

SECTION 02270 – TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION

- A. In compliance with the local, State and Federal regulations regarding storm water management during construction, the CONTRACTOR shall not allow any debris, waste materials or pollutants, originating from the CONTRACTOR's operations, to enter the storm drainage system. The CONTRACTOR shall be fully responsible for developing and implementing a Storm Water Pollution Prevention Plan (SWPPP).

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01060 – Permits and Other Regulatory Requirements
- B. Section 01300 – Record Drawings and Submittals

1.3 STORM WATER POLLUTION PREVENTION MEASURES

- A. The CONTRACTOR shall contain and remove any and all waste or pollutants generated by the CONTRACTOR's construction operations using the appropriate Best Management Practices (BMPs) by preparing a SWPPP. The SWPPP shall be submitted for approval to the AGENCY and the appropriate regulatory agencies in accordance with the standard specifications. The SWPPP shall be written, amended, and certified by a Qualified SWPPP Developer (QSD) in accordance with the General Permit.
- B. The CONTRACTOR shall be responsible throughout the duration of the construction period for installing and maintaining the applicable BMPs and for removing and legally disposing of temporary control measures, wastes and pollutants at an off-site location. The CONTRACTOR shall ensure all BMPs and temporary control measures required by the General Permit and the SWPPP are implemented by a Qualified SWPPP Practitioner (QSP) in accordance with the General Permit. Unless otherwise directed by the AGENCY or specified elsewhere in these specifications, the CONTRACTOR's responsibility for BMP implementation shall continue throughout any temporary suspension of work.
- C. The CONTRACTOR is responsible for all treatment necessary to ensure water is disposed of in a legal manner.
- D. In accordance with the General Permit and the SWPPP, the CONTRACTOR shall develop a Rain Event Action Plan (REAP) within 48 hours prior to any likely precipitation event.

1.4 RESPONSIBILITIES, CONSEQUENCES, AND REMEDIES

- A. Conformance with the provisions of this section shall not relieve the CONTRACTOR from the CONTRACTOR's responsibilities of the Contract Documents.
- B. For purposes of this section, costs and liabilities include, but are not limited to, fines, penalties and damages, whether assessed against the AGENCY or the

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CONTRACTOR, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Act.

- C. If solid or liquid materials or waste, hazardous or otherwise, or pollutants originating from the CONTRACTOR's operation enter the storm drain system or water courses, the CONTRACTOR will be required to thoroughly clean up the affected storm drain facilities and water courses to the satisfaction of the AGENCY. If the CONTRACTOR fails to clean up the affected facilities as required, the AGENCY will issue a stop-work order and take necessary actions to ensure the cleanup of the affected facilities.
- D. The CONTRACTOR shall be responsible for all costs, including fines, the AGENCY's cost of defense, the cost of cleanup by others ordered by the AGENCY, and liabilities imposed by law as a result of the CONTRACTOR's failure or negligence in complying with the requirements specified herein.

PART 2 – MATERIALS (NOT USED)

PART 3 – EXECUTION

3.1 SWPPP PREPARATION AND IMPLEMENTATION

- A. The CONTRACTOR, as a registered QSD/QSP or under the direction of a registered QSD/QSP, shall develop and implement a project specific SWPPP based on the CONTRACTOR's construction activities to ensure compliance with the State Water Resources Control Board (SWRCB) General Permit for Storm Water Discharges Associated with Construction Activity in accordance with the standard specifications. The SWPPP shall be kept on file with any amendments and made available upon request of the AGENCY or representative from the Regional Water Quality Control Board or the SWRCB.
- B. Amendments or changes to the SWPPP shall be performed by the CONTRACTOR and QSD, and are a requirement. All costs for implementing and maintaining the General Permit conditions and SWPPP and BMP requirements shall be borne by the CONTRACTOR.

3.2 SELECTIVE BMPS FOR STORM WATER POLLUTION PREVENTION

- A. The CONTRACTOR shall incorporate some or all of the following BMPs, as applicable, into the CONTRACTOR's site-specific SWPPP for this project.
 - 1. Material Handling and Storage
 - a. Non-hazardous Materials
 - (1) Designated Delivery and Storage Area: The CONTRACTOR shall propose, within the CONTRACTOR's staging site, an area that is suitable for material delivery and storage. To the maximum extent practicable, these areas shall be away from gutters, catch basins, drainage courses or creeks. The CONTRACTOR shall submit the proposed areas to and shall

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- obtain approval from the AGENCY in writing prior to bringing in materials.
- (2) Storage of Granular Material: The CONTRACTOR shall store granular material at least ten feet (10') away from any inlet or curb return and shall prevent the granular materials from entering the storm system, drainage courses or creeks. During wet weather or when rain is forecast within 24 hours, the CONTRACTOR shall cover granular materials with a tarpaulin and surround the material with sandbags or other approved heavy objects.
- b. Hazardous Materials
- (1) Hazardous materials include, but are not limited to, petroleum products, friable products containing asbestos, antifreeze, paints, thinners, solvents, pesticides, herbicides and various other toxic chemicals.
 - (2) The CONTRACTOR shall propose, within the CONTRACTOR's staging site, an area that is suitable for hazardous material delivery and storage. To the maximum extent practicable, the area shall be away from inlets, gutters, drainage courses or creeks. The CONTRACTOR shall submit the proposed area to and shall obtain the approval from the AGENCY in writing prior to bringing in hazardous materials.
 - (3) The CONTRACTOR shall label and store all hazardous materials and hazardous wastes in accordance with applicable regulation.
 - (4) The CONTRACTOR shall keep all hazardous materials or waste in containers and fully covered to avoid contamination of storm runoff.
 - (5) The CONTRACTOR shall keep an accurate, up-to-date inventory, including Materials Safety Data Sheets (MSDSs), of hazardous materials and hazardous wastes stored on-site to assist emergency response personnel in the event of a hazardous material incident.
2. Hazardous Material Usage
- a. The CONTRACTOR shall follow all local, State and Federal policies, laws and regulations governing the use of hazardous materials.
3. Vehicle and Equipment Cleaning, Maintenance and Fueling
- a. Cleaning: The CONTRACTOR shall not clean or wash vehicles or equipment on-site or in the streets. If allowed by the AGENCY in writing, cleaning and washing shall be performed in a designated and bermed area approved by the AGENCY using water only. No soaps, solvents, degreasers, steam cleaning equipment or similar methods are permitted. The CONTRACTOR shall not allow wash water to flow into streets, gutters, storm drain system, drainage courses or creeks.
 - b. Maintenance and Fueling: The CONTRACTOR shall perform maintenance and fueling of vehicles or equipment in a designated,

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bermed area or over a drip pan that will prevent waste, leaks or spills from entering streets, gutters, storm drain system, drainage courses or creeks. The CONTRACTOR shall inspect all vehicles and equipment arriving on-site for leaking fluids and shall promptly repair leaking vehicles and equipment. Drip pans shall be used to catch leaks until repairs can be made. Shut-off valves on equipment must be working properly.

4. Spill Prevention and Control
 - a. If hazardous materials are used on the project, the CONTRACTOR shall keep a stockpile of spill clean-up materials, such as rags or absorbents, readily accessible on-site.
 - b. Above-ground storage tanks and their installations shall comply with all local, State and Federal requirements.
 - c. The CONTRACTOR shall immediately contain and prevent spills or leaks from entering storm drain system, drainage courses or creeks and shall properly clean up and dispose of the spills or leaks. The CONTRACTOR shall not wash the spills or leaks into streets, gutters, storm drain system, drainage courses or creeks and shall not bury the spills or leaks.

5. Disposal of Hazardous Waste
 - a. Unless the CONTRACTOR is a licensed hazardous waste handler, the CONTRACTOR shall contract with a licensed hazardous waste handler to remove and dispose of hazardous waste materials unless the waste quantities to be transported are below threshold limits for transportation as specified in the State and Federal regulations.
 - b. The CONTRACTOR shall arrange for regular hazardous waste collection to comply with limits for storage of hazardous waste.
 - c. The CONTRACTOR may dispose of dry, empty paint cans, buckets, paintbrushes, rollers, rags and drop cloths in the trash.
 - d. The CONTRACTOR shall dispose of hazardous waste at facilities authorized for treatment, storage and disposal of hazardous waste only.

6. Street Sweeping
 - a. At the end of each day or as directed by the AGENCY, the CONTRACTOR shall sweep roadways of all debris and excess materials attributed to the CONTRACTOR's operations.

7. Water Usage
 - a. The CONTRACTOR shall use the least amount of water necessary for dust control and street sweeping operations.
 - b. The CONTRACTOR shall not use water to flush dust and debris down the street in place of street sweeping.

8. Dumpsters and Portable Sanitary Facilities
 - a. If dumpsters or portable sanitary facilities are used, they shall be stationed at least ten feet (10') away from storm drain facilities.

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- b. The CONTRACTOR shall arrange for regular waste collection to keep dumpsters and portable sanitary facilities from overflowing and shall regularly inspect these facilities for leaks. If a leak is discovered, the CONTRACTOR shall arrange for the repair or replacement of facilities that leak. The CONTRACTOR shall not wash the dumpsters or portable sanitary facilities on-site.
9. Earthwork
- a. The CONTRACTOR shall maximize the control of erosion and sediment by using the Best Management Practices for erosion and sedimentation control described in the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook or ABAG Manual of Standards for Erosion and Sediment Control Measures.
10. Dewatering
- a. The CONTRACTOR shall route water through a control device, such as a sediment trap, sediment basin or Baker tank, to remove settleable solids prior to discharging the water into the storm drain system. Refer to the CASQA Stormwater Best Management Practice Handbook for these sediment control measures.
 - b. Approval of the control device shall be obtained in advance from the AGENCY and the SDRWQCB.
 - c. Filtration of the water following the control device may be required on a case-by-case basis.
 - d. If the SDRWQCB and AGENCY determine that the dewatering operation would not generate an appreciable amount of settleable solids, the control device may be waived.
11. Saw Cutting
- a. During saw cutting or grinding operation, use as little water as possible.
 - b. During saw cutting, the CONTRACTOR shall cover or barricade catch basins using filter fabric, straw bales, sandbags or 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 of the catch basin is covered. Refer to CASQA Stormwater Best Management Practice Handbook for these control measures.
 - c. The CONTRACTOR shall shovel, absorb or vacuum saw cut slurry and pick up the waste as the work progresses prior to moving to the next location, as specified elsewhere in these specifications or as directed by the AGENCY.
 - d. If saw cut slurry enters catch basins, the CONTRACTOR shall, at the CONTRACTOR's cost, clean up the storm drain system immediately.
12. Concrete, Grout and Mortar Related Work
- a. Material Handling
 - (1) The CONTRACTOR shall avoid mixing excess amounts of fresh concrete or cement mortar on-site.

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- (2) The CONTRACTOR shall store concrete, grout and mortar away from storm drain facilities or drainage courses and shall ensure that these materials do not enter the storm drain system.
- b. Washing of Concrete Truck and Tools
 - (1) The CONTRACTOR shall not wash out concrete trucks or equipment into streets, gutters, storm drain system, drainage courses or creeks.
 - (2) The CONTRACTOR shall perform washing of concrete trucks and tools off-site.

3.3 CONTRACTOR TRAINING AND AWARENESS

- A. The CONTRACTOR shall train all employees and subcontractors on the storm water pollution prevention requirements contained in these specifications.
- B. The CONTRACTOR shall inform subcontractor of the storm water pollution prevention contract requirements and include appropriate subcontract provisions to ensure that these requirements are met.
- C. The CONTRACTOR shall post warning signs in areas treated with chemicals.

3.4 BMP MAINTENANCE

- A. To ensure proper implementation and effectiveness of the BMPs, the CONTRACTOR shall regularly inspect, maintain, repair and/or replace the deployed BMPs throughout the construction site. The CONTRACTOR shall identify corrective actions and the time needed to address any deficient BMPs or reinitiate any BMPs that have been discontinued. The CONTRACTOR shall keep written records of all BMP inspections, maintenance and corrective actions.
- B. The frequency of the BMP inspection shall be as follows:
 1. Prior to a forecast storm
 2. After any precipitation that causes runoff
 3. At 24-hour intervals during extended rain events
 4. Routinely, at a minimum of once every week
- C. If the CONTRACTOR or the AGENCY identifies a deficiency in the deployment or functioning of a BMP, the deficiency shall be corrected immediately. If requested by the CONTRACTOR and approved by the AGENCY in writing, the deficiency may be corrected at a later time or date but the corrective action shall not be later than the onset of the subsequent rain event. The correction of deficient BMPs shall be at no additional cost to the AGENCY.

3.5 EROSION CONTROL

- A. During all phases of construction, the CONTRACTOR shall perform the work in a manner which will minimize soil erosion and prevent water pollution from site runoff by utilizing the following:

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1. Proper scheduling of work and careful construction practices.
2. Grading disturbed surfaces to provide positive drainage and prevent ponding of water.
3. Installing desilting basins, gravel bag dikes, silt fences and other erosion control measures to prevent sediment escape from the construction site and to maintain runoff quality.

****END OF SECTION****