

SECTION 8

STORMWATER POLLUTION PREVENTION

8-1 GENERAL

- A. Throughout the construction period of the project, the Contractor shall practice the Stormwater Pollution Prevention procedures as described in this Section.
- B. If the project disturbs one (1) or more acres of soil, then Contractor shall file a Notice of Intent with the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) and comply with Construction General Permit Order 2009-2009-DWQ. Contractor shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) in accordance with State requirements.
- C. For projects disturbing less than one (1) acre of soil, the Contractor must follow the "Pollution Prevention – It's Part of the Plan" plan sheet provided by the City and incorporated herein.

8-2 RELATED WORK

- A. Documents affecting work of this section include, but are not necessary limited to, the General Conditions, Supplementary Conditions and of these Standard Drawings and Specifications.
- B. In addition to standards described in this section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.
- C. A daily inspection, and more often if necessary, shall be conducted by the Engineer to verify that requirements for cleanliness are being met.
- D. In addition to the standards described in this section, the Contractor shall comply with pertinent requirements of other government agencies having jurisdiction over this Work.

8-3 EXECUTION

- A. Non-hazardous Material / Waste Management
 - 1. The Contractor shall propose designated areas of the project 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.

2. Granular Material

- a. The Contractor shall store granular material at least ten (10) feet away from catch basin and curb returns, and shall not be stored within the gutter pan.
- b. The Contractor shall not allow granular material to enter the storm drains or creeks.
- c. When rain is forecast within twenty-four (24) hours, during wet weather, or any time the granular material is not in use, the Contractor shall cover granular material with a tarpaulin and to berm stockpiles of sand, dirt, or other construction materials unless directed otherwise by the Engineer. The Contractor shall prevent tracking or depositing materials onto City streets.

3. The Contractor shall use recycled water to control dust on a daily basis or as directed by the Engineer.

4. Street Sweeping - At the end of each working day or as directed by the Engineer, the Contractor shall clean and sweep roadways and on-site paved areas of all materials attributed to or involved in the work. The Contractor shall not use water to flush down streets in place of street sweeping.

- a. When rain is expected, ensure that material stockpiles are covered, sweep to remove loose debris, and remove filter fabric to reduce potential for street flooding.

5. Contractor shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.

6. Recycling

- a. The Contractor shall recycle aggregate base material, asphalt concrete, and Portland Cement Concrete as described in Section 24, "Inert Solids and Building Materials Recycling", of these Specifications. Only source separated single recyclable materials can be collected by another collector other than the City's collection

Contractor. "Source separated single recyclable materials" are recyclable materials that are separated from other recyclable materials or solid waste and placed in separate containers according to type or category of materials and directly marketed as a single commodity.

- b. In addition, to the maximum extent practicable, the Contractor shall reuse or recycle any useful construction materials generated during the project.

7. Disposal

- a. At the end of each working day, the Contractor shall collect all scrap, debris, and waste material, and dispose of such materials properly and ensure dumpsters are covered. City requires that garbage, mixed construction and demolition materials, and mixed recycling be collected by its exclusive waste collection contractor.
- b. The Contractor shall inspect dumpsters for leaks and contact trash hauling or collection contractors to replace or repair dumpsters that leak.
- c. The Contractor shall not discharge water on-site from cleaning dumpsters.
- d. The Contractor shall arrange for regular waste collection before dumpsters overflow.
- e. The Contractor shall cover loads that are being transported to or from the site.

B. SPILL PREVENTION AND CONTROL

- 1. The Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.
- 2. 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 for transportation specified in State and Federal regulations.

3. The Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.
4. The Contractor shall report immediately any hazardous materials spill to City of Palo Alto Police Department Dispatch at (650) 329-2413.
5. The Contractor shall place portable toilets away from storm drains and ensure they are in good working order and checked frequently for leaks.

C. VEHICLE / EQUIPMENT CLEANING

1. The Contractor shall not perform vehicle or equipment cleaning on-site or in the street using soaps, solvents, degreasers, steam cleaning equipment, or equivalent methods.
2. The Contractor shall perform vehicle or equipment cleaning, with water only, in a designated, bermed area that will not allow rinse water to run off-site or into streets, gutters, storm drains, or creeks.

D. VEHICLE / EQUIPMENT MAINTENANCE AND FUELING

1. The Contractor shall perform maintenance and fueling of vehicles or equipment in a designated, bermed area or over a drip pan that will not allow run-on of stormwater or runoff of spills.
2. The Contractor shall use secondary containment, such as a drip pan, to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured.
3. The Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.
4. The Contractor shall clean up leaks and spills of vehicle or equipment fluids immediately and dispose of the waste and cleanup materials as hazardous waste, as described in Section 8-3.B above.
5. The Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.

6. The Contractor shall report any hazardous materials spill to City of Palo Alto Police Department Dispatch at (650) 329-2413.
7. The Contractor shall inspect 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 are made.
8. The Contractor shall recycle waste oil and antifreeze, to the maximum extent practicable.
9. The Contractor shall comply with Federal, State, County and City requirements for storage of hazardous materials in above ground storage tanks.

E. CONTRACTOR TRAINING AND AWARENESS

1. The Contractor shall train all employees/subcontractors on the stormwater pollution prevention requirements contained in these specifications.
2. The Contractor shall inform subcontractors of the stormwater pollution prevention contract requirements and include appropriate subcontract provisions to ensure that these requirements are met.
3. The Contractor shall post warning signs in areas treated with chemicals.
4. The Contractor shall apply a “No Dumping! Flows to [Creek Name]” message on the curb adjacent to all newly constructed catch basins as specified on City Standard Drawing No. 302 and as described below:
 - a. Catch basins on private property shall be labeled by painting the message on the adjacent curb, using a stencil available from the Palo Alto Regional Water Quality Control Plant.
 - b. Catch basins within the public right-of-way shall be labeled by installing a stainless steel medallion, available from the Public Works Inspector, on the adjacent curb.

F. SPECIFIC REQUIREMENTS

1. Paving Operations
 - a. Project Site Management

- i. When rain is forecast within twenty-four (24) hours or during wet weather, the Engineer may prevent the Contractor from paving or seal coating to prevent uncured materials from contacting stormwater runoff.
- ii. The Engineer may direct the Contractor to protect drainage courses by using control measures, such as earth dike, straw bale, and sand bag, to divert runoff or trap and filter sediment.
- iii. The Contractor shall place drip pans or absorbent material under paving equipment when not in use.
- iv. The Contractor shall cover catch basins and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.

2. Paving Waste Management

- a. 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 waste container. The Contractor shall not use water to wash down fresh asphalt concrete pavement.
- b. Saw Cutting
 - i. During saw cutting, the Contractor shall cover catch basins using control measures, such as filter fabric, gravel 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.
 - ii. 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. The Contractor shall use as little water as possible and properly dispose of residues.
 - iii. If saw cut slurry enters catch basins, the Contractor shall remove the slurry from the storm drain system immediately.

3. Contaminated Soil Management
 - a. On all projects involving grading or excavation, the Contractor shall report to the Engineer contaminated soils 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 Engineer.
 - 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. The soil shall be managed as required by the Palo Alto Fire Department and Santa Clara County Environmental Health, or other designated agency. If the project is found to be within an area of soil contamination not identified by the City in the project specifications, a change order shall be negotiated to cover additional work performed by the Contractor.
4. Concrete, Grout, and Mortar Waste Management
 - a. The Contractor shall store concrete, grout, and mortar away from drainage areas, and under cover to protect from rainfall and runoff to ensure that these materials do not enter the storm drain system.
5. Concrete Truck/Equipment Wash Out
 - a. The Contractor shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks.
 - b. The Contractor shall perform washout of concrete trucks or equipment off-site or in a designated area on-site where the water will flow into a temporary waste pit and make sure wash water does not leach into the underlying soil. (See California Stormwater Quality Association (CASQA) Construction BMP Handbook for properly designed concrete washouts.
6. Exposed Aggregate Concrete Wash Water
 - a. The Contractor shall avoid creating runoff by draining water from washing of exposed aggregate concrete to a dirt area. If a suitable dirt area is not available, then the Contractor shall drain wash down

to a bermed surface where it can be pumped and disposed of properly. It may not enter the storm drain system.

- b. The Contractor shall collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the material in a designated waste container.

G. Fiber rolls

1. Standard Drawing 332 - Typical Fiber Roll Installation.

2. Materials

- a. Fiber rolls should be either prefabricated rolls or rolled tubes of erosion control blanket with a minimum diameter of eight (8) inches.

3. Installation

- a. Slope inclination of 4:1 (H:V) or flatter, fiber rolls should be placed at a maximum interval of twenty (20) feet. Slope inclination between 4:1 and 2:1 (H:V), fiber rolls should be placed at a maximum interval of fifteen (15) feet. Slope inclination of 2:1 or greater (H:V), fiber rolls should be placed at a maximum interval of ten (10) feet.
- b. Stake fiber rolls into a two (2) to four (4) inch deep trench with a width equal to the diameter of the fiber roll. Drive stakes at the end of each fiber roll and spaced four (4) feet maximum on center. Use wood stakes with a nominal classification of $\frac{3}{4}$ by $\frac{3}{4}$ inch and minimum length of twenty-four (24) inches.

4. Cleanup

- a. Collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbances to blend with adjacent ground.
- b. Ensure that all storm drain inlet filter fabric or other materials are removed once construction is complete.

END OF SECTION