Dated: October 17, 2017
- “Contra Costa College New Science Building” plans, prepared by Smithgroup JJR, BKF Engineers, RHAA, Integral Group, and Teecom, dated March 30, 2018, revised April 20, 2018
Section 2  Project Information

2.1 Project and Site Description

The Contra Costa College New Science Building project is located at 2600 Mission Bell Drive in San Pablo, California. The site is accessible from Campus Drive. The 1.56 acre site is contained within the Contra Costa College property. The New Science Building project involves three increments. Increment 0 will involve the demolition of existing buildings, hardscape, utilities, and landscape. Increment 1 will include site utility work and grading. Increment 2 involves the construction of a new three-story building, utility services, hardscape, and landscape.

Initial construction activities during Increment 0 will include:
- Demolition of Existing Site
- Rough Grading

To reduce pollutant run-off, construction practices may include, but are not held or limited to:
- Soil Stabilization Practices
- Practices to Reduce Tracking Sediment Onto Public and Private Roads
- Practices to Minimize Wind Erosion
- Practices to Minimize Contact with Storm Water
- Pre-Construction Control Practices

Site improvements will include:
- Fine Grading
- Construction of New Three-Story Building
- Paving and Construction of Hardscape Improvements and Associated Underground Utilities
- Landscaping

The rainy season in this area is October 15th through April 15th. However, rainfall does occur outside this period and BMPs are required year round.

Site elevations range from approximately 94 at north draining south to an elevation of approximately 68. Existing overland release paths across the site will be maintained to accommodate run-off from upstream properties. The proposed developed project run-off will be detained and treated on site per City of San Pablo and Contra Costa County requirements before discharging to the public storm drain system. Run-on from off-site tributary areas enters the site from the street and neighboring open space to the north, and flows overland into the adjacent storm drain system within the limits of the property. Run-off will be collected through a network of area drains, subdrains, and pipes throughout the site and directed to the existing storm drain system on the property.

2.2 Site Data / Storm Water Run-On from Off-Site Areas

Site Data
Total Site Area = 68,040 sf = 1.56 acres

Existing / Pre-Construction Site Conditions
- Impervious Area Percentage = 49.9%
- Impervious Site Area = 33,957 sf = 0.780 acres
- Impervious Site Area Weighted Run-off Coefficient = 0.95
- Pervious Site Area = 34,083 sf = 0.782 acres
- Pervious Site Area Weighted Run-off Coefficient = 0.50
- Total Existing Site Area Weighted Run-off Coefficient = 0.72

Proposed / Post-Construction Site Conditions
- Impervious Area Percentage = 45.8%
- Impervious Site Area = 31,187 sf = 0.716 acres
- Impervious Site Area Weighted Run-off Coefficient = 0.95
- Pervious Site Area = 36,853 sf = 0.846 acres
- Pervious Site Area Weighted Run-off Coefficient = 0.50
- Total Proposed Site Area Weighted Run-off Coefficient = 0.74

Run-On Discharges from Off-Site Areas
(Existing Conditions - 100 Year Event)
- Area Run-off Coefficient = 0.72
- Area Rainfall Intensity = 4.42 in/hr
- Drainage Area = 1.56 acres
- Site Area Run-on Discharge = 5.00 cfs

Run-on from off-site tributary areas enters the site from the north and flows overland to the south. The site geometry and topography this flow can be accommodated in overland swales at depths less than 0.3’ near proposed structures. The flows across the site are incorporated into the site grading and drainage design. The QSP is responsible for maintaining a non-erosive channel lining for the swales that convey off-site flows through the site.

### 2.3 Findings of the Construction Site Sediment and Receiving Water Risk Determination

The risk level for this project is 1.

The site’s RUSLE factors were determined as follows:
- Rainfall/Runoff (R) - EPA On-Line Rainfall Erosivity Factor Calculator
- Soil Erodibility (K) - GIS Map
- Length and Steepness of Slope (LS) - Site Specific Option

Since this is a Risk Level 1 site, NALs and NELs are not applicable.

All risk determination calculations are included in the SWPPP as a part of Appendix B.
As described above in Section 1.6 “Required Non-Compliance Reporting”, the QSP is required to properly document reportable discharges or other violations of the General Permit. Exceedances and violations may result in the project being subject to the more stringent monitoring and reporting requirements applicable to a Risk Level 2 or 3 project. This would require a major amendment to the project SWPPP, including an expanded CSMP.

2.4 Construction Schedule

Listed below are the identified phases of construction and their proposed start dates:

Increment 0 - From approximately July 9, 2018 through January 31, 2019.
Abatement and Demolition

Increment 1 - From approximately February 1, 2019 through June 30, 2019
Site Utilities, Site Work, Grading

Increment 2 – From approximately July 1, 2019 through August 31, 2021.
New Science Building Construction

This schedule is subject to change depending on permitting processes, phasing, and conditions encountered during construction and weather conditions. The QSP is required to keep an updated and detailed schedule in Appendix F.

2.5 Potential Construction Site Pollutant Sources

The following is a list of example construction materials and activities that have the potential to contribute pollutants, other than sediment, to storm water run-off:

- Vehicle fluids, including oil, grease, petroleum, and coolants
- Asphalthic emulsions associated with asphalt concrete paving operations
- Cement materials associated with Portland cement concrete (PCC) paving operations, drainage structures, and median barriers
- Base and subbase material
- Joint and curing compounds
- Concrete curing compounds
- Paints
- Solvents, thinners, and acids
- Sandblasting materials
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, mulch, pesticides)
- BMP materials (sandbags)
- Treated lumber (materials and waste)
- PCC rubble
- General litter
Construction activities that have the potential to contribute sediment to storm water discharges include:

- Clear and grub operations
- Grading operations
- Soil import and export operations
- Utility excavation operations
- Sandblasting operations
- Landscaping operations
- Painting

The QSP is required to maintain an ongoing and active list of potential pollutant sources, construction activities, and identify areas of the site where additional BMPs are necessary to reduce or prevent pollutants in discharges. This “SWPPP Construction Site Pollutant Checklist” must be consistent with the Material Safety Data Sheets (MSDS) for the project. It is recommended that the SWPPP and MSDS be kept together at the site office, together with the Stormwater Management Plan.

A template for the SWPPP Construction Site Pollutant Checklist is provided in Appendix G. In completing the list, the QSP, contractor, and subcontractors shall address at a minimum:

1. The quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
2. The degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
3. In describing method of control and protection, Contractor shall consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

### 2.6 Identification of Non-Storm Water Discharges

Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Any release of contained stormwater that is not concurrent with rainfall is considered as a non-stormwater discharge (including pumping from excavations). Non-storm water discharges may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction, must be addressed through structural as well as non-structural BMPs.

The QSD is required to identify all potential non-storm water discharges within the project. All project activities shall be examined to determine what discharges will be generated or may be required in order to complete each activity, including mobile-type operations.

Examples of common construction activities that may result in non-storm water discharges on a project:

- Vehicle and equipment cleaning, fueling and maintenance
- Surface water diversions,
- Dewatering operations
- Saw-cutting
- Drilling
- Boring
- AC and PCC grinding
- AC and PCC recycling
- Concrete mixing
- Crushing
- Bridge cleaning
- Blasting
- Painting
- Hydro-demolition
- Mortar mixing
- Air-blown mortar
Section 3  

Best Management Practices

3.1 BMP Implementation

The Contractor is required to install BMPs as shown on the Erosion Control Plans included in Appendix R and implement/install the BMPs listed in this section of the SWPPP. The Contractor shall modify the Erosion Control Plan to reflect the phase of construction and the weather conditions. The Contractor shall install BMPs before the site is disturbed (e.g., to provide protection during grading operations or to reduce or minimize pollution from historic areas of contamination during construction). The erosion control plan shall be implemented year round.

A BMP Consideration Checklist has been provided in Appendix H, followed by the Fact Sheets for the BMPs that are recommended for this project, which are included in the following sections. BMPs will be installed in a sequence to follow the progress of the grading and construction. As each area of the site is disturbed, BMPs will be installed to conform to the specific site requirements. In general, the project will have limited areas exposed at any time. Where practical, grading will occur during dry periods. Plantings shall be installed with sufficient time before rainfall begins to stabilize the soil. If this is not practical, physical means such as erosion blankets shall be used or sediment trapping devices shall be installed.

3.2 Erosion and Sediment Control

Identified in this section is a system of erosion and sediment control BMPs that have been found to be effective. As a result, there is a reduction of sediment related pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the BAT/BCT standard. This General Permit additionally requires that SWPPPs be designed to address post-construction BMPs installed to reduce pollutants after construction.

3.2.1 Erosion Control

Erosion control is any source control practice that protects the soil surface and prevents soil particles from being detached by rainfall, flowing water, or wind. Erosion control consists of using project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season), preventing or reducing erosion potential by diverting or controlling drainage, as well as preparing and stabilizing disturbed soil areas. It should be noted that several additional BMPs, such as Check Dams (SE-4) and Fiber Rolls (SE-5) can be used for erosion control, by reducing slope length or steepness, as well as for sediment control (i.e., perimeter control or retention of sediment).

All inactive soil disturbed areas on the project site, and most active areas prior to the onset of rain, must be protected from erosion. Soil disturbed areas may include relatively flat areas as well as slopes. Typically, steep slopes and large exposed areas require the most robust erosion controls. Flatter slopes and smaller areas still require protection, but less costly materials may be appropriate for these areas, allowing savings to be directed to the more robust BMPs for steep slopes and large exposed areas. To be effective, erosion control BMPs for slopes at disturbed areas must be protected from concentrated flows.

Some erosion control BMPs can be used effectively to temporarily prevent erosion by concentrated flows. These BMPs, used alone or in combination, prevent erosion by intercepting, diverting, conveying, and discharging concentrated flows in a manner that prevents soil detachment and transport. Temporary concentrated flow conveyance controls, such as Earth Dikes and Drainage Swales (EC-9) and Velocity Dissipation Devices (EC-10) may be required to direct run-on around or through the project in a non-erodible fashion.
The Contractor will implement the following practices for effective erosion control during construction:

- Provide effective soil cover for inactive areas and all finished slopes, open space, utility backfill, and completed lots. Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
- Limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.
- Implement/install the erosion control BMPs listed below.

**Erosion Control BMPs**

The California Stormwater BMP Handbook - Construction contains fact sheets for erosion control BMPs applicable to a wide range of project types and potential construction activities. The table below indicates the erosion control BMPs that are required, because they are certain to be needed, and those that should be implemented as needed. As indicated in the footnotes under “Required”, some BMPs serve similar purposes and shall be implemented/installed in the combination deemed most suitable for the site conditions by the QSP.

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<thead>
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<th>BMP#</th>
<th>BMP Name</th>
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<td>EC-10</td>
<td>Velocity Dissipation Devices</td>
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<td>EC-15</td>
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<td>Non-Vegetative Stabilization ²</td>
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</tbody>
</table>

1) BMP fact sheet updated in 2009
2) New BMP fact sheet added in 2009

Appendix H includes copies of the fact sheets of all the BMPs selected for this project.

Temporary Erosion Control BMPs as shown in the above table will be implemented per the SWPPP.

**EC-1 Scheduling**

The project is scheduled to complete tasks requiring soil disturbance by June 10, 2020. Much of the work during the winter will on vertical construction.

**EC-2 Preservation of Existing Vegetation**

Areas of protected vegetation are identified on the plans and will be protected using safety fence.
**EC-3 Temporary Hydraulic Mulch (Bonded Stabilized Fiber Matrix)**

Hydraulic Mulch consists of various types of fibrous materials mixed with water and sprayed onto the soil surface in slurry form to provide a layer of temporary protection from wind and water erosion. Temporary hydraulic mulch will be used to stabilize disturbed soils.

- Where feasible, it is preferable to prepare soil surfaces prior to application by roughening embankments and fill areas with a crimping or punching type roller or by track walking.
- Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.
- Where possible apply hydraulic mulch from multiple directions to adequately cover the soil. Application from a single direction can result in shadowing, uneven coverage and failure of the BMP.
- Use a mulch with a tackifier component.

**EC-5, EC-6 and EC-8 Temporary Erosion Control (various)**

Temporary erosion control (various) may be used.

**EC-9 Earth Dikes**

No earth dikes are necessary on the project.

**EC-10 Outlet Protection**

There are no outlets on the project sites. EC-10 is not necessary.

**EC-15 Slope Roughening**

There are no locations on the project where slope roughening is necessary.

**EC-16 Non-vegetative Stabilization Streambank Stabilization**

There are no locations on the project where non-vegetative stabilization is necessary.
3.2.2 Sediment Control

Sediment control is any practice that traps soil particles after they have been detached and moved by rain, flowing water, or wind. Sediment control measures are usually passive systems that rely on filtering or settling the particles out of the water or wind that is transporting them.

Sediment control BMPs include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped. Sediment control practices can consist of installing linear sediment barriers (such as silt fences, gravel bag berms, or fiber rolls); and constructing check dams, a sediment trap or sediment basin to retain sediment on site. Linear sediment barriers are typically placed below the toe of exposed and erodible slopes, down-slope of exposed soil areas, around soil stockpiles, and at other appropriate locations along the site perimeter. Some BMPs are dual-purpose, such as Fiber Rolls and Check Dams. By reducing effective slope length or steepness, these BMPs reduce erosion as well as promote sedimentation.

Sediment control BMPs are most effective when used in conjunction with erosion control BMPs. The combination of erosion control and sediment control is the most effective means to prevent sediment from leaving the project site and potentially entering storm drains or receiving waters. This General Permit requires that sediment controls be established and maintained at all sites, and requires the combined use with erosion controls to protect disturbed areas at most sites.

The QSP shall assure that the following practices for effective sediment control are implemented during construction:

- Effective perimeter controls are established and maintained to sufficiently control sediment discharges from the site.
- Streets are cleaned as needed to prevent unauthorized non-storm water discharges from reaching surface water or Municipal Separate Storm Sewer Systems (MS4 drainage systems).
- All run-on, all run-off within the site and all run-off that discharges off the site are effectively managed. Run-on from off-site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.
- Erodible landscape material is not applied at least 2 days prior to forecast rain or during rain events.
- Erodible landscape materials are stacked on pallets and covered when they are not being used or applied.
- Erodible landscape material is applied at quantities and application rates according to manufacturer recommendations or based on written specifications by knowledgeable and experienced field personnel.
- Sediment control BMPs listed in the following section are implemented and installed.

Sediment Control BMPs

The California Stormwater BMP Handbook - Construction contains fact sheets for sediment control BMPs applicable to a wide range of project types and potential construction activities. The table below indicates the sediment control BMPs that are required, because they are certain to be needed, and those that should be implemented as needed. As indicated in the footnotes under “Required”, some BMPs serve similar purposes and shall be implemented.installed in the combination deemed most suitable for the site conditions by the QSP.
<table>
<thead>
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<th>BMP#</th>
<th>BMP Name</th>
<th>Required</th>
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<tbody>
<tr>
<td>SE-1</td>
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<td>SE-3</td>
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<tr>
<td>SE-5</td>
<td>Fiber Rolls ¹</td>
<td>X³</td>
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<tr>
<td>SE-6</td>
<td>Gravel Bag Berm ¹</td>
<td>X³</td>
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<tr>
<td>SE-7</td>
<td>Street Sweeping and Vacuuming</td>
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<td>Sand Bag Barrier ¹</td>
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<td>Storm Drain Inlet Protection ¹</td>
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<td>SE-12</td>
<td>Temporary Silt Dike ²</td>
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<tr>
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<td>Biofilter Bags ²</td>
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</tbody>
</table>

1) BMP fact sheet updated in 2009  
2) New BMP fact sheet added in 2009  
3) Linear sediment barriers (must use at least one of these)

Appendix H includes copies of the fact sheets of all the BMPs selected for this project.

Temporary Sediment Control BMPs as shown in the above table will be implemented per the WPCDs.

**SE-1 Temporary Silt Fence**

A silt fence is a temporary sediment barrier consisting of woven geotextile stretched across and attached to supporting posts, trenched-in, and, depending upon the strength of fabric used, supported with plastic or wire mesh fence. Silt fences trap sediment by intercepting and detaining small amounts of sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence. Silt fences are proposed on top of slopes to reduce the potential for wind to carry sediment from disturbed soils. Silt fences shall remain in place until the disturbed area is permanently stabilized, after which, the silt fence shall be removed and properly disposed.

**SE-3 Temporary Sediment Trap**

Temporary sediment traps are not necessary because storage behind SE-5 and SE-10 will be adequate to retain sediments.

**SE-5 Temporary Fiber Rolls**

A fiber roll consists of straw, coir, or other biodegradable materials bound into a tight tubular roll wrapped by netting, which can be photodegradable or natural. Additionally, gravel core fiber rolls are available, which contain an imbedded ballast material such as gravel or sand for additional weight when staking the rolls are not feasible (such as use as inlet protection). Fiber rolls are proposed at the toe and on the face of slopes along the contours. Fiber rolls intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff (through sedimentation). By interrupting the length of a slope, fiber rolls can also reduce sheet and rill erosion until vegetation is established. Install fiber rolls as noted on plans.
SE-6 Temporary Gravel Bag Berm

A gravel bag berm is a series of gravel-filled bags placed on a level contour to intercept sheet flows. Gravel bags pond sheet flow runoff, allowing sediment to settle out, and release runoff slowly as sheet flow, preventing erosion. When appropriately placed, a gravel bag berm intercepts and slows sheet flow runoff, causing temporary ponding. The temporary ponding allows sediment to settle. The open graded gravel in the bags is porous, which allows the ponded runoff to flow slowly through the bags, releasing the runoff as sheet flows. Gravel bag berms also interrupt the slope length and thereby reduce erosion by reducing the tendency of sheet flows to concentrate into rivulets, which erode rills, and ultimately gullies, into disturbed, sloped soils. Gravel bag berms are similar to sand bag barriers, but are more porous. Generally, gravel bag berms should be used in conjunction with temporary soil stabilization controls up slope to provide effective erosion and sediment control.

Design and Layout

- Locate gravel bag berms on level contours.
- When used for slope interruption, the following slope(sheet) flow length combinations apply:
  - Slope inclination of 4:1 (H:V) or flatter: Gravel bags should be placed at a maximum interval of 20 ft, with the first row near the slope toe.
  - Slope inclination between 4:1 and 2:1 (H:V): Gravel bags should be placed at a maximum interval of 15 ft. (a closer spacing is more effective), with the first row near the slope toe. Slope inclination 2:1 (H:V) or greater: Gravel bags should be placed at a maximum interval of 10 ft. (a closer spacing is more effective), with the first row near the slope toe.
- Turn the ends of the gravel bag barriers up slope to prevent runoff from going around the berm.
- Allow sufficient space up slope from the gravel bag berm to allow ponding, and to provide room for sediment storage.
- For installation near the toe of the slope, gravel bag barriers should be set back from the slope toe to facilitate cleaning. Where specific site conditions do not allow for a set-back, the gravel bag barrier may be constructed on the toe of the slope. To prevent flows behind the barrier, bags can be placed perpendicular to a berm to serve as cross barriers.
- Drainage area should not exceed 5 acres.
- In Non-Traffic Areas:
  - Height = 18 in. maximum
  - Top width = 24 in. minimum for three or more layer construction
  - Top width = 12 in. minimum for one or two layer construction
  - Side slopes = 2:1 (H:V) or flatter
- In Construction Traffic Areas:
  - Height = 12 in. maximum
  - Top width = 24 in. minimum for three or more layer construction.
  - Top width = 12 in. minimum for one or two layer construction.
  - Side slopes = 2:1 (H:V) or flatter.
- Butt ends of bags tightly.
- On multiple row, or multiple layer construction, overlap butt joints of adjacent row and row beneath.
- Use a pyramid approach when stacking bags.
SE-7 Street Sweeping
Power Brooms will be used for street sweeping. Sweeping will occur daily in areas with construction activity where needed.

SE-8 Temporary Sandbag Barrier
A sandbag barrier is a series of sand-filled bags placed on a level contour to intercept or to divert sheet flows. Sandbag barriers placed on a level contour pond sheet flow runoff, allowing sediment to settle out. When appropriately placed, a sandbag barrier intercepts and slows sheet flow runoff, causing temporary ponding. The temporary ponding allows sediment to settle. Sand-filled bags have limited porosity, which is further limited as the fine sand tends to quickly plug with sediment, limiting or completely blocking the rate of flow through the barrier. If a porous barrier is desired, consider SE-1, Silt Fence, SE-5, Fiber Rolls, SE-6, Gravel Bag Berms or SE-14, Biofilter Bags. Sandbag barriers also interrupt the slope length and thereby reduce erosion by reducing the tendency of sheet flows to concentrate into rivulets which erode rills, and ultimately gullies, into disturbed, sloped soils. Sandbag barriers are similar to gravel bag berms, but less porous. Generally, sandbag barriers should be used in conjunction with temporary soil stabilization controls up slope to provide effective erosion and sediment control.

Design and Layout

- Locate sandbag barriers on a level contour.
- When used for slope interruption, the following slope/sheet flow length combinations apply:
  - Slope inclination of 4:1 (H:V) or flatter: Sandbags should be placed at a maximum interval of 20 ft, with the first row near the slope toe.
  - Slope inclination between 4:1 and 2:1 (H:V): Sandbags should be placed at a maximum interval of 15 ft. (a closer spacing is more effective), with the first row near the slope toe.
  - Slope inclination 2:1 (H:V) or greater: Sandbags should be placed at a maximum interval of 10 ft. (a closer spacing is more effective), with the first row near the slope toe.
- Turn the ends of the sandbag barrier up slope to prevent runoff from going around the barrier.
- Allow sufficient space up slope from the barrier to allow ponding, and to provide room for sediment storage.
- For installation near the toe of the slope, sand bag barriers should be set back from the slope toe to facilitate cleaning. Where specific site conditions do not allow for a set-back, the sand bag barrier may be constructed on the toe of the slope. To prevent flows behind the barrier, bags can be placed perpendicular to a berm to serve as cross barriers.
- Drainage area should not exceed 5 acres.
- Stack sandbags at least three bags high.
- Butt ends of bags tightly.
- Overlap butt joints of row beneath with each successive row.
- Use a pyramid approach when stacking bags.
- In non-traffic areas
  - Height = 18 in. maximum
  - Top width = 24 in. minimum for three or more layer construction
  - Side slope = 2:1 (H:V) or flatter
- In construction traffic areas
  - Height = 12 in. maximum
- Top width = 24 in. minimum for three or more layer construction.
- Side slopes = 2:1 (H:V) or flatter.

**SE-10 Temporary Drain Inlet Protection**

Storm drain inlet protection consisting of a fiber roll around a storm drain, drop inlet, or curb inlet will be used. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Temporary geotextile storm drain inserts attach underneath storm drain grates to capture and filter storm water.

**SE-12, 13, 14 Temporary Silt Dike, Compost Socks and Berm and Biofilter Bags**

Measures not proposed. Storm drain inlet protection and fiber rolls will be used.

### 3.2.3 Tracking Control

Tracking control consists of preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area. Street Sweeping and Vacuuming (SE-7) is also a tracking control practice. All sites must have a stabilized construction entrance and implement controls to prevent off-site tracking of sediment or other loose construction-related materials. These controls should be inspected daily.

Attention to control of tracking sediment off site is essential, as dirty streets and roads near a construction site create a nuisance to the public and can generate complaints to elected officials and regulators. These complaints often result in immediate inspections and regulatory actions.

The Contractor will implement the following practices for effective sediment tracking control during construction:

- Stabilize all construction entrances and exits to prevent the off-site tracking of loose construction/landscape materials.
- Implement/install the tracking control BMPs listed below.

#### Tracking Control BMPs

The California Stormwater BMP Handbook - Construction contains fact sheets for tracking control BMPs. The table below indicates the tracking control BMPs that are required, because they are certain to be needed, and those that should be implemented as needed.

<table>
<thead>
<tr>
<th>BMP#</th>
<th>BMP Name</th>
<th>Required</th>
<th>Implement as Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-1</td>
<td>Stabilized Construction Entrance/Exit</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>TC-2</td>
<td>Stabilized Construction Roadway</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>TC-3</td>
<td>Entrance/Outlet Tire Wash</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Appendix H includes copies of the fact sheets of all the BMPs selected for this project. Temporary Tracking Control BMP as shown in the above table will be implemented per the WPCDs.

### SC-7 Street Sweeping

To the extent feasible, parking will be on stabilized surfaces. To the extent feasible, work will be conducted from paved surfaces. Prior to being driven from a disturbed area to a paved surface, wheels
will be checked and sediment will be knocked from the tires. Powerbrooms will be used to collect any sediment that is tracked onto the roadway.

**TC-1 Temporary Construction Exit**
A construction exit will be provided as shown on plans.

**TC-2 Stabilized Construction Roadway**
No extended construction roadways are proposed.

**TC-3 Temporary Entrance/Outlet Tire Wash**
Limited access to disturbed soils is proposed. No tire wash facilities are warranted based on construction scheduling and size of disturbed areas. Sediment will knocked from tire as warranted by site conditions.

### 3.2.4 Wind Erosion Control

Wind erosion control consists of applying water or other dust palliatives to prevent or minimize dust nuisance.

Other BMPs that control wind erosion are EC-1 through EC-8, and EC-14 through EC-16. Be advised that some of the dust palliatives/chemical dust suppression agents may have potential water quality impacts.

The Contractor will implement the following practices for effective wind erosion control during construction:

- Good housekeeping to prevent wind erosion of materials on site.
- Implement/install the wind erosion control BMP listed below.

**Wind Erosion Control BMP**

The California Stormwater BMP Handbook - Construction contains a fact sheet for wind erosion control BMPs. As indicated in the table below, the wind erosion control BMPs are required.

<table>
<thead>
<tr>
<th>BMP#</th>
<th>BMP Name</th>
<th>Required</th>
<th>Implement as Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE-1</td>
<td>Wind Erosion Control ¹</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>1)</td>
<td>BMP fact sheet updated in 2009</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix H includes copies of the fact sheets of all the BMPs selected for this project.

Wind Erosion Control (WE-1) will be implemented as needed.

**WE-1 Wind Erosion Control**

Wind erosion control will consist of wetting soil to compact in weight of soil. All soil will be off-hauled to Contractor’s Yard. No overnight stockpile will be proposed. Dust control BMPs generally stabilize exposed surfaces and minimize activities that suspend or track dust particles. For heavily traveled and disturbed areas, wet suppression (watering), chemical dust suppression, gravel asphalt surfacing, temporary gravel construction entrances, equipment wash-out areas, and haul truck covers can be employed as dust control applications. Permanent or temporary vegetation and mulching can be
employed for areas of occasional or no construction traffic. Preventive measures include minimizing surface areas to be disturbed, limiting onsite vehicle traffic to 15 mph or less, and controlling the number and activity of vehicles on a site at any given time. Chemical dust uppressants include: mulch and fiber based dust palliatives (e.g. paper mulch with gypsum binder), salts and brines (e.g. calcium chloride, magnesium chloride), nonpetroleum based organics (e.g. vegetable oil, lignosulfonate), petroleum based organics (e.g. asphalt emulsion, dust oils, petroleum resins), synthetic polymers (e.g. polyvinyl acetate, vinyls, acrylic), clay additives (e.g. bentonite, montimorillonite) and electrochemical products (e.g. enzymes, ionic products).

Additional preventive measures include:

- Schedule construction activities to minimize exposed area (see EC-1, Scheduling).
- Quickly treat exposed soils using water, mulching, chemical dust suppressants, or stone/gravel layering.
- Identify and stabilize key access points prior to commencement of construction.
- Minimize the impact of dust by anticipating the direction of prevailing winds.
- Restrict construction traffic to stabilized roadways within the project site, as practicable.
- Water shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.
- All distribution equipment shall be equipped with a positive means of shutoff.
- Unless water is applied by means of pipelines, at least one mobile unit shall be available at all times to apply water or dust palliative to the project.
- If reclaimed waste water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board (RWQCB) requirements. Non-potable water shall not be conveyed in tanks or drain pipes that will be used to convey potable water and there shall be no connection between potable and non-potable supplies. Non-potable tanks, pipes, and other conveyances shall be marked, “NON-POTABLE WATER - DO NOT DRINK.”
- Pave or chemically stabilize access points where unpaved traffic surfaces adjoin paved roads.
- Provide covers for haul trucks transporting materials that contribute to dust.
- Provide for rapid clean up of sediments deposited on paved roads. Furnish stabilized construction road entrances and wheel wash areas.
- Stabilize inactive areas of construction sites using temporary vegetation or chemical stabilization methods.
- For chemical stabilization, there are many products available for chemically stabilizing gravel roadways and stockpiles. If chemical stabilization is used, the chemicals shall not create any adverse effects on stormwater, plant life, or groundwater and shall meet all applicable regulatory requirements.

3.3 Non-Storm Water and Materials Management

3.3.1 Non-Storm Water Management

The discharge of materials other than storm water and authorized non-storm water discharges is prohibited by NPDES regulations as well as other local codes and ordinances. It is recognized that certain authorized non-storm water discharges may be necessary for the completion of construction projects. Non-storm water management BMPs are source control BMPs that prevent pollution by
limiting or reducing potential pollutants at their source or eliminating off-site discharge. These practices involve day-to-day operations of the construction site and are usually under the control of the contractor. These BMPs are also referred to as “good housekeeping practices”, which involve keeping a clean, orderly construction site. This project will incorporate “good housekeeping practices”.

The Contractor will implement the following practices for effective non-storm water management source control during construction:

- All stockpiled materials that are not actively being used shall be covered and surrounded by a berm at all times during the project. Stockpiled materials include soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.
- All chemicals shall be sheltered and stored in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
- Construction materials not designated for outdoor use shall be stored in a manner that minimizes exposure to rain.
- Contractor shall implement BMPs to prevent the off-site tracking of loose construction/landscape materials.
- Contractor shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.
- Prevent oil, grease, or fuel to leak into the ground, storm drains or surface waters.
- Place all equipment or vehicles which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
- Clean leaks immediately and disposing of leaked materials properly.
- Wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.
- Implement/install the non-storm water management source control BMPs listed below.

### Non-Storm Water Management BMPs

The California Stormwater BMP Handbook - Construction contains fact sheets for non-storm water management source control BMPs applicable to a wide range of project types and potential construction activities. The table below indicates the non-storm water management source control BMPs that are required, because they are certain to be needed, and those that should be implemented as needed.

<table>
<thead>
<tr>
<th>BMP#</th>
<th>BMP Name</th>
<th>Required</th>
<th>Implement as Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS-1</td>
<td>Water Conservation Practices</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NS-2</td>
<td>Dewatering Operations ¹</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>NS-3</td>
<td>Paving and Grinding Operations ¹</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NS-6</td>
<td>Illicit Connection/Discharge</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NS-7</td>
<td>Potable Water/Irrigation</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>NS-8</td>
<td>Vehicle and Equipment Cleaning</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>NS-9</td>
<td>Vehicle and Equipment Fueling</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NS-10</td>
<td>Vehicle and Equipment Maintenance</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Appendix H includes copies of the fact sheets of all the BMPs selected for this project.

The Non-Stormwater Pollution Control BMPs as shown in the above table will be implemented as needed.

**NS-1 Water Conservation Practices**

Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and the transport of pollutants offsite. These practices can reduce or eliminate non-stormwater discharges. The following practices will be implemented:

- Keep water equipment in good working condition.
- Stabilize water truck filling area.
- Repair water leaks promptly.
- Washing of vehicles and equipment on the construction site is discouraged.
- Avoid using water to clean construction areas. If water must be used for cleaning or surface preparation, surface shall be swept and vacuumed first to remove dirt. This will minimize amount of water required.
- Direct construction water runoff to areas where it can soak into the ground or be collected and reused.
- Authorized non-stormwater discharges to the storm drain system, channels, or receiving waters are acceptable with the implementation of appropriate BMPs.
- Lock water tank valves to prevent unauthorized use.

**NS-2 Dewatering Operations**

The need for dewatering flows shall be minimized by berming to direct flow away from openings and covering trenches and bore holes. Dewatering flows shall be disposed of by dispersal for infiltration. Scheduling will be used to avoid open trenches during rainfall periods. If there is an exposed trench when rain is forecast that cannot be filled, berms will be constructed to divert surface flow away from the opening and covers will be placed over the opening. Any water that reaches the low point will be allowed to evaporate or percolate.

In the event that covering and berming is not successful, refer to the Field Guide to Construction Site Dewatering, October 2001 available on the Caltrans website and refer to the Basin Plan for guidance on dewatering.

It may be possible to discharge to the sewer or storm drain system with permit. A permit is required if the option is required.

Before sending dewatering flows to the storm drain or sewer system, Contractor shall submit a dewatering and discharge work plan under Section 5-1.02, "Plans and Working Drawings," of the
Standard Specifications and "Water Pollution Control" of these special provisions. The dewatering and discharge work plan must include:

1. Title sheet and table of contents
2. Description of dewatering and discharge activities detailing locations, quantity of water, equipment, and discharge point – Include description of filtering device (Baker Tank or sediment sack and list Turbidity and pH limits (Typically <50 NTU and pH 6.5 to 8.5)
3. Estimated schedule for dewatering and discharge start and end dates of intermittent and continuous activities
4. Discharge alternatives, such as dust control or percolation
5. Visual monitoring procedures with inspection log
6. Copy of written approval to discharge into a sanitary sewer system or storm drain system at least 5 business days before starting discharge activities

NS-3 Paving, Sawcutting and Grinding Operations

Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent run-on and runoff pollution, properly disposing of wastes, and training employees and subcontractors. Many types of construction materials associated with paving and grinding operations, including mortar, concrete, and cement and their associated wastes have basic chemical properties that can raise pH levels outside of the permitted range. Additional care shall be taken when managing these materials to prevent them from coming into contact with stormwater flows.

General

- Project will avoid paving during the wet season. Project is scheduled for completion October 31. Paving and grinding activities will be rescheduled if rain is forecasted.
- Employees and sub-contractors will be trained in pollution prevention and reduction.
- Disposal of PCC (Portland cement concrete) and AC (asphalt concrete) waste shall be in conformance with WM-8, Concrete Waste Management.

Saw Cutting, Grinding, and Pavement Removal

- Shovel or vacuum saw-cut slurry and remove from site. Cover or barricade storm drains during saw cutting to contain slurry.
- When paving involves AC, the following steps shall be implemented to prevent the discharge of grinding residue, uncompacted or loose AC, tack coats, equipment cleaners, or unrelated paving materials:
  o AC grindings, pieces, or chunks used in embankments or shoulder backing shall not be allowed to enter any storm drains or watercourses. Install inlet protection and perimeter controls until area is stabilized (i.e. cutting, grinding or other removal activities are complete and loose material has been properly removed and disposed of) or permanent controls are in place. Examples of temporary perimeter controls can be found in EC-9, Earth Dikes and Drainage Swales; SE-1, Silt Fence; SE-5, Fiber Rolls, or SE-13 Compost Socks and Berms.
  o Collect and remove all broken asphalt and recycle when practical. Old or spilled asphalt shall be recycled or disposed of properly.
Do not allow saw-cut slurry to enter storm drains or watercourses. Residue from grinding operations shall be picked up by a vacuum attachment to the grinding machine, or by sweeping, shall not be allowed to flow across the pavement, and shall not be left on the surface of the pavement. See also WM-8, Concrete Waste Management, and WM-10, Liquid Waste Management.

- Pavement removal activities shall not be conducted in the rain.
- Collect removed pavement material by mechanical or manual methods. This material may be recycled for use as shoulder backing or base material.
- If removed pavement material cannot be recycled, transport the material back to an approved storage site.

**Asphaltic Concrete Paving**

If paving involves asphaltic cement concrete, follow these steps:

- Do not allow sand or gravel placed over new asphalt to wash into storm drains, streets, or creeks. Vacuum or sweep loose sand and gravel and properly dispose of this waste by referring to WM-5, Solid Waste Management.
- Old asphalt shall be disposed of properly. Collect and remove all broken asphalt from the site and recycle whenever possible.

**Portland Cement Concrete Paving**

- Do not wash sweepings from exposed aggregate concrete into a storm drain system. Collect waste materials by dry methods, such as sweeping or shoveling, and return to aggregate base stockpile or dispose of properly. Allow aggregate rinse to settle. Then, either allow rinse water to dry in a temporary pit as described in WM-8, Concrete Waste Management, or pump the water to the sanitary sewer if authorized by the local wastewater authority.

**Sealing Operations**

- During chip seal application and sweeping operations, petroleum or petroleum covered aggregate shall not be allowed to enter any storm drain or water courses. Apply temporary perimeter controls until structure is stabilized (i.e. all sealing operations are complete and cured and loose materials have been properly removed and disposed).
- Inlet protection (SE-10, Storm Drain Inlet Protection) shall be used during application of seal coat, tack coat, slurry seal, and fog seal.
- Seal coat, tack coat, slurry seal, or fog seal shall not be applied if rainfall is predicted to occur during the application or curing period.

**Paving Equipment**

- Leaks and spills from paving equipment can contain toxic levels of heavy metals and oil and grease. Place drip pans or absorbent materials under paving equipment when not in use.
• Clean up spills with absorbent materials and dispose of in accordance with the applicable regulations. See NS-10, Vehicle and Equipment Maintenance, WM-4, Spill Prevention and Control, and WM-10, Liquid Waste Management.
• Substances used to coat asphalt transport trucks and asphalt spreading equipment shall not contain soap and shall be non-foaming and non-toxic.
• Paving equipment parked onsite shall be parked over plastic to prevent soil contamination.
• Clean asphalt coated equipment offsite whenever possible. When cleaning dry, hardened asphalt from equipment, manage hardened asphalt debris as described in WM-5, Solid Waste Management. Any cleaning onsite shall follow NS-8, Vehicle and Equipment Cleaning.

**Thermoplastic Striping**

• Thermoplastic striper and pre-heater equipment shutoff valves shall be inspected to ensure that they are working properly to prevent leaking thermoplastic from entering drain inlets, the stormwater drainage system, or watercourses.
• Pre-heaters shall be filled carefully to prevent splashing or spilling of hot thermoplastic.
• Leave six inches of space at the top of the pre-heater container when filling thermoplastic to allow room for material to move.
• Do not pre-heat, transfer, or load thermoplastic near drain inlets or watercourses.
• Clean truck beds daily of loose debris and melted thermoplastic. When possible, recycle thermoplastic material.

**Raised/Recessed Pavement Marker Application and Removal**

• Do not transfer or load bituminous material near drain inlets, the stormwater drainage system, or watercourses.
• Melting tanks shall be loaded with care and not filled to beyond six inches from the top to leave room for splashing.
• When servicing or filling melting tanks, ensure all pressure is released before removing lids to avoid spills.
• Use mechanical or manual methods to collect excess bituminous material from the roadway after removal of markers.

**Inspection and Maintenance**

• Inspect and verify that activity-based BMPs are in place prior to the commencement of paving and grinding operations.
• BMPs shall be inspected in accordance with General Permit requirements for the associated project type and risk level. BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
• Keep ample supplies of drip pans or absorbent materials onsite.
• Inspect and maintain machinery regularly to minimize leaks and drips.

