City of Sonoma

Building Department Informational Handout

Handout No: 46
Revised 03/06/2017

Erosion and Sediment Control Plan Requirements Checklist/Flowchart

STEP 1: Determine if the project requires an Erosion and Sediment Control Plan by answering **Question(s) 1.a.** and **1.b.** below.

Question 1.a. Is the project required to obtain a grading permit for excavations or stockpiles of 50 cubic yards or more of soil?

☐ **YES** ☐ **NO**

If you answered **YES**, continue to **STEP 2**.
If you answered **NO**, continue to **Question 1.b.**

Question 1.b. Is the project required to obtain a building permit for construction activities which will result in soil disturbance due to clearing, excavation, or filling?

☐ **YES** ☐ **NO**

If you answered **YES**, continue to **STEP 2**.
If you answered **NO**, stop here. Your project does not require an Erosion and Sediment Control Plan.

STEP 2: Determine if the project requires any of the erosion and sediment control permits issued by other agencies by answering **Question(s) 2.a.–2.d.** below.

Question 2.a. Does the project include soil disturbance due to clearing, excavation, or filling activities totaling one (1) acre or more?

☐ **YES** ☐ **NO**

If you answered **YES**, a State of California Construction General Permit is required for the project.
Continue to **Question 2.b.** on page 2.
If you answered **NO**, continue to **Question 2.b.** on page 2.

Question 2.b. Does the project include depositing fill materials into designated wetlands or creeks for site development or construction of dams, bridges, or culverts? (Note: Not typical for most projects.)

☐ **YES** ☐ **NO**

If you answered **YES**, an Army Corps of Engineers Section 404 Permit is required for this project. Continue to **Question 2.c.** below.
If you answered **NO**, continue to **Question 2.d.** below.

Question 2.c. Does the project require a Section 401 Water Quality Certification from the State of California because a Federal Army Corps of Engineers 404 Permit is also being obtained? (Note: Not typical for most projects.)

☐ **YES** ☐ **NO**

If you answered **YES**, a State of California Section 401 Water Quality Certification is required for this project. Continue to **Question 2.d.** below.
If you answered **NO**, continue to **Question 2.d.** below.

Question 2.d. Does the project have the potential to substantially divert or obstruct the natural flow of Sonoma Creek, Nathanson Creek, or Fryer Creek? (Note: Not typical for most projects.)

☐ **YES** ☐ **NO**

If you answered **YES**, a CA Department of Fish and Wildlife Streambed Alteration Agreement is required for this project. Continue to **STEP 3** below.
If you answered **NO**, continue to **STEP 3** below.

STEP 3: Determine if a site plan/map must be submitted as part of your Erosion and Sediment Control Plan by answering **Question 3.a.** below.

Question 3.a. Is the full extent of soil disturbing activities limited to trenching or excavation for utilities, pier footings, fence posts, swimming pools, or foundations for additions to existing residential buildings?

☐ **YES** ☐ **NO**

If you answered **YES**, complete **STEP 4** to complete your Erosion and Sediment Control Plan. No further steps are required.
If you answered **NO**, complete **STEP 4** and then continue to **STEP 5**.

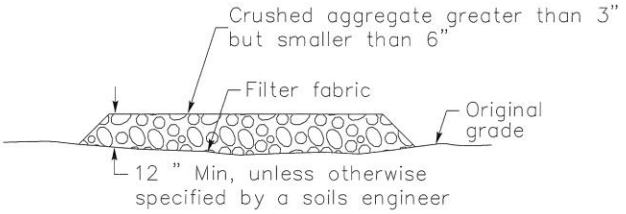
STEP 4: Attach pages 3 through 7 of the following **Non-Site-Specific and Typical Erosion and Sediment Control Best Management Practices (BMP's)** to your submitted plans.

Non-Site-Specific and Typical Erosion and Sediment Control Best Management Practices (BMP's)

As applicable, the following non-site-specific and typical erosion and sediment control Best Management Practices (BMPs) will be implemented to the maximum extent practicable for the duration of the project:

A. Vehicle and heavy equipment ingress and egress to the construction site shall be limited to paved or reinforced entrances. Reinforced entrances shall be designed, built, and maintained so as to prevent sediment from "tracking-out" into the public right-of-way on vehicle and heavy equipment tires.

