

WATER POLLUTION AND EROSION CONTROL NOTES:

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-K(246)	2004	7	105

A. GENERAL:

- The Contractor is reminded of the requirements of Section 209 - Water Pollution and Erosion Control, in the "Hawaii Standard Specifications for Road, Bridge and Public Works Construction". Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment.
- The Contractor shall follow the guidelines in the "Best Management Practices Manual for Construction Sites in Honolulu", dated May 1999 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
- The Contractor shall furnish, install, and maintain a rain gauge at a location designated by the Engineer. Furnishing, installing, maintaining, and removing the rain gauge will not be paid for separately but shall be incidental to the various contract items.
- The cost to install, maintain and to remove all waste disposal, erosion and sediment control and maintenance practices, good housekeeping BMPs, and all costs of obtaining of permits and meeting the requirements of Section 209 will be incidental to the various contract items and not paid for separately.

B. WASTE DISPOSAL:

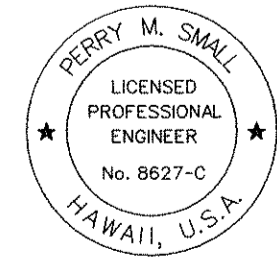
- Waste Materials  
All waste materials shall be collected and stored in a securely lidded metal dumpster. The dumpster shall meet all local and State solid waste management regulations. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
- Hazardous Waste  
All hazardous waste materials shall be disposed of in the manner specified by local or State regulation or by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
- Sanitary Waste  
All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- All control measures shall be inspected at least once each week and within 24 hours following any rainfall event of 0.5 inches or greater.
- All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
- Silt screen or fence shall be inspected for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground.
- Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
- A maintenance inspection report shall be made promptly after each inspection by the Contractor.

- The Contractor shall select a minimum of three personnel who shall be responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.
- Contractor to provide rain gauges and daily reading to the Engineer.
- GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:
  - Materials Pollution Prevention Plan
    - Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Fertilizers
Detergents	Petroleum Based Products
Paints (enamel and latex)	Cleaning Solvents
Metal Studs	Wood
Tar	Masonry Block
    - Material Management Practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough product as is required to do the job.
    - All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
    - Products shall be kept in their original containers with the original manufacturer's label.
    - Substances shall not be mixed with one another unless recommended by the manufacturer.
    - Whenever possible, a product shall be used up completely before disposing of the container.
    - Manufacturer's recommendations for proper use and disposal shall be followed.
    - The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.
  - The Contractor shall immediately clean and vacuum all areas of slurry created by sawcutting.
  - Hazardous Material Pollution Prevention Plan
    - Products shall be kept in original containers unless they are not resealable.
    - Original labels and material safety data sheets (MSDS) shall be retained.
    - Surplus products shall be disposed of according to manufacturers' instructions or local and State recommended methods.
  - Onsite and Offsite Product Specific Plan
    - The following product specific practices shall be followed onsite:
      - Petroleum Based Products:  
All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.
      - Fertilizers:  
Fertilizers used shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer shall be worked into the soil to limit exposure to storm water. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.

 <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.</p> <p><i>Perry M. Small</i></p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><b>WATER POLLUTION AND EROSION CONTROL NOTES</b></p> <p>INTERSTATE ROUTE H-1 ZIPPER LANE EXTENSION RADFORD DRIVE OVERPASS TO KEEHI INTERCHANGE FEDERAL AID PROJECT NO. NH-HI-K(246)</p> <p>Scale: None Date: Mar. 2, 2004</p>
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### WATER POLLUTION AND EROSION CONTROL NOTES: -Cont.