**NS-6 Illegal Connection and Illegal Discharge Detection Reporting**

*Planning*
• There are no identified pre-existing areas of contamination.
• Inspect site before beginning the job for evidence of illicit connections, illegal dumping or discharges. Document any pre-existing conditions and notify the owner.
• Inspect site regularly during project execution for evidence of illicit connections, illegal dumping or discharges.
• Observe site perimeter for evidence for potential of illicitly discharged or illegally dumped material, which may enter the job site.

Identification of Illicit Connections and Illegal Dumping or Discharges

General – Unlabeled and unidentifiable material shall be treated as hazardous.
Solids - Look for debris, or rubbish piles. Solid waste dumping often occurs on roadways with light traffic loads or in areas not easily visible from the traveled way.
Liquids - signs of illegal liquid dumping or discharge can include:
  • Visible signs of staining or unusual colors to the pavement or surrounding adjacent soils
  • Pungent odors coming from the drainage systems
  • Discoloration or oily substances in the water or stains and residues detained within ditches, channels or drain boxes
  • Abnormal water flow during the dry weather season

Evidence of illicit connections or illegal discharges is typically detected at storm drain outfall locations or at manholes. Signs of an illicit connection or illegal discharge can include:

• Abnormal water flow during the dry weather season
• Unusual flows in sub drain systems used for dewatering
• Pungent odors coming from the drainage systems
• Discoloration or oily substances in the water or stains and residues detained within ditches, channels or drain boxes
• Excessive sediment deposits, particularly adjacent to or near active offsite construction projects

Reporting

Notify the owner of any illicit connections and illegal dumping or discharge incidents at the time of discovery. For illicit connections or discharges to the storm drain system, notify the local stormwater management agency. For illegal dumping, notify the local law enforcement agency.

Cleanup and Removal

The responsibility for cleanup and removal of illicit or illegal dumping or discharges will vary by location. Contact the local stormwater management agency for further information.

NS-7 Potable Water / Irrigation

• Direct water from offsite sources around or through a construction site, where feasible, in a way that minimizes contact with the construction site.
• Discharges from water line flushing shall be reused for landscaping purposes where feasible.
• Shut off the water source to broken lines, sprinklers, or valves as soon as possible to prevent excess water flow.
• Protect downstream stormwater drainage systems and watercourses from water pumped or bailed from trenches excavated to repair water lines.
• Inspect irrigated areas within the construction limits for excess watering. Adjust watering times and schedules to ensure that the appropriate amount of water is being used and to minimize runoff. Consider factors such as soil structure, grade, time of year, and type of plant material in determining the proper amounts of water for a specific area.

NS-8 Vehicle and Equipment Cleaning
Options to washing equipment onsite include contracting with either an offsite or mobile commercial washing business. These businesses may be better equipped to handle and dispose of the wash waters properly. Performing this work offsite can also be economical by eliminating the need for a separate washing operation onsite.

If washing operations are to take place onsite, then:

• Use phosphate-free, biodegradable soaps.
• Educate employees and subcontractors on pollution prevention measures.
• Do not permit steam cleaning onsite. Steam cleaning can generate significant pollutant concentrates.
• Cleaning of vehicles and equipment with soap, solvents or steam should not occur on the project site unless resulting wastes are fully contained and disposed of. Resulting wastes shall not be discharged or buried, and must be captured and recycled or disposed according to the requirements of WM-10, Liquid Waste Management or WM-6, Hazardous Waste Management, depending on the waste characteristics. Minimize use of solvents. Use of diesel for vehicle and equipment cleaning is prohibited.
• All vehicles and equipment that regularly enter and leave the construction site must be cleaned offsite.
• When vehicle and equipment washing and cleaning must occur onsite, and the operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area shall have the following characteristics:
  o Located away from storm drain inlets, drainage facilities, or watercourses
  o Paved with concrete or asphalt and bermed to contain wash waters and to prevent run-on and runoff
  o Configured with a sump to allow collection and disposal of wash water
  o No discharge of wash waters to storm drains or watercourses
  o Used only when necessary

When cleaning vehicles and equipment with water:
• Use as little water as possible. High-pressure sprayers may use less water than a hose and shall be considered
• Use positive shutoff valve to minimize water usage
• Facility wash racks shall discharge to a sanitary sewer, recycle system or other approved discharge system and must not discharge to the storm drainage system, watercourses, or to groundwater
NS-9 Vehicle and Equipment Fueling

- Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.
- Discourage “topping-off” of fuel tanks.
- Absorbent spill cleanup materials and spill kits shall be available in fueling areas and on fueling trucks. Other options to washing equipment onsite include contracting with either an offsite or mobile commercial be disposed of properly after use.
- Drip pans or absorbent pads shall be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the absorbent materials promptly and dispose of properly.
- Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and large excavators, most vehicles shall be able to travel to a designated area with little lost time.
- Train employees and subcontractors in proper fueling and cleanup procedures.
- When fueling must take place onsite, designate an area away from drainage courses to be used. Fueling areas shall be identified in the SWPPP.
- Dedicated fueling areas shall be protected from stormwater run-on and runoff, and shall be located at least 50 ft away from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Protect fueling areas with berms and dikes to prevent run-on, runoff, and to contain spills.
- Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shutoff to control drips. Fueling operations shall not be left unattended.
- Use vapor recovery nozzles to help control drips as well as air pollution where required by Air Quality Management District (AQMD).
- Federal, state, and local requirements shall be observed for any stationary above ground storage tanks.

NS-10 Vehicle and Equipment Maintenance

- Use offsite repair shops as much as possible. These businesses are better equipped to handle vehicle fluids and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate maintenance area.
- If maintenance must occur onsite, use designated areas, located away from drainage courses. Dedicated maintenance areas shall be protected from stormwater run-on and runoff, and shall be located at least 50 ft from downstream drainage facilities and watercourses.
- Drip pans or absorbent pads shall be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.
- Place a stockpile of spill cleanup materials where it will be readily accessible. All fueling trucks and fueling areas are required to have spill kits and/or use other spill protection devices.
- Use absorbent materials on small spills. Remove the absorbent materials promptly and dispose of properly.
- Inspect onsite vehicles and equipment daily at startup for leaks, and repair immediately.
- Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease.
• Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic and transmission fluids. Provide secondary containment and covers for these materials if stored onsite.
• Train employees and subcontractors in proper maintenance and spill cleanup procedures.
• Drip pans or plastic sheeting shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than 1 hour.
• For long-term projects, consider using portable tents or covers over maintenance areas if maintenance cannot be performed offsite.
• Consider use of new, alternative greases and lubricants, such as adhesive greases, for chassis lubrication and fifth-wheel lubrication.
• Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
• Do not place used oil in a dumpster or pour into a storm drain or watercourse.
• Properly dispose of or recycle used batteries.
• Do not bury used tires.
• Repair leaks of fluids and oil immediately.

Listed below is further information if you must perform vehicle or equipment maintenance onsite.

**Safer Alternative Products**

• Consider products that are less toxic or hazardous than regular products. These products are often sold under an “environmentally friendly” label.
• Consider use of grease substitutes for lubrication of truck fifth-wheels. Follow manufacturers label for details on specific uses.
• Consider use of plastic friction plates on truck fifth-wheels in lieu of grease. Follow manufacturers label for details on specific uses.

**Waste Reduction**

Parts are often cleaned using solvents such as trichloroethylene, trichloroethane, or methylene chloride. Many of these cleaners are listed in California Toxic Rule as priority pollutants. These materials are harmful and must not contaminate stormwater. They must be disposed of as a hazardous waste. Reducing the number of solvents makes recycling easier and reduces hazardous waste management costs. Often, one solvent can perform a job as well as two different solvents. Also, if possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials. For example, replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check the list of active ingredients to see whether it contains chlorinated solvents. The “chlor” term indicates that the solvent is chlorinated. Also, try substituting a wire brush for solvents to clean parts.

**NS-12 Concrete Curing**

**Chemical Curing**

• Avoid over spray of curing compounds.
• Minimize the drift by applying the curing compound close to the concrete surface. Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.
• Use proper storage and handling techniques for concrete curing compounds. Refer to WM-1, Material Delivery and Storage.
• Protect drain inlets prior to the application of curing compounds.
• Refer to WM-4, Spill Prevention and Control.

Water Curing for Retaining Walls, and other Structures

• Direct cure water away from inlets and watercourses to collection areas for evaporation or other means of removal in accordance with all applicable permits. See WM-8 Concrete Waste Management.
• Collect cure water at the top of slopes and transport to a concrete waste management area in a non-erosive manner. See EC-9 Earth Dikes and Drainage Swales, EC-10, Velocity Dissipation Devices, and EC-11, Slope Drains.
• Utilize wet blankets or a similar method that maintains moisture while minimizing the use and possible discharge of water.

Education

• Educate employees, subcontractors, and suppliers on proper concrete curing techniques to prevent contact with discharge as described herein.
• Arrange for the QSP or the appropriately trained contractor’s superintendent or representative to oversee and enforce concrete curing procedures.

NS-13 Material and Equipment Used Over Water

No material or equipment use is proposed over water as a part of this project.

NS-14 Concrete Finishing

• Collect and properly dispose of water from high-pressure water blasting operations.
• Collect contaminated water from blasting operations at the top of slopes. Transport or dispose of contaminated water while using BMPs such as those for erosion control. Refer to EC-9, Earth Dikes and Drainage Swales, EC-10, Velocity Dissipation Devices, and EC-11, Slope Drains.
• Direct water from blasting operations away from inlets and watercourses to collection areas for infiltration or other means of removal (dewatering). Refer to NS-2 Dewatering Operations.
• Protect inlets during sandblasting operations. Refer to SE-10, Storm Drain Inlet Protection.
• Refer to WM-8, Concrete Waste Management for disposal of concrete debris.
• Minimize the drift of dust and blast material as much as possible by keeping the blasting nozzle close to the surface.
• When blast residue contains a potentially hazardous waste, refer to WM-6, Hazardous Waste Management.

Education
Educate employees, subcontractors, and suppliers on proper concrete finishing techniques to prevent contact with discharge as described herein. Arrange for the QSP or the appropriately trained contractor’s superintendent or representative to oversee and enforce concrete finishing procedures.

### 3.3.2 Waste Management & Materials Pollution Control

Waste management and materials pollution control BMPs, like non-storm water management BMPs, are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with storm water. These BMPs also involve day-to-day operations of the construction site which are under the control of the contractor, and are additional “good housekeeping practices” which involve keeping a clean, orderly construction site.
The Contractor will implement the following practices for effective waste management and materials pollution control during construction:

- Not dispose of rinse/wash waters to ground.
- Not allow sanitation facilities to leak. (Regular maintenance and inspection shall occur to assure that facilities do not leak.)
- Cover waste disposal containers at the end of each day and during rain events.
- Not allow discharge from waste containers.
- Protect stockpiled waste materials from wind and rain at all times (except during active use).
- Review the Spill Prevention and Control BMP WM-4. Contractor shall update the spill response procedure as necessary to be current with site conditions. Contractor shall have the necessary materials on site (spill response kit) and in a designated location for use. Spills and leaks shall be cleaned up immediately and disposed of properly. Appropriate spill response personnel shall be assigned and trained.
- Make concrete (and other) washouts water tight or arrange to have contractor/vendor to perform off-site. Contractor shall ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas. Washouts shall be sized appropriately by the QSP.
- Cover stockpiled materials such as mulch and top soils when they are not actively being used.
- Shelter fertilizer containers and other landscape materials when they are not actively being used.
- Implement/install the non-storm water management source control BMPs listed below.

Waste Management & Materials Pollution Control BMPs

The California Stormwater BMP Handbook - Construction contains fact sheets for waste management & materials pollution control BMPs applicable to a wide range of project types and potential construction activities. The table below indicates the waste management & materials pollution control BMPs that are required, because they are certain to be needed, and those that should be implemented as needed.

<table>
<thead>
<tr>
<th>BMP#</th>
<th>BMP Name</th>
<th>Required</th>
<th>Implement as Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WM-1</td>
<td>Material Delivery and Storage (^1)</td>
<td>X</td>
<td></td>
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<tr>
<td>WM-2</td>
<td>Material Use (^1)</td>
<td>X</td>
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<tr>
<td>WM-3</td>
<td>Stockpile Management (^1)</td>
<td>X</td>
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<tr>
<td>WM-4</td>
<td>Spill Prevention and Control</td>
<td>X</td>
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<td>WM-5</td>
<td>Solid Waste Management</td>
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<td>WM-6</td>
<td>Hazardous Waste Management</td>
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<td>WM-7</td>
<td>Contaminated Soil Management</td>
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<td>WM-8</td>
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<tr>
<td>WM-9</td>
<td>Sanitary/ Septic Waste Management (^1)</td>
<td>X</td>
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<tr>
<td>WM-10</td>
<td>Liquid Waste Management (^1)</td>
<td></td>
<td>X</td>
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</tbody>
</table>

\(^1\) BMP fact sheet updated in 2009

Materials will be delivered to the Contractor’s Yard. The Contractor’s Yard is located under Route 92 and is protected from direct rainfall. Materials will be stored in sheds with no direct water contact.
Portable sanitary facilities will be provided at the Contractor’s Yard and will be located at job locations as necessary, though a single facility may be used where there are several nearby job locations.