An **example** specification for a typical reinforced construction entrance is shown below:



SECTION B–B
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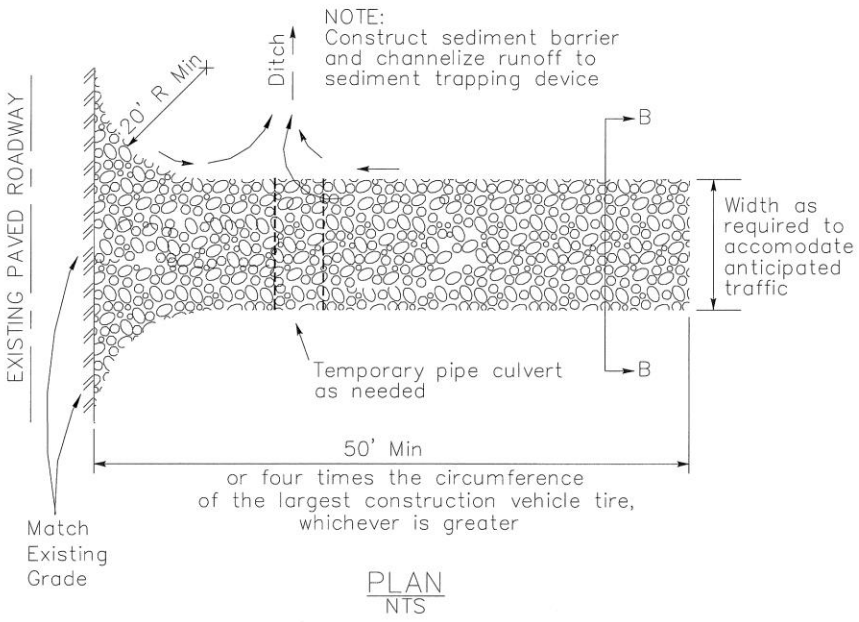