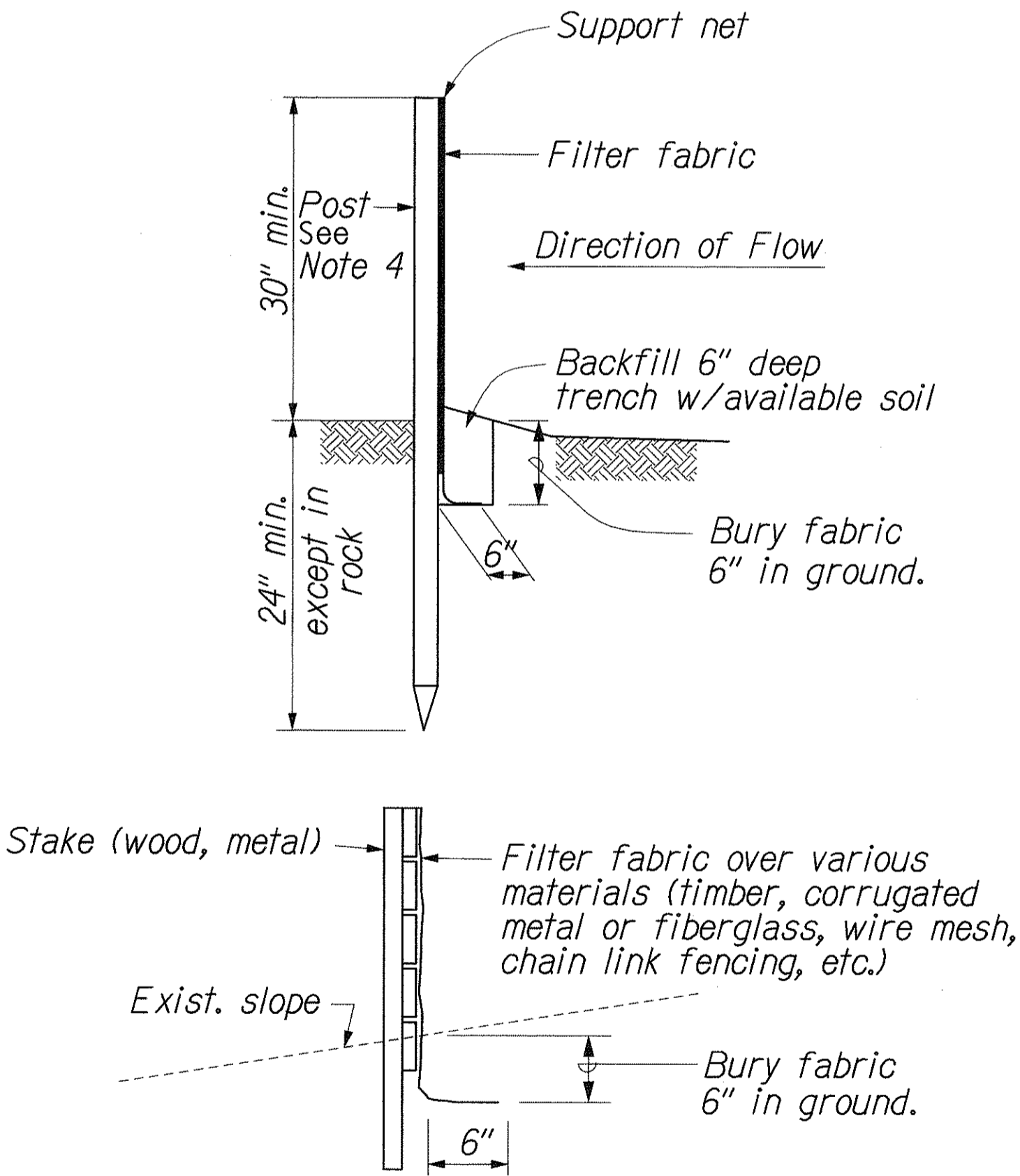
- 3) **Paints:**  
All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the highway drainage system but shall be properly disposed of according to manufacturers' instructions or State and local regulations.
- 4) **Concrete Trucks:**  
Concrete trucks shall be allowed to wash out or drum wash water only at designated site. Water shall not be discharged in the highway drainage system or waters of the United States. The Contractor shall contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. The Contractor shall clean disposal site as required or as requested by the Owner's representative.
- b. **Offsite Vehicle Tracking:**  
A stabilized construction entrance shall be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance shall be cleaned daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
- c. The Contractor shall immediately pick up any material dropped or tracked onto the road.
5. **Spill Control Plan**
  - a. A spill prevention plan shall be posted to include a description and cause of each spill, measures to prevent and clean up each spill.
  - b. The Contractor shall be the spill prevention and cleanup coordinator. The Contractor shall designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel shall be posted in the material storage area and in the office trailer onsite.
  - c. Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the location of the information and cleanup supplies.
  - d. Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite.
  - e. All spills shall be cleaned up immediately after discovery.
  - f. The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
  - g. Spills of toxic hazardous material shall be reported to the appropriate State or local government agency, regardless of the size.