Where feasible, concrete will be delivered using concrete trucks that have built in water recycling systems. There is little concrete wash associated with these vehicles. Temporary Concrete Washout (Portable) will be implemented per the WPCDs for any required on-site wash. All other Temporary Waste Management and Materials Pollution Control BMPs as shown in Table 500.4.2 will be implemented as needed.

Debris boxes will be covered at the end of each day and while it is raining.

**WM-1 Material Delivery and Storage**

The following steps shall be taken to minimize risk:

- Chemicals must be stored in water tight containers with appropriate secondary containment or in a storage shed.
- When a material storage area is located on bare soil, the area shall be lined and bermed.
- Use containment pallets or other practical and available solutions, such as storing materials within newly constructed buildings or garages, to meet material storage requirements.
- Stack erodible landscape material on pallets and cover when not in use.
- Contain all fertilizers and other landscape materials when not in use.
- Temporary storage areas shall be located away from vehicular traffic.
- Material Safety Data Sheets (MSDS) shall be available on-site for all materials stored that have the potential to effect water quality.
- Construction site areas shall be designated for material delivery and storage.
- Material delivery and storage areas shall be located away from waterways, if possible.
  - Avoid transport near drainage paths or waterways.
  - Surround with earth berms or other appropriate containment BMP. See EC-9, Earth Dikes and Drainage Swales.
  - Place in an area that will be paved.
- Storage of reactive, ignitable, or flammable liquids must comply with the fire codes of the area. Contact the local Fire Marshal to review site materials, quantities, and proposed storage area to determine specific requirements. See the Flammable and Combustible Liquid Code, NFPA30.
- An up to date inventory of materials delivered and stored onsite shall be kept. Hazardous materials storage onsite shall be minimized.
- Hazardous materials shall be handled as infrequently as possible.
- Keep ample spill cleanup supplies appropriate for the materials being stored. Ensure that cleanup supplies are in a conspicuous, labeled area.
- Employees and subcontractors shall be trained on the proper material delivery and storage practices.
- Employees trained in emergency spill cleanup procedures must be present when dangerous materials or liquid chemicals are unloaded.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose of materials and any contaminated soil. See WM-7, Contaminated Soil
Material Storage Areas and Practices

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall not be overfilled. Containers and drums shall be placed in temporary containment facilities for storage.
- A temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest container within its boundary, whichever is greater.
- A temporary containment facility shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- A temporary containment facility shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids shall be sent to an approved disposal site.
- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- Materials shall be covered prior to, and during rain events.
- Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials shall be covered during non-working days and prior to and during rain events.
- Stockpiles shall be protected in accordance with WM-3, Stockpile Management.
- Materials shall be stored indoors within existing structures or completely enclosed storage sheds when available.
- Proper storage instructions shall be posted at all times in an open and conspicuous location.
- An ample supply of appropriate spill clean up material shall be kept near storage areas.
- Also see WM-6, Hazardous Waste Management, for storing of hazardous wastes.
- Lime used for lime treatment shall be covered at the end of every day and shall remain covered during rain events.
- Lime shall be stored in a manner that protects the stockpile from flowing runoff.
- Lime shall not be applied if rain is forecast within 48 hours of application.

Material Delivery Practices

Keep an accurate, up-to-date inventory of material delivered and stored onsite.
Arrange for employees trained in emergency spill cleanup procedures to be present when dangerous materials or liquid chemicals are unloaded.

**Spill Cleanup**

- Contain and clean up any spill immediately.
- Properly remove and dispose of any hazardous materials or contaminated soil if significant residual materials remain on the ground after construction is complete. See WM-7, Contaminated Soil Management.
- See WM-4, Spill Prevention and Control, for spills of chemicals and/or hazardous materials.
- If spills or leaks of materials occur that are not contained and could discharge to surface waters, non-visible sampling of site discharge may be required. Refer to the General Permit or to your project specific Construction Site Monitoring Plan to determine if and where sampling is required.

**WM-2 Material Use**

The following steps shall be taken to minimize risk:

- Minimize use of hazardous materials onsite.
- Follow manufacturer instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals.
- Train personnel who use pesticides. The California Department of Pesticide Regulation and county agricultural commissioners license pesticide dealers, certify pesticide applicators, and conduct onsite inspections.
- Do not over-apply fertilizers, herbicides, and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over-application is expensive and environmentally harmful. Unless on steep slopes, till fertilizers into the soil rather than hydraulic application. Apply surface dressings in several smaller applications, as opposed to one large application, to allow time for infiltration and to avoid excess material being carried offsite by runoff. Do not apply these chemicals before predicted rainfall.
- Train employees and subcontractors in proper material use.
- Supply Material Safety Data Sheets (MSDS) for all materials.
- Dispose of latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry and are no longer hazardous, with other construction debris.
- Do not remove the original product label; it contains important safety and disposal information. Use the entire product before disposing of the container.
- Mix paint indoors or in a containment area. Never clean paintbrushes or rinse paint containers into a street, gutter, storm drain, or watercourse. Dispose of any paint thinners, residue, and sludge(s) that cannot be recycled, as hazardous waste.
- For water-based paint, clean brushes to the extent practicable, and rinse to a drain leading to a sanitary sewer where permitted, or contain for proper disposal off site. For oil-based paints, clean brushes to the extent practicable, and filter and reuse thinners and solvents.
- Use recycled and less hazardous products when practical. Recycle residual paints, solvents, non-treated lumber, and other materials.
• Use materials only where and when needed to complete the construction activity. Use safer alternative materials as much as possible. Reduce or eliminate use of hazardous materials onsite when practical.

• Document the location, time, chemicals applied, and applicator’s name and qualifications.

• Keep an ample supply of spill clean up material near use areas. Train employees in spill clean up procedures.

• Avoid exposing applied materials to rainfall and runoff unless sufficient time has been allowed for them to dry.

• Discontinue use of erodible landscape material within 2 days prior to a forecasted rain event and materials shall be covered and/or bermed.

• Provide containment for material use areas such as masons’ areas or paint mixing/preparation areas to prevent materials/pollutants from entering stormwater.

**WM-3 Stockpile Management**

No stockpiling of materials is proposed at the construction locations. Materials will be taken from Contractors Yard at the start of the day and waste materials will be hauled to Contractor Yard at the end of the day. If storage occurs in the project Contractor Yard, storage will be under the existing freeway and will not be subject to direct rainfall. Dust control measures will be implemented on any stockpiled materials.

**WM-3 Stockpile Management**

No stockpiling of materials is proposed. Materials will be hauled to contractor’s yard.

**WM-4 Spill Prevention and Control**

See Contractors spill prevention plan. Employees will be trained to identify the type of spill (Minor, Semi-Significant or Significant/Hazardous), and respond accordingly. Spills will not be cleaned up using water. The spills will be cleaned up using materials specified for the type of spill. The used clean up material and the recovered materials no longer suitable for the intended purpose will be disposed off site as per the applicable regulations. Regular meetings will be held to discuss these procedures as continuing education for new employees.

**Spill Prevention and Control**

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

Implement spill and leak prevention procedures for chemicals and hazardous substances stored on the job site. Whenever you spill or leak chemicals or hazardous substances at the job site, you are responsible for all associated cleanup costs and related liability.

Report minor, semi-significant, and significant or hazardous spills to the WPC manager. The WPC manager must notify the Engineer immediately.

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

**Minor Spills**
Minor spills consist of quantities of oil, gasoline, paint, or other materials that are small enough to be controlled by a 1st responder upon discovery of the spill.

Clean up a minor spill using the following procedures:

1. Contain the spread of the spill
2. Recover the spilled material using absorption
3. Clean the contaminated area
4. Dispose of the contaminated material and absorbents promptly and properly under "Waste Management" of these special provisions

**Semi-Significant Spills**

Semi-significant spills consist of spills that can be controlled by a 1st responder with help from other personnel.

Clean up a semi-significant spill immediately using the following procedures:

1. Contain the spread of the spill.
2. On paved or impervious surfaces, encircle and recover the spilled material with absorbent materials. Do not allow the spill to spread widely.
3. If the spill occurs on soil, contain the spill by constructing an earthen dike and dig up the contaminated soil for disposal.
4. If the spill occurs during precipitation, cover the spill with 10-mil plastic sheeting or other material to prevent contamination of runoff.
5. Dispose of the contaminated material promptly and properly under "Waste Management" of these special provisions.

**Significant or Hazardous Spills**

Significant or hazardous spills consist of spills that cannot be controlled by job site personnel.

Immediately notify qualified personnel of a significant or hazardous spill. Take the following steps:

1. Do not attempt to clean up the spill until qualified personnel have arrived
2. Notify the Engineer and follow up with a report
3. Obtain the immediate services of a spill contractor or hazardous material team
4. Notify local emergency response teams by dialing 911 and county officials by using the emergency phone numbers retained at the job site
5. Notify the California Emergency Management Agency State Warning Center at (916) 845-8911
6. Notify the National Response Center at (800) 424-8802 regarding spills of Federal reportable quantities under 40 CFR 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's Department
   7.6. Department of Toxic Substances
Prevent a spill from entering stormwater runoff before and during cleanup activities. Do not bury or wash the spill with water.

**WM-5 Solid Waste Management**

The following steps shall help keep a clean site and reduce stormwater pollution:

- Select designated waste collection areas onsite.
- Inform trash-hauling contractors that you will accept only watertight dumpsters for onsite use. Inspect dumpsters for leaks and repair any dumpster that is not watertight.
- Locate containers in a covered area or in a secondary containment.
- Provide an adequate number of containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.
- Plan for additional containers and more frequent pickup during the demolition phase of construction.
- Collect site trash daily, especially during rainy and windy conditions.
- Remove solid waste promptly since erosion and sediment control devices tend to collect litter.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.
- Arrange for regular waste collection before containers overflow.
- Clean up immediately if a container does spill.
- Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.

Regular meetings will be held to discuss these procedures as continuing education for new employees.

**Collection, Storage, and Disposal**

- Littering on the project site is prohibited.
- To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines is a priority.
- Trash receptacles shall be provided in the contractor’s yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Litter from work areas within the construction limits of the project site shall be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and debris shall not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.
- Dumpsters of sufficient size and number shall be provided to contain the solid waste generated by the project.
• Full dumpsters shall be removed from the project site and the contents shall be disposed of by the trash hauling contractor.
• Construction debris and waste shall be removed from the site biweekly or more frequently as needed.
• Construction material visible to the public shall be stored or stacked in an orderly manner.
• Stormwater run-on shall be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
• Solid waste storage areas shall be located at least 50 ft from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.
• Except during fair weather, construction and highway planting waste not stored in watertight dumpsters shall be securely covered from wind and rain by covering the waste with tarps or plastic.
• Segregate potentially hazardous waste from non-hazardous construction site waste.
• Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
• For disposal of hazardous waste, see WM-6, Hazardous Waste Management. Have hazardous waste hauled to an appropriate disposal and/or recycling facility.
• Salvage or recycle useful vegetation debris, packaging and surplus building materials when practical. For example, trees and shrubs from land clearing can be used as a brush barrier, or converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

WM-6 Hazardous Waste Management
Hazardous Waste Management will be implemented as per the contract specifications for any requirements pertaining to handling of contaminated material. Any waste generated will be stored in watertight containers and stored in a location approved by the Engineer until it is disposed of by a licensed hazardous waste transporter.

WM-7 Contaminated Soil Management
Prevent or reduce the discharge of pollutants to stormwater from contaminated soil and highly acidic or alkaline soils by conducting pre-construction surveys, inspecting excavations regularly, and remediating contaminated soil promptly. Look for contaminated soil as evidenced by discoloration, odors, differences in soil properties, abandoned underground tanks or pipes, or buried debris.

• Prevent leaks and spills. Contaminated soil can be expensive to treat and dispose of properly. However, addressing the problem before construction is much less expensive than after the structures are in place.
• The contractor may further identify contaminated soils by investigating:
  - Past site uses and activities
  - Detected or undetected spills and leaks
  - Acid or alkaline solutions from exposed soil or rock formations high in acid or alkaline forming elements
  - Contaminated soil as evidenced by discoloration, odors, differences in soil properties, abandoned underground tanks or pipes, or buried debris.
- Suspected soils should be tested at a certified laboratory.

ADL contaminated soil has been identified on the site. If suspected or known contaminated soils are excavated, the soils shall be stockpiled on plastic and covered. Contractor shall coordinate with Caltrans for testing.

**WM-8 Concrete Waste Management**

Concrete waste will be handled in accordance with contract documents. Collect and dispose of Portland concrete, AC, or HMA waste at locations where sawcutting, coring, grinding, grooving or hydro-concrete demolition of Portland cement concrete, AC or HMA create a residue or slurry. Concrete waste will be collected and disposed as appropriate portable washout bins. If any spilled material is observed, the spilled material shall be removed and placed into the concrete washout bin. WM-4 Spill Prevention and Control BMPs shall be implemented in case of any spill.

**WM-9 Sanitary/Septic Waste Management**

Sanitary or septic wastes shall be treated or disposed of in accordance with state and local requirements. The sanitary facilities shall be located at least 50 feet away from storm drains. The weekly QSP inspection shall include a review of sanitary facilities and disposal shall be monitored.

**WM-10 Liquid Waste Management**

The following steps shall help keep a clean site and reduce stormwater pollution:

- Select designated liquid waste collection areas onsite.
- Inspect containers for leaks and repair any container that is not watertight.
- Locate containers in a covered area or in a secondary containment.
- Provide an adequate number of containers with lids or covers that can be placed over the containers to keep rain out.
- Plan for enough containers and pickup schedule for anticipated liquid waste.
- Make sure that liquid waste, including toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Do not hose out liquid waste containers on the construction site. Leave container cleaning to the liquid waste collecting contractor.
- Arrange for regular liquid waste collection before containers overflow.
- Clean up immediately if a container does spill.
- Make sure that liquid waste is collected, removed, and disposed of only at authorized disposal areas.

Regular meetings will be held to discuss these procedures as continuing education for new employees.

*Containing Liquid Wastes*
• Drilling residue and drilling fluids shall not be allowed to enter storm drains and watercourses and shall be disposed of outside the highway right-of-way in conformance with the provisions in Standard Specifications Section 7-1.13.
• If an appropriate location is available, as determined by the Resident Engineer (RE), drilling residue and drilling fluids that are exempt under California Code of Regulations (CCR) Title 23 §2511(g) may be dried by infiltration and evaporation in a containment facility constructed in conformance with the provisions concerning the Temporary Concrete Washout Facilities detailed in WM-08 Concrete Waste Management.
• Liquid wastes generated as part of an operational procedure, such as water-laden dredged material and drilling mud, shall be contained and not allowed to flow into drainage channels or receiving waters prior to treatment.
• Contain liquid wastes in a controlled area, such as a holding pit, sediment basin, roll-off bin, or portable tank.
• Containment devices must be structurally sound and leak free.
• Containment devices must be of sufficient quantity or volume to completely contain the liquid wastes generated.
• Take precautions to avoid spills or accidental releases of contained liquid wastes. Apply the education measures and spill response procedures outlined in WM-4 Spill Prevention and Control.
• Do not locate containment areas or devices where accidental release of the contained liquid can threaten health or safety, or discharge to water bodies, channels, or storm drains.

Capturing Liquid Wastes

• Capture all liquid wastes running off a surface, which has the potential to affect the storm drainage system, such as wash water and rinse water from cleaning walls or pavement.
• Do not allow liquid wastes to flow or discharge uncontrolled. Use temporary dikes or berms to intercept flows and direct them to a containment area or device for capture.
• If the liquid waste is sediment laden, use a sediment trap (see SC-3 Sediment Trap) for capturing and treating the liquid waste stream, or capture in a containment device and allow sediment to settle.

Disposing of Liquid Wastes

• Typical method is to dewater the contained liquid waste, using procedures such as described in NS-2 Dewatering Operations, and SC-2 Sediment/Desilting Basin; and dispose of resulting solids per WM-5 Solid Waste Management, or per Standard Specifications Section 7-1.13, “Disposal of Material Outside the Highway Right of Way”, for off-site disposal.
• Method of disposal for some liquid wastes may be prescribed in Water Quality Reports, NPDES permits, Environmental Impact Reports, 401 Water Quality Certifications or 404 permits, local agency discharge permits, etc., and may be defined elsewhere in the special provisions.
• Liquid wastes, such as from dredged material, may require testing and certification whether it is hazardous or not before a disposal method can be determined.
• For disposal of hazardous waste, see WM-6 Hazardous Waste Management.
• If necessary, further treat liquid wastes prior to disposal. Treatment may include, though is not limited to, sedimentation, filtration, and chemical neutralization.
• Spot check employees and subcontractors at least monthly throughout the job to ensure appropriate practices are being employed.
• Remove deposited solids in containment areas and capturing devices as needed, and at the completion of the task. Dispose of any solids as described in WM-5 Solid Waste Management.
• Inspect containment areas and capturing devices frequently for damage, and repair as needed.

Appendix H includes copies of the fact sheets of all the BMPs selected for this project.

**3.4 Post-Construction Storm Water Management Measures**

The post-construction storm water management measures are to be developed.
Section 4    BMP Inspection, Maintenance, and Repair

4.1 Construction Site Monitoring Program

Contractor shall ensure that all inspection, maintenance repair and sampling activities at the project location are performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP shall complete inspections of all BMPs as required to ensure proper functioning of the BMPs at all times during construction. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment. The QSP is to implement the Construction Site Monitoring Program (CSMP) in accordance with the requirements found in Appendix A. The CSMP is included in this SWPPP in Appendix N, and incorporates a description of the BMP inspection locations, inspection procedures, and inspection follow-up and tracking procedures, including BMP maintenance and repair, sampling and analysis (if needed), SWPPP amendments (if needed).

Contractor shall purchase a turbidity meter and a pH meter. The QSP shall be trained in the use of both meters.
Section 5 Training

The Contractor shall designate a Qualified SWPPP Practitioner (QSP). The QSP must receive training and possess one of the certifications and or registrations specified in Table 9 of the 2009 Construction General Permit established by the SWRCB.

The QSP is required to document all training activities (formal and informal), and retain a record of training activities in SWPPP Appendix K. Training documentation must also be submitted in the Annual Report.

The Contractor’s Qualified SWPPP Practitioner is TBD.

Other Contractor personnel attending tailgate training will document attendance using the form in Attachment I. Informal training will include tailgate site briefings to be conducted bi-weekly, and will address the following topics:

- Erosion Control BMPs
- Sediment Control BMPs
- Non-Storm Water BMPs
- Waste Management and Materials Pollution Control BMPs
- Emergency Procedures specific to the construction site storm water management

This SWPPP was prepared by BKF Engineers, under the direction of Mr. Ed Boscacci, a registered Professional Engineer in the State of California and a Qualified SWPPP Developer. Mr. Boscacci has over 10 years of experience in the preparation of SWPPPs, and has the following previous experience:

- Has prepared over 25 project-specific SWPPPs
- Over 30 years of experience in storm drain design, hydrology, and hydraulics
- SWPPP Preparation training sponsored by San Francisco Bay Estuary
Section 6  Responsible Parties and Operators

6.1 Responsible Parties

A list of authorized representatives, along with project site personnel who are responsible for SWPPP activities, including the QSD and QSP, has been provided in Appendix L. This list includes the names of the individuals granted authority to sign permit-related documents.

6.2 Contractor List

The QSP is required to notify all contractors and subcontractors of the requirement for storm water management measures during the project. A list of contractors and subcontractors shall be maintained by the QSP and included in Appendix M. If subcontractors change during the project, the list will be updated accordingly. A sample “Subcontractor Notification Letter” and log is included in Appendix M.
List of Appendices

APPENDIX A  CONSTRUCTION GENERAL PERMIT  
(SECTIONS APPLICABLE TO RISK LEVEL 1 PROJECTS)

APPENDIX B  SUBMITTED PERMIT REGISTRATION DOCUMENTS

APPENDIX C  SWPPP AMENDMENTS AND AMENDMENT LOG

APPENDIX D  NAL/NEL EXCEEDANCE SITE EVALUATIONS  
(NOT INCLUDED - NOT APPLICABLE TO RISK LEVEL 1)

APPENDIX E  SUBMITTED CHANGES TO PRDS

APPENDIX F  CONSTRUCTION SCHEDULE

APPENDIX G  CONSTRUCTION ACTIVITIES, MATERIALS USED AND ASSOCIATED POLLUTANTS

APPENDIX H  BMP CONSIDERATION CHECKLIST AND CASQA BMP HANDBOOK  
FACT SHEETS  
(FACT SHEETS NOT INCLUDED IN VERSION OF SWPPP POSTED ON SMARTS)

APPENDIX I  SAMPLE CONSTRUCTION SITE INSPECTION REPORT FORM

APPENDIX J  SITE SPECIFIC RAIN EVENT ACTION PLAN  
(NOT INCLUDED - NOT APPLICABLE TO RISK LEVEL 1)

APPENDIX K  TRAINING REPORTING FORM

APPENDIX L  RESPONSIBLE PARTIES

APPENDIX M  CONTRACTORS AND SUBCONTRACTORS

APPENDIX N  CONSTRUCTION SITE MONITORING PROGRAM

APPENDIX O  CONSTRUCTION RECORDS

APPENDIX P  AGENCY APPROVALS AND MISCELLANEOUS DOCUMENTS

APPENDIX Q  TEST METHODS, DETECTION LIMITS, REPORTING UNITS,  
APPLICABLE NALS AND NELS  
(NOT INCLUDED - NOT APPLICABLE TO RISK LEVEL 1)

APPENDIX R  EROSION CONTROL PLAN

APPENDIX S  CONTRACTOR ACTIVITIES LOCATION MAP
APPENDIX A

CONSTRUCTION GENERAL PERMIT

(Sections Applicable to Risk Level 1 Projects)

(Not Included in Version of SWPPP Posted on SMARTS.)
APPENDIX B

SUBMITTED PERMIT REGISTRATION DOCUMENTS

The following documents are to be filed electronically via the SMARTS system and included in this appendix per Attachment B, Section J of the General Permit. Paper copies of duplicate documents are not included in Appendix B.

1. Notice of Intent (NOI).
2. Site Map – See site map legend for specific documents to be included.
3. SWPPP – SWPPP consists of this entire document.
5. Post Construction Water Balance Calculator – NOT APPLICABLE TO THIS LOCATION.
6. ATS Design Document and Certification – NOT APPLICABLE TO THIS PROJECT.
The following list of referenced plans incorporate the information listed under Attachment B, Section J.2 of the General Permit.

a. **Vicinity Map** – See attached vicinity map.
b. **Site Layout** – See Inc. 2 Layout Plan, Sheet C2.0.
c. **Site Boundaries** - Inc. 2 Layout Plan, Sheet C2.0.
d. **Drainage Areas** – See attached Site Drainage Exhibit.
e. **Discharge Locations** – Site discharges to the San Francisco Bay through the City’s existing storm drain system.
f. **Sampling Locations** – N/A
g. **Disturbed Areas** – Entire site is disturbed.
h. **Active Disturbed Areas** – Entire site is disturbed.
i. **Runoff BMP Locations** – See attached Erosion Control Plans.
j. **Erosion Control BMPs** – See attached Erosion Control Plans.
k. **Sediment Control BMPs** – See attached Erosion Control Plans.
l. **ATS Location** – N/A
m. **Sensitive Habitats** – N/A.
n. **Post-Construction BMPs** – See attached Erosion Control Plans. BMP implemented as part of construction will remain and be maintained as necessary, see erosion control plans.
o. **Construction Activities Locations** – TBD. This will be shown/up-dated on contractor markup of Appendix S.
**Sediment Risk Factor Worksheet**

<table>
<thead>
<tr>
<th><strong>A) R Factor</strong></th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. &quot;Isoerodent&quot; maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.</td>
<td>50.32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>B) K Factor (weighted average, by area, for all site soils)</strong></th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.</td>
<td>0.24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>C) LS Factor (weighted average, by area, for all slopes)</strong></th>
<th>Entry</th>
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</thead>
<tbody>
<tr>
<td>The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.</td>
<td>0.13</td>
</tr>
</tbody>
</table>

| Watershed Erosion Estimate (=RxKxLS) in tons/acre | 1.569984 |

<table>
<thead>
<tr>
<th>Site Sediment Risk Factor</th>
<th>Entry</th>
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</thead>
<tbody>
<tr>
<td>Low Sediment Risk: &lt; 15 tons/acre</td>
<td>Low</td>
</tr>
<tr>
<td>Medium Sediment Risk: &gt;=15 and &lt;75 tons/acre</td>
<td></td>
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<tr>
<td>High Sediment Risk: &gt;= 75 tons/acre</td>
<td></td>
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<tr>
<td>Receiving Water (RW) Risk Factor Worksheet</td>
<td>Entry</td>
</tr>
<tr>
<td>------------------------------------------</td>
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<tr>
<td><strong>A. Watershed Characteristics</strong></td>
<td>yes/no</td>
</tr>
<tr>
<td><strong>A.1.</strong> Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed waterbody impaired by sediment (For help with impaired waterbodies please visit the link below) or has a USEPA approved TMDL implementation plan for sediment?:</td>
<td><a href="http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml">Link</a></td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td></td>
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<tr>
<td><strong>A.2.</strong> Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN &amp; COLD &amp; MIGRATORY? (For help please review the appropriate Regional Board Basin Plan)</td>
<td><a href="http://www.waterboards.ca.gov/waterboards_map.shtml">Link</a></td>
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<tr>
<td>Region 1 Basin Plan</td>
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<td>Region 2 Basin Plan</td>
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<td>Region 3 Basin Plan</td>
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<td>Region 4 Basin Plan</td>
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<td>Region 5 Basin Plan</td>
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<td>Region 6 Basin Plan</td>
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<td>Region 7 Basin Plan</td>
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<td>Region 8 Basin Plan</td>
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<td>Region 9 Basin Plan</td>
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</table>
### Combined Risk Level Matrix

<table>
<thead>
<tr>
<th>Receiving Water Risk</th>
<th>Sediment Risk</th>
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<tbody>
<tr>
<td>Low</td>
<td>Low Level 1</td>
</tr>
<tr>
<td>High</td>
<td>Level 2</td>
</tr>
</tbody>
</table>

- **Project Sediment Risk:** Low
- **Project RW Risk:** Low
- **Project Combined Risk:** Level 1
APPENDIX C

SWPPP AMENDMENTS AND AMENDMENT LOG
## APPENDIX C

### SWPPP AMENDMENTS AND AMENDMENT LOG

**SWPPP Amendment No. (Insert here)**

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Contra Costa College New Science Building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town Permits:</td>
<td>Grading Permit No: TBD</td>
</tr>
<tr>
<td>BKF Project Number:</td>
<td>20175092</td>
</tr>
</tbody>
</table>

**Qualified SWPPP Developer (QSD) Certification of the Storm Water 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."

<table>
<thead>
<tr>
<th>QSD’s Signature</th>
<th>April 25, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dayne Johnson, Project Manager</td>
<td>(925) 940-2200</td>
</tr>
</tbody>
</table>

**Discharger (Owner or Legally Responsible Person - LRP) Approval of the Storm Water 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."

<table>
<thead>
<tr>
<th>Discharger (or LRP)’s Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Ray Pile, Authorized Representative</td>
<td>Telephone Number</td>
</tr>
<tr>
<td>Discharger’s name and title</td>
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<td>(925) 940-2200</td>
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</table>
**Amendment Log**

Project Name: **Contra Costa College New Science Building**

Town Permits: **Grading Permit No: TBD**

BKF Project Number: **20175092**

<table>
<thead>
<tr>
<th>Amendment No.</th>
<th>Date</th>
<th>Brief Description of Amendment</th>
<th>Prepared By</th>
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APPENDIX D
NAL/NEL EXCEEDANCE SITE EVALUATIONS

(NOT INCLUDED - NOT APPLICABLE TO RISK LEVEL 1)
APPENDIX E

SUBMITTED CHANGES TO PRDS
(DUE TO CHANGE IN OWNERSHIP OR ACREAGE)
APPENDIX F

CONSTRUCTION SCHEDULE
APPENDIX G

CONSTRUCTION ACTIVITIES,
MATERIALS USED AND ASSOCIATED POLLUTANTS
## SWPPP Construction Site Pollutant Checklist

**CATEGORY - ADHESIVES**

<table>
<thead>
<tr>
<th>Examples:</th>
<th>Pollutants:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesives, glues, Resins and epoxy synthetics, Caulks, sealers, putty, sealing agents, Coal tars (naphtha, pitch)</td>
<td>Phenolics, formaldehydes Phenolics, formaldehydes Asbestos, phenolics, formaldehydes Benzene, phenols, naphthalene</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Product Name, Physical Form (L, P or S)*</th>
<th>Storage Location</th>
<th>Method of Control and Protection</th>
<th>Quantity</th>
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*Physical Form – “L” = Liquid, “P” = Powder, “S” = Solid

Note: VOC = Volatile organic compounds, BOD = Biological oxygen demand due to the use of oxygen by decomposing materials.

## CATEGORY - CLEANERS

### Examples:
- Polishes, (metal, ceramic, tile)
- Etching agents,
- Cleaners, ammonia, lye, caustic sodas
- Bleaching agents
- Chromate salts

### Pollutants:
- Metals
- Acidity/alkalinity
- Chromium

<table>
<thead>
<tr>
<th>Product Name, Physical Form (L, P or S)*</th>
<th>Storage Location</th>
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</table>
## CATEGORY - PLUMBING

### Examples:
- Solder (lead, tin), flux (zinc chloride)
- Pipe fitting (cut shavings)
- Galvanized metals (nails, fences)
- Electrical wiring

### Pollutants:
- Lead, copper, zinc, tin
- Copper
- Zinc
- Copper, lead

<table>
<thead>
<tr>
<th>Product Name, Physical Form (L, P or S)*</th>
<th>Storage Location</th>
<th>Method of Control and Protection</th>
<th>Quantity</th>
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</table>
### CATEGORY - PAINTING

<table>
<thead>
<tr>
<th>Examples:</th>
<th>Pollutants:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint thinner, acetone, MEK, stripper</td>
<td>VOCs</td>
</tr>
<tr>
<td>Paints, lacquers, varnish, enamels</td>
<td>Metals, Phenolics, mineral spirits</td>
</tr>
<tr>
<td>Turpentine, gum spirit, solvents</td>
<td>VOCs</td>
</tr>
<tr>
<td>Sanding</td>
<td>Metals</td>
</tr>
<tr>
<td>Paints</td>
<td>Metals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Name, Physical Form (L, P or S)*</th>
<th>Storage Location</th>
<th>Method of Control and Protection</th>
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<td>Treated woods</td>
<td>Copper, creosote</td>
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</tbody>
</table>
**Examples:**
- Dusts (brick, cement)
- Colored chalks (pigments)
- Concrete curing compounds
- Glazing compounds
- Cleaning surfaces

**Pollutants:**
- Acidity, sediments
- Metals
- See MSDS
- Asbestos
- Acidity

<table>
<thead>
<tr>
<th>Product Name, Physical Form (L, P or S)*</th>
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</table>
### CATEGORY – FLOORS AND WALLS

**Examples:**
- Flashing
- Drywall
- Tile cutting (ceramic dusts)
- Adhesives (see Adhesives category)

**Pollutants:**
- Copper, aluminum
- Dusts
- Minerals

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| Examples: | Insulation  
Coolant reservoirs  
Adhesives (See Adhesives category) | Pollutants: | Asbestos  
Freon |
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<td>Coolant reservoirs</td>
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<tr>
<td>Adhesives (See Adhesives category)</td>
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</table>
**Examples:**
- Vehicle and machinery maintenance
- Gasoline, oils, additives
- Marking paints (sprays)
- Grading, earth moving
- Portable toilets
- Fire hazard control (herbicides)
- Health and Safety
- Wash waters (herbicides, concrete, oils and greases)

**Pollutants:**
- Oils and grease, coolants
- Benzene & derivatives, oils, grease
- Vinyl chloride, metals
- Erosion (sediments)
- BOD, disinfectants (spills)
- Sodium arsenite, dinitro compounds
- Rodenticides, insecticides
(see above categories)

<table>
<thead>
<tr>
<th>Product Name, Physical Form (L, P or S)*</th>
<th>Storage Location</th>
<th>Method of Control and Protection</th>
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### CATEGORY – LANDSCAPING AND EARTHMOVING

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<th>Examples:</th>
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<tbody>
<tr>
<td>Planting, plant maintenance</td>
<td>Pesticides, herbicides, nutrients</td>
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<tr>
<td>Excavation, tilling</td>
<td>Erosion (sediments)</td>
</tr>
<tr>
<td>Masonry and concrete</td>
<td>(see above categories)</td>
</tr>
<tr>
<td>Solid wastes (trees, shrubs)</td>
<td>BOD</td>
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<tr>
<td>Exposing natural lime /mineral deposits</td>
<td>Acidity/alkalinity, metals</td>
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<tr>
<td>Soil additives</td>
<td>Aluminum sulfate, sulfur</td>
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<td>Revegetation of graded areas</td>
<td>Fertilizers</td>
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<th>Product Name, Physical Form (L, P or S)*</th>
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### CATEGORY - MATERIALS STORAGE

**Examples:**
- Waste storage (used oils, solvents, etc)
- Hazardous waste containment
- Raw material piles

**Pollutants:**
- Spills, leaks
- Dusts, sediments

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<tr>
<th>Product Name, Physical Form (L, P or S)*</th>
<th>Storage Location</th>
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APPENDIX H

BMP CONSIDERATION CHECKLIST

AND

CASQA BMP HANDBOOK FACT SHEETS

(Not Included in Version of SWPPP Posted on SMARTS.)
## BMP Consideration Checklist

### CONSTRUCTION SITE BMPs
### CONSIDERATION CHECKLIST

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as “Not Used” with a brief statement describing why it is not being used.

### EROSION CONTROL BMPs

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<th>BMP</th>
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<td>Scheduling</td>
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<td>Preservation of Existing Vegetation</td>
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<td>Hydroseeding(1)</td>
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<td>Soil Binders(1)</td>
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<td>Geotextiles &amp; Mats(1)</td>
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<td>Wood Mulching</td>
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<td>Earth Dikes &amp; Drainage Swales</td>
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<td>Velocity Dissipation Devices</td>
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<td>Compost Blankets(3)</td>
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<td>Non-Vegetative Stabilization(3)</td>
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(1) BMP fact sheet updated in 2009  
(2) BMP fact sheet removed in 2009 (formerly PAM)  
(3) New BMP fact sheet added in 2009  

See Section 3.2.1 for BMPs that are required and those to be implemented as needed.
CONSTRUCTION SITE BMPs
CONSIDERATION CHECKLIST

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as “Not Used” with a brief statement describing why it is not being used.

### SEDIMENT CONTROL BMPs

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<td>SE-5</td>
<td>Fiber Rolls(1)</td>
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<td>Street Sweeping and Vacuuming</td>
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<td>Straw Bale Barrier</td>
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<td>SE-1, SE-5, SE-6 &amp; SE-12 are more applicable as linear sediment barriers for this project.</td>
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<td>Active Treatment Systems(1)</td>
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<td></td>
</tr>
<tr>
<td>SE-13</td>
<td>Compost Socks and Berms(2)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-14</td>
<td>Biofilter Bags(2)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) BMP fact sheet updated in 2009
(2) New BMP fact sheet added in 2009

### WIND EROSION CONTROL BMPs

| WE-1    | Wind Erosion Control(1)       | X                      | X             |                   |                                                 |

(1) BMP fact sheet updated in 2009

See Sections 3.2.2 & 3.2.4 for BMPs that are required and those to be implemented as needed.
## CONSTRUCTION SITE BMPs
### CONSIDERATION CHECKLIST

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as “Not Used” with a brief statement describing why it is not being used.

### TRACKING CONTROL BMPs

<table>
<thead>
<tr>
<th>BMP No.</th>
<th>BMP</th>
<th>CONSIDERED FOR PROJECT</th>
<th>CHECK IF USED</th>
<th>CHECK IF NOT USED</th>
<th>IF NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-1</td>
<td>Stabilized Construction Entrance/Exit</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC-2</td>
<td>Stabilized Construction Roadway</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC-3</td>
<td>Entrance/Outlet Tire Wash</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NON-STORM WATER MANAGEMENT BMPs

<table>
<thead>
<tr>
<th>BMP No.</th>
<th>BMP</th>
<th>CONSIDERED FOR PROJECT</th>
<th>CHECK IF USED</th>
<th>CHECK IF NOT USED</th>
<th>IF NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS-1</td>
<td>Water Conservation Practices</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-2</td>
<td>Dewatering Operations$^{(1)}$</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-3</td>
<td>Paving and Grinding Operations$^{(1)}$</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-4</td>
<td>Temporary Stream Crossing</td>
<td>X</td>
<td></td>
<td></td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>NS-5</td>
<td>Clear Water Diversion</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>NS-6</td>
<td>Illicit Connection/Discharge</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-7</td>
<td>Potable Water/Irrigation</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-8</td>
<td>Vehicle and Equipment Cleaning</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-9</td>
<td>Vehicle and Equipment Fueling</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-10</td>
<td>Vehicle and Equipment Maintenance</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-11</td>
<td>Pile Driving Operations</td>
<td>X</td>
<td></td>
<td></td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>NS-12</td>
<td>Concrete Curing$^{(1)}$</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-13</td>
<td>Concrete Finishing$^{(1)}$</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS-14</td>
<td>Material and Equipment Use over Water</td>
<td>X</td>
<td></td>
<td></td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>NS-15</td>
<td>Demolition Adjacent to Water</td>
<td>X</td>
<td></td>
<td></td>
<td>Not applicable to project.</td>
</tr>
<tr>
<td>NS-16</td>
<td>Temporary Batch Plants$^{(1)}$</td>
<td>X</td>
<td></td>
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<td>Not applicable to project.</td>
</tr>
</tbody>
</table>

(1) BMP fact sheet updated in 2009

See Sections 3.2.3 & 3.3.1 for BMPs that are required and those to be implemented as needed.
### CONSTRUCTION SITE BMPs

#### CONSIDERATION CHECKLIST

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as “Not Used” with a brief statement describing why it is not being used.

#### WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs

<table>
<thead>
<tr>
<th>BMP No.</th>
<th>BMP</th>
<th>CONSIDERED FOR PROJECT</th>
<th>CHECK IF USED</th>
<th>CHECK IF NOT USED</th>
<th>IF NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>WM-1</td>
<td>Material Delivery and Storage(^{(1)})</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WM-2</td>
<td>Material Use(^{(1)})</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WM-3</td>
<td>Stockpile Management(^{(1)})</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WM-4</td>
<td>Spill Prevention and Control</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WM-5</td>
<td>Solid Waste Management</td>
<td>X</td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>WM-6</td>
<td>Hazardous Waste Management</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>WM-7</td>
<td>Contaminated Soil Management</td>
<td>X</td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>WM-8</td>
<td>Concrete Waste Management(^{(1)})</td>
<td>X</td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>WM-9</td>
<td>Sanitary/Septic Waste Management(^{(1)})</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WM-10</td>
<td>Liquid Waste Management(^{(1)})</td>
<td>X</td>
<td>X</td>
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</tr>
</tbody>
</table>

\(^{(1)}\) BMP fact sheet updated in 2009

See Section 3.3.2 for BMPs that are required and those to be implemented as needed.
APPENDIX I

SAMPLE CONSTRUCTION SITE INSPECTION REPORT FORM
APPENDIX J

SITE SPECIFIC RAIN EVENT ACTION PLAN

(FORMS AND COMPLETED PLANS)

(NOT INCLUDED - NOT APPLICABLE TO RISK LEVEL 1)
APPENDIX K

TRAINING REPORTING FORM
Trained Contractor Personnel Log

Storm Water Management Training Log

Project Name: ____________________________________________

Project Number/Location: ____________________________________________

Storm Water Management Topic: (check as appropriate)

☐ SWPPP Implementation  ☐ Non-storm water management
☐ BMP Inspection and Maintenance  ☐ Storm Water Sampling
☐ Record Keeping  ☐ Sediment Control
☐ Erosion Control  ☐ Tracking Control
☐ Wind Erosion Control  ☐ Waste Management and Materials Pollution Control

Specific Training Objective: ____________________________________________

Location: __________________________ Date: __________________________

Instructor: __________________________ Telephone: __________________________

Course Length (hours): __________________________

Attendee Roster (attach additional forms if necessary)

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Phone</th>
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<tbody>
<tr>
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<tr>
<td>Name</td>
<td>Company</td>
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</tbody>
</table>

COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
APPENDIX L

RESPONSIBLE PARTIES

Property Owners / Dischargers:
Contra Costa Community College District

Legally Responsible Person:
Ray Pile

Qualified SWPPP Practitioner
TBD

Qualified SWPPP Developer
Dayne Johnson
BKF Engineers
1646 N. California Blvd, Suite 400
Walnut Creek, California  94596
APPENDIX M

CONTRACTORS AND SUBCONTRACTORS
## CONTRACTOR/SUBCONTRACTOR LIST

(All contractors, subcontractors, and individuals who will be directed by the QSP.)

<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>CONTACT NAME</th>
<th>ADDRESS</th>
<th>PHONE NUMBER</th>
<th>EMERGENCY CONTACT #</th>
<th>SPECIFIC AREAS OF RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

*USE ADDITIONAL PAGES AS NECESSARY*
APPENDIX N

CONSTRUCTION SITE MONITORING PROGRAM
APPENDIX N
CONSTRUCTION SITE MONITORING PROGRAM

1. BMP INSPECTIONS

1.1 Inspection Requirements - General

The QSP shall complete inspections of all BMPs as required to ensure proper functioning of the BMPs at all times during construction.

At a minimum, inspections shall be conducted as follows:

- Within 2 business days (48 hours) prior to a forecast storm that is anticipated to be a Qualifying Storm / Rain Event, which is any event that produces 0.5 inches or more precipitation, with a 48 hour or greater period between rain events.
- Within 2 business days (48 hours) after each Qualifying Storm / Rain Event or any rain event that causes run-off from the site.
- Daily during extended rain events.
- For all BMPs - Weekly during the entire construction period.
- For selected additional BMPs, as identified by the QSP - Daily during the entire construction period.
- Inspections during non-business hours are not required.
- If a random visual observation results in action being taken, then the visual observation shall be considered an inspection and documented accordingly.
- In addition to the inspections listed above, a quarterly inspection for non-storm water discharge shall be performed.

For each inspection required, the QSP shall complete an inspection checklist. Sample inspection forms are provided in Appendix I. At a minimum, inspection checklists shall include the following:

- Inspection date and time, and date the inspection report was written.
- Weather information, including presence or absence of precipitation, estimate of beginning of Qualifying Storm / Rain Event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.
- Site information, including stage of construction, activities completed, and approximate area of the site exposed.
- A description of any BMPs evaluated, including location of each BMP, and any deficiencies noted.
- If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.
- Report the presence of any observed pollutant characteristics (floating or suspended material, discoloration, turbidity, etc.), noticeable odors, or any visible surface sheen, for any discharges.
• Any corrective actions required, including any necessary changes to the SWPPP and the implementation dates of the associated SWPPP changes.
• Documentation that the required corrective actions were taken.
• Photographs taken during the inspection, if any.
• Inspector’s name, title, and signature.

The QSP shall identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. QSP shall submit all completed inspection checklists electronically via SMARTS as part of the Annual Report. Additional daily inspections performed at the discretion of the QSP do not need to be submitted unless the inspection results in sampling and analysis or a corrective action. Contractor shall ensure that all completed inspection checklists remain on-site with the SWPPP.

1.2 Inspection Requirements Prior to a Qualifying Storm / Rain Event

• Inspect all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the Contractor/QSP shall implement appropriate corrective actions.
• Inspect any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
• Inspect all BMPs to identify whether they have been properly implemented in accordance with the SWPPP. If needed, the Contractor/QSP shall implement appropriate corrective actions.
• For the inspections described in the first two bullet points above, QSP shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.
• If there are signs of spills, leaks or malfunctions, or evidence of non-storm water discharge QSP shall sample for pH and turbidity.
• If visual monitoring indicates evidence of non-visible pollutant discharge, QSP shall sample for, and analyze samples for, all non-visible pollutant parameters as described in Section 1.8 “Non-Visible Pollutant Monitoring Requirements” below.

1.3 Inspection Requirements After a Qualifying Storm / Rain Event

• Conduct post rain event inspections to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs required and revise the SWPPP accordingly.
• Complete the inspections listed under Section 1.2 “Inspection Requirements Prior to a Qualifying Storm / Rain Event” above.
• Inspect the discharge of stored or contained storm water that is derived from and discharged subsequent to a Qualifying Storm / Rain Event at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.
• Record the time, date and rain gauge reading of all qualifying storm / rain events.

1.4 Inspection Requirements During an Extended Rain Event

• Complete the inspections listed under Section 1.2 “Inspection Requirements Prior to a Qualifying Storm / Rain Event” and Section 1.3 “Inspection Requirements After a Qualifying Storm / Rain Event” above. Inspections should be performed at least once each 24 hour period during an extended rain event.
1.5 Inspection Requirements During/After a Breach

During or immediately after a breach in perimeter controls, inlet protection, or sediment traps/basins, or any other unauthorized storm water discharges, Contractor/QSP shall do the following:

- Direct non-sampling/testing personnel to repair the breach immediately after sampling to minimize unauthorized storm water discharges.
- Direct trained/qualified personnel to sample for turbidity and pH.
- Direct trained/qualified personnel to sample for other pollutants if warranted by visual observations. QSP shall refer to the Construction Site Pollutant Checklists in Appendix G for possible pollutants associated with materials exposed to storm water.
- Prepare a sampling report with the following information:
  1. Location(s) of sampling.
  2. The date and approximate time of sampling.
  3. The individual(s) who performed the sampling.
  4. Identifying numbers for samples.
  5. Field analysis performed, or laboratory analysis to be performed, on samples.
- Contractor shall keep all sampling reports and field or analytical data in the SWPPP document.
- QSP shall submit all sampling reports and all field or laboratory analytical data electronically via SMARTS as part of the Annual Report. The Regional Board will respond with any further action required by the QSP and/or the Contractor.

1.6 Visual Observation Exemptions

The QSP shall conduct inspections per the requirements described above, but is not required to conduct visual observation (inspections) under the following conditions:

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

If no required inspections are collected due to these exceptions, Contractor/QSP shall include an explanation in the SWPPP and in the Annual Report documenting why the visual observations (inspections) were not conducted.

1.7 Non-Storm Water Discharge Monitoring Requirements

a. Visual Monitoring Requirements:
   i. QSP shall inspect each drainage area for the presence of (or indications of prior) non-storm water discharges and their sources.
   ii. QSP shall conduct one non-storm water inspection quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Inspections are only required during daylight hours (sunrise to sunset).
   iii. QSP shall ensure that each inspection documents the presence or evidence of any non-storm water discharge, pollutant characteristics and source.
b. Sampling Requirements:
   
   i. If there are signs of spills, leaks or malfunctions, or evidence of non-storm water discharge QSP shall sample for pH and turbidity.

   ii. If visual monitoring indicates evidence of non-visible pollutant discharge in non-storm water discharges, QSP shall sample for, and analyze samples for, all non-visible pollutant parameters as described in Section 1.8 “Non-Visible Pollutant Monitoring Requirements” below.

   c. QSP shall submit all sampling reports and all field or laboratory analytical data electronically via SMARTS as part of the Annual Report. The Regional Board will respond with any further action required by the QSP and/or the Contractor.

1.8 Non-Visible Pollutant Monitoring Requirements

   a. Contractor/QSP shall notify owner of release within 8 hours and provide details of incident and course of actions to be taken. QSP shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

   b. QSP shall ensure that water samples are large enough to characterize the site conditions.

   c. QSP shall collect samples at all discharge locations that can be safely accessed.

   d. QSP shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

   e. If the breach, malfunction, leakage, or spill occurs when it is not raining, the QSP shall implement appropriate clean-up procedures. Then during the next rain event that occurs during business hours and generates runoff, the QSP shall collect samples during the first two hours of discharge.

   f. QSP shall analyze samples for all non-visible pollutant parameters (if applicable). Parameters indicating the presence of pollutants identified in the pollutant source assessment are required. Contractor/QSP shall modify this document to address these additional parameters in accordance with any updated SWPPP pollutant source assessment.

   g. QSP shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

   h. QSP shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

   i. QSP shall prepare a sampling report to document the specifics of each sample taken. At a minimum, the sampling report shall contain the following:

      i. Location(s) of sampling.

      ii. The date and approximate time of sampling.

      iii. The individual(s) who performed the sampling.

      iv. Identifying numbers for samples.

      v. Field analysis performed, or laboratory analysis to be performed, on samples.
j. Contractor shall keep all field or laboratory analytical data in the SWPPP document. At a minimum, the data records shall contain the following:
   i. Complete copies of all field or laboratory analyses.
   ii. The date and approximate time of analyses.
   iii. The individual(s) who performed the analyses.
   iv. The method detection limits and reporting units, and the analytical techniques or methods used.
   v. Quality assurance / quality control records and results.

k. QSP shall submit all sampling reports and all field or laboratory analytical data electronically via SMARTS as part of the Annual Report. The Regional Board will respond with any further action required by the QSP and/or the Contractor.

2. BMP MAINTENANCE AND REPAIR

BMPs shall be maintained regularly based on permit-required inspections and observations made during the course of normal construction activities.

The QSP shall implement corrective actions as soon as practical, but begin within 72 hours from the time deficiencies are identified during inspections. The QSP shall complete follow-up inspections and document that the required corrective actions were taken. If warranted by the problem encountered and corrective action required, SWPPP amendments shall be prepared by the QSP and approved by the QSD.

3. RECORDS

Contractor shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Contractor shall provide all records to owner upon completion of construction. Contractor shall retain all records on-site, in Appendix O, while construction is ongoing. At a minimum, these records sampling report shall include the following:

- All inspection checklists.
- Rain gauge readings from site inspections.
- Exemption/Exception Records – See Section 1.6.
- All sampling reports.
- A summary of all analytical results from the last three years, as well as all field / or analytical data.
- The records of any corrective actions (BMP Maintenance and Repair) and follow-up activities that resulted from analytical results or inspections.

4. REFERENCES

The QSP’s attention is directed to Appendix D, “Field Monitoring and Analysis Guidance” of the November 2009 California Stormwater BMP Handbook, Construction (www.casqa.org) for sampling procedures, including sampling safety.
APPENDIX O
CONSTRUCTION RECORDS
APPENDIX P

AGENCY APPROVALS AND MISCELLANEOUS DOCUMENTS
APPENDIX Q

TEST METHODS, DETECTION LIMITS,
REPORTING UNITS, APPLICABLE NALS AND NELS

(NOT INCLUDED - NOT APPLICABLE TO RISK LEVEL 1)
APPENDIX R
EROSION CONTROL PLAN
APPENDIX S

CONTRACTOR ACTIVITIES LOCATION MAP
ROUGH GRADING AND UTILITY PLAN

ROUGH GRADING AND UTILITY NOTES

ROUGH GRADING AND UTILITY LEGEND

NOTES:
1. FOR TRENCHING IN SUBURBAN AREA, TEENAGE HARDSIDE 1050 1/215, WITH APPROVED REINFORCED PLINES AND DRAINAGE IN THE INFRASTRUCTURAL DESIGN.
2. PRODUCTION MATERIALS (EXISTING CONCRETE): TWO CONCRETE MUST BE MIXED TOGETHER.

FUTURE SCIENCE BUILDING

PS
PHYSICAL SCIENCES

GE
GENERAL EDUCATION

SAB
STUDENT & ADMINISTRATION BUILDING

LLRC
LIBRARY AND LEARNING RESOURCE CENTER