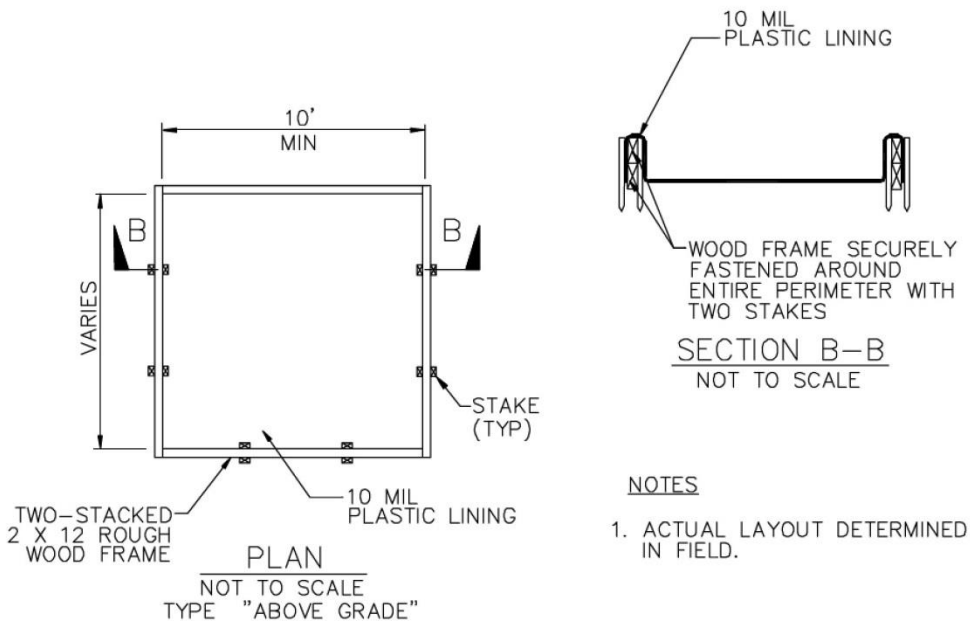
PLAN
NTS

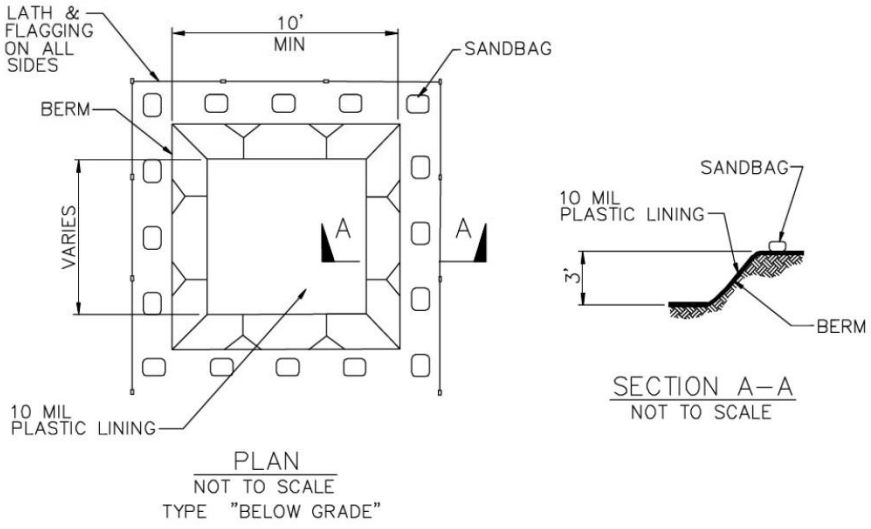
B. All dirt or sediment tracked into the public right-of-way shall be promptly removed as soon as feasible and no less frequently than at the end of each working day. Dry sweeping methods are to be used for sweeping.

C. Existing vegetation shall be preserved wherever feasible to minimize disturbed soil area and associated erosion.

D. All construction products including uncured paint, concrete, stucco, drywall mud, and mortar shall be protected from runon during precipitation and wastes disposed of properly in a designated washout.

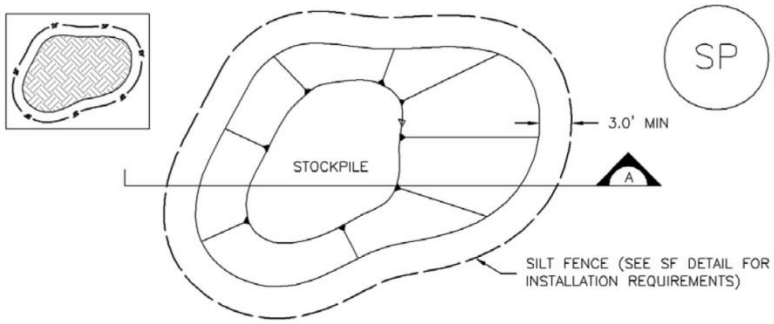
Example specifications of typical washout facilities are shown below:



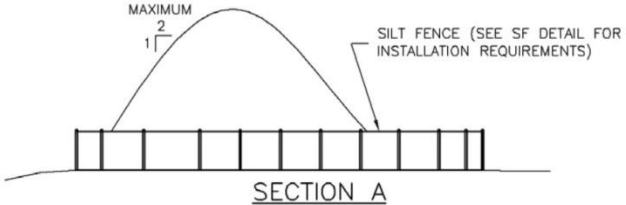


E. All stockpiles of erodible materials shall be provided with erosion and sediment controls to prevent erosion and dust generation.

Example specifications of typical erosion and sediment controls for stockpiles of erodible materials are shown below:

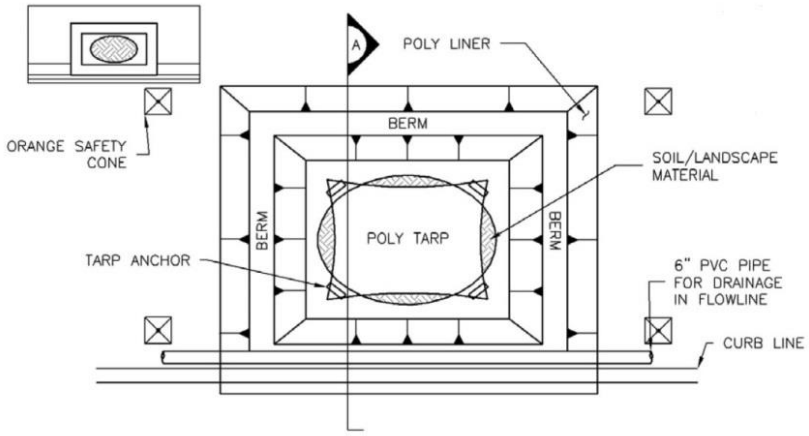


STOCKPILE PROTECTION PLAN

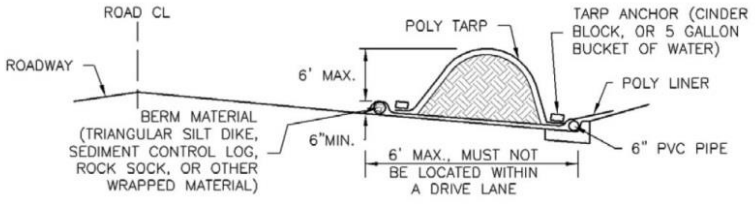


SECTION A

SP–1. STOCKPILE PROTECTION



MATERIALS STAGING IN ROADWAY PLAN

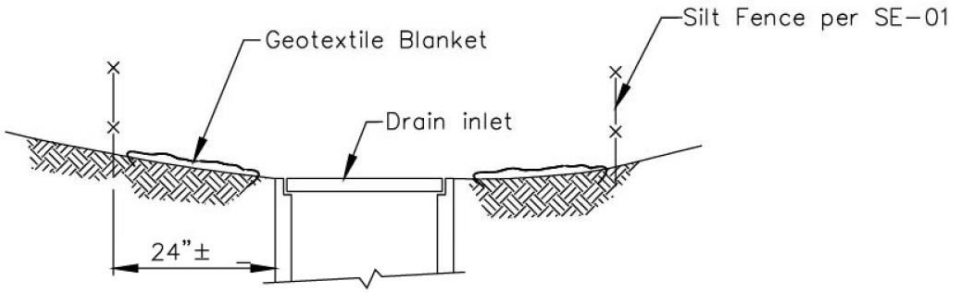


SECTION A

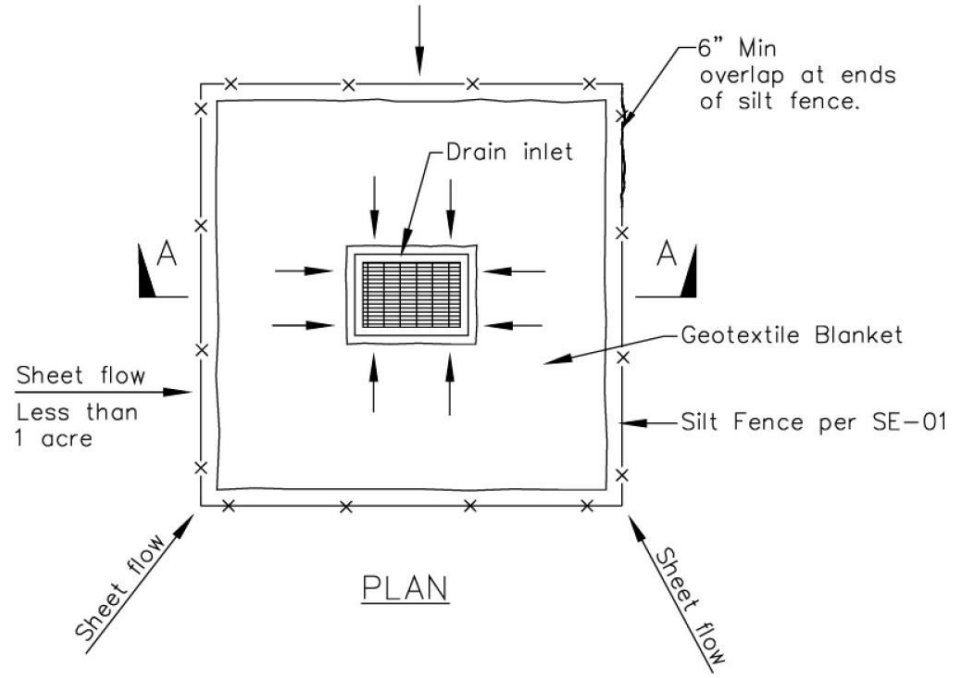
SP–2. MATERIALS STAGING IN ROADWAY

F. All storm drain inlets on the site or receiving direct discharges of stormwater from the site shall be protected from sediment-laden discharges using appropriate Best Management Practices.

Example specifications of typical sediment controls for storm drain drop-inlets or area drains are below:



SECTION A–A



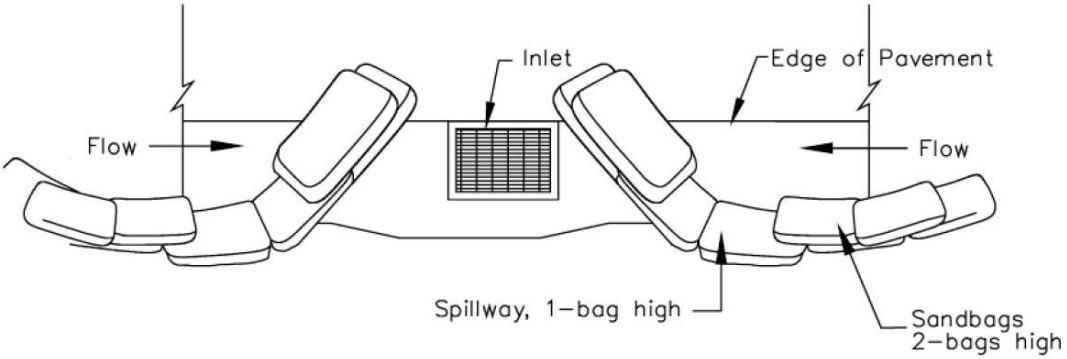
PLAN

DI PROTECTION TYPE 1
NOT TO SCALE

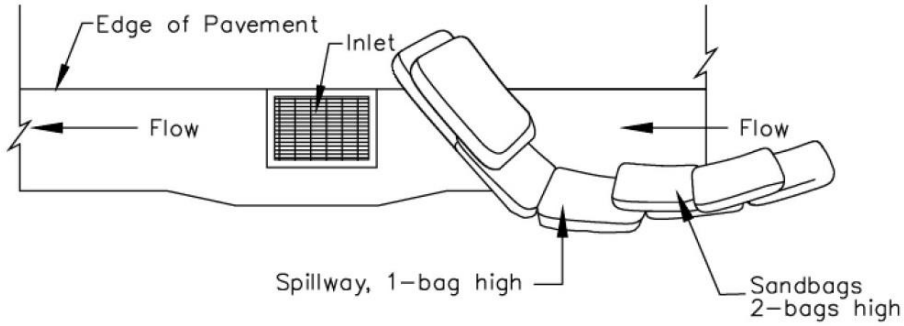
NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.

Example specifications of typical sediment controls for storm drain curb-inlets are below:



TYPICAL PROTECTION FOR INLET ON SUMP



TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

DI PROTECTION TYPE 3
NOT TO SCALE

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STEP 5: Review your answers to **Question 1.a.** to determine the next applicable steps to take towards completing your Erosion and Sediment Control Plan.

If you answered **YES** to **Question 1.a.**, skip to **STEP 8** and then complete **STEPS 8-17** to complete your Erosion and Sediment Control Plan.

If you answered **NO** to **Question 1.a.**, continue to complete **STEPS 6 and 7** to complete your Erosion and Sediment Control Plan. No further steps are necessary.

STEP 6: Prepare and submit a map or drawing large enough to clearly show the items listed in requirements **6.a.** through **6.c.**

Requirement 6.a. Indicate areas to be disturbed, scraped, graded or otherwise subject to increased rates of erosion as a result of construction activities associated with the project.

Requirement 6.b. Indicate the location of all erosion control Best Management Practices (BMPs). These include, but are not limited to: crimped and tackified straw, plastic sheeting, tarps, erosion control blankets, jute netting, or hydroseeding.

Requirement 6.c. Indicate the location of all sediment control BMPs. These include, but are not limited to: silt fence barriers, straw wattles, sediment basins, check dams, or catch basin inserts.

STEP 7: Include a brief description of the purpose and product details for each of the BMPs included on the drawing or map completed in **STEP 6**. The description should include supporting calculations or material estimates where applicable. For example, the description for a sediment settling basin should include a basin-sizing calculation based on tributary area and historic rainfall. The description for hydroseeding should include the type, mixture, and quantity of seed to be applied.

STEP 8: The Erosion and Sediment Control plan shall be prepared by a civil engineer or other professional who is qualified to prepare such a plan. Erosion control plans for engineered grading projects, or when directed by the city engineer in sensitive areas, shall be prepared by a certified erosion control specialist.

STEP 9: The erosion and sediment control plan shall denote the items in **Requirement(s) 9.a.-9.l.** as applicable to the proposed grading activity:

Requirement 9.a. A description and delineation of the vegetative measures to be taken to minimize erosion and sedimentation

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Requirement 9.b. A description and delineation of the temporary and permanent measures to be taken to protect manufactured or disturbed slopes from erosion by mechanical means, such as with mulches,

diversion dikes, etc.

Requirement 9.c. The delineation of the drainage control measures to be taken.

Requirement 9.d. The extent and manner of the cutting of trees and the clearing of vegetation, the disposal of same, and the measures to be taken for the protection of undisturbed trees and vegetation.

Requirement 9.e. The methods to be used for the disposal of excess materials.

Requirement 9.f. The methods to be used for the control of dust.

Requirement 9.g. A description and delineation of the temporary and permanent measures to be taken to retain sediment on the site.

Requirement 9.h. A description of the measures to be taken and the associated best management practices (BMP) inspection schedule to maintain the BMPs shown on the plan during grading operations and construction on the site.

Requirement 9.i. The extent of disturbed ground that will exist, what streets will be paved, and what drainage devices will be installed prior to the start of each rainy season.

Requirement 9.j. Locations of at-grade or above-ground drainage facilities and channels.

Requirement 9.k. Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and type and quantity of mulching for both temporary and permanent vegetative control measures.

Requirement 9.l. Any other information required by the city engineer.

STEP 10: Consult appropriate guidance manuals when preparing your Erosion and Sediment Control Plan to meet **Requirement 10.a.**

Requirement 10.a. All grading, erosion control practices, sediment control practices, and waterway crossings shall meet the design criteria set forth in the most recent version of the California Stormwater Quality Association Best Management Practice Handbook, or other handbook authorized for use by the public works director, and shall be adequate to prevent transportation of sediment from the site to any off-site area. A rationale, including any applicable supporting engineering calculations, should be provided for all BMPs included in the Erosion and Sediment Control Plan.

STEP 11: Schedule vegetation clearing activities to meet **Requirement 11.a.**

Requirement 11.a. All clearing techniques that retain natural vegetation and drainage patterns, as described in the California Stormwater Quality Association Best Management Practice Handbook, shall be used to the satisfaction of the city engineer. Clearing, except that necessary to establish sediment control BMPs, shall not begin until all sediment control BMPs have been installed and have been stabilized.

STEP 12: Design waterway crossings to meet **Requirement 12.a.**

Requirement 12.a. Grading, erosion control practices, sediment control practices, and waterway crossings shall meet the design criteria set forth in the most recent version of the California Stormwater Quality Association Best Management Practice Handbook, or other handbook authorized for use by the public works director, and shall be adequate to prevent transportation of sediment from the site to any off-site area to the satisfaction of the city engineer.

STEP 13: Include appropriate general housekeeping requirements in the Erosion and Sediment Control Plan to meet **Requirement 13.a.**

Requirement 13.a. General Housekeeping. The following general site and good housekeeping requirements shall be implemented and are special provisions of any grading permit issued:

a. Sufficient erosion and sediment control supplies shall be available on site during the rainy season to protect areas susceptible to erosion during rain events. Contractors shall be prepared year-round to deploy erosion and sediment treatment control practices.
b. Soil disturbance work shall be conducted during dry weather whenever possible.
c. The contractor shall provide adequate materials management, including covering, securing, and segregating potentially toxic materials (asphalt, herbicides, pesticides, fertilizer, grease, oils, fuel, paints, stains, solvents, wood preservatives, etc.), and providing secondary containment for hazardous materials.
d. The contractor shall provide training and equipment to contain spills of oil and other hazardous materials.
e. Designated concrete washout areas shall be established at least 50 feet away from storm drain inlets or drainage facilities and away from the concrete truck access area so that construction traffic will not drive through wash waters. The wash out area shall have a contained area of sufficient volume to completely contain all liquid and waste concrete material plus a sufficient freeboard for rainwater.
f. Paving operations shall control run on and prevent runoff from areas being paved and be conducted in a manner that properly disposes of wastes.
g. Sanitary facilities of sufficient number and size to accommodate construction crews shall be located away from storm drain inlets and drainage facilities, and anchored to prevent being blown over or tipped by vandals. The facilities shall be maintained in good working order and emptied at regular intervals by a licensed sanitary waste hauler.

STEP 14: Design erosion controls to meet applicable minimum standards in **Requirement 14.a.**

Requirement 14.a. The following erosion control requirements shall be incorporated in the erosion and sediment control plans:

a. Projects shall be designed to avoid disturbing land in sensitive areas and to preserve

existing vegetation wherever possible.

b. Engineered grading operations shall be scheduled during dry months when practical, and shall allow adequate time before rainfall begins to stabilize the soil with erosion control materials.
c. Seeding and mulching shall be done as soon as grading is complete.
d. If seeding or another vegetative erosion control method is used, the vegetative cover shall become established within a time frame approved by the city engineer, or the city engineer may require the site to be reseeded or a nonvegetative option employed.
e. Special techniques that meet the design criteria outlined in the California Stormwater Quality Association Best Management Practice Handbook on steep slopes or in drainage-ways shall be used to ensure stabilization.
f. Soil stockpiles must be stabilized and/or securely covered upon forecast of rain.
g. In areas where permanent reseeding and planting is not established at the close of the construction season, additional control measures shall be used, such as a heavy mulch layer or another method that does not require germination, to ensure soil stabilization at the site.
h. Where runoff needs to be diverted from one area and conveyed to another, earth dikes, drainage swales, slope drains or other suitable practice shall be constructed in accordance with the design criteria set forth in the most recent version of the California Stormwater Quality Association Best Management Practice Handbook.
i. Techniques shall be employed to prevent the blowing of dust or sediment from the site.
j. Techniques that deliver upland runoff past disturbed slopes shall be employed when determined necessary by the city engineer.

STEP 15: Design sediment controls to meet applicable minimum standards in **Requirement 15.a.**

Requirement 15.a. The following sediment control requirements shall be incorporated in the sediment and erosion control plan:

a. Linear sediment barriers shall be 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.
b. Street sweeping shall be conducted on an as-needed basis to remove sediment from streets and roadways and to prevent the sediment from entering storm drains or receiving waters.
c. Every storm drain inlet with the potential to receive sediment-laden runoff shall be protected in accordance with the design criteria set forth in the most recent version of the California Stormwater Quality Association Best Management Practice Handbook. Inlet protection shall be inspected and maintained frequently.
d. Sediment basins or sediment traps shall be installed on projects where sediment-laden water may enter the drainage system or watercourses and in association with dikes, temporary channels, and pipes used to convey runoff from disturbed areas.
e. Protection for adjacent properties by the use of a vegetated buffer strip in combination with other perimeter controls or other appropriate method, as described in the most recent version of the California Stormwater Quality Association Best Management Practice Handbook or other manual as approved by the public works director.

STEP 16: Design watercourse protection measures to meet applicable minimum standards in **Requirement 16.a.**

Requirement 16.a. The following waterway and watercourse protection requirements shall be incorporated in the erosion and sediment control plans and implemented when applicable:

a. A temporary stream crossing installed and approved by the appropriate regulatory agencies if a wet watercourse will be crossed regularly during construction.
b. Stabilization of the watercourse channel before, during, and after any in-channel work.
c. All on-site stormwater conveyance channels shall be designed according to the criteria outlined in the California Stormwater Quality Association Best Management Practice Handbook.
d. Stabilization adequate to prevent erosion located at the outlets of all pipes and paved channels.

STEP 17: Design watercourse protection measures to meet applicable minimum standards in **Requirement 17.a.**

Requirement 17.a. The following construction site access requirements shall be incorporated in the erosion and sediment control plans and implemented when applicable:

a. A temporary access road provided at all sites.
b. Other measures, such as track-out prevention devices, or as required by the grading inspector in order to ensure that sediment is not tracked onto public streets by construction vehicles or washed into storm drains.

STOP HERE. No further steps are necessary.