#### E. PERMIT REQUIREMENTS:

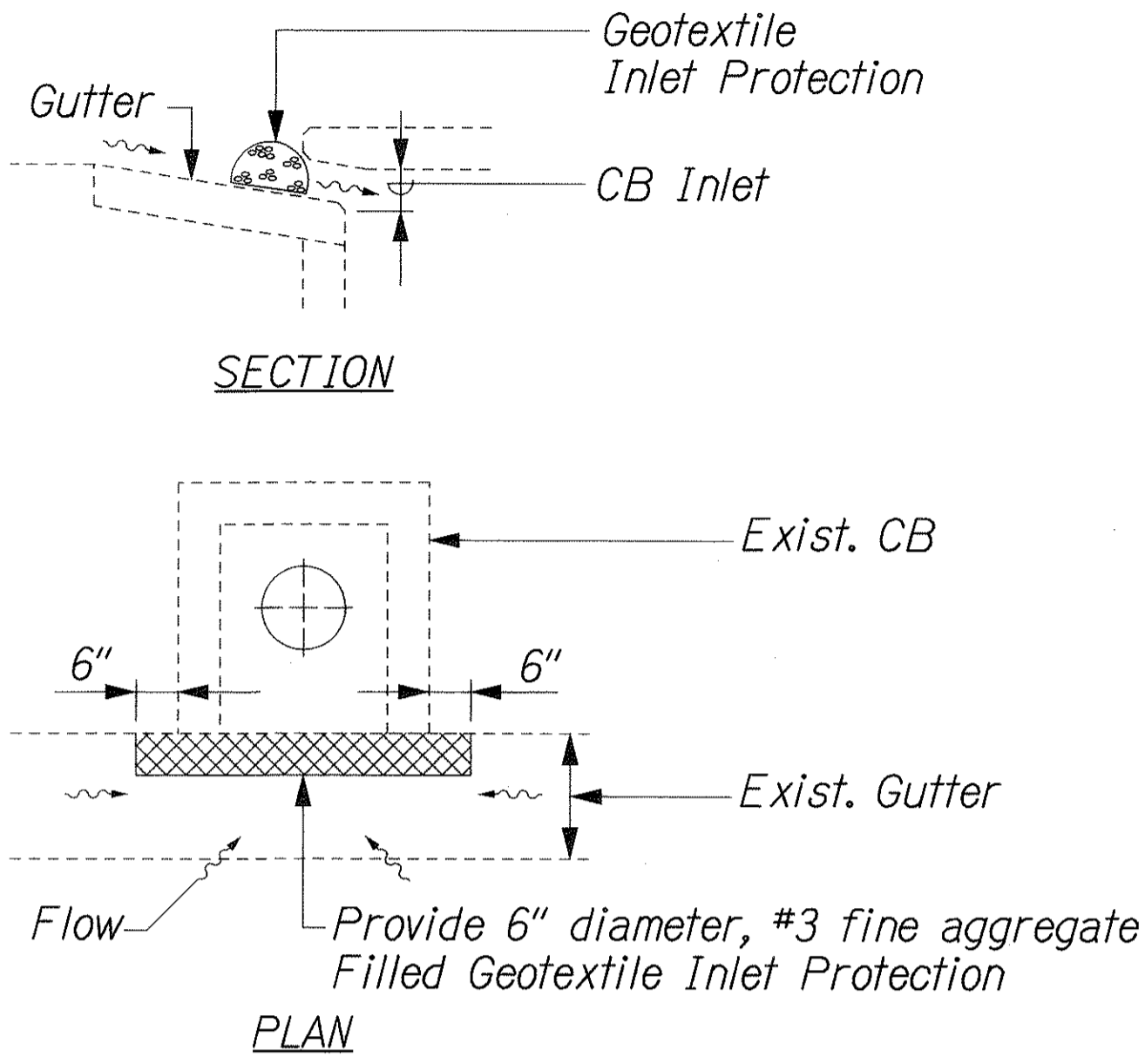
1. A National Pollutant Discharge Elimination System (NPDES) Permit is required for Construction Activities of one acre or more. The Contractor shall submit to the Engineer four sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.04 of the specifications.
2. The Contractor shall comply with all applicable State and Federal Permit conditions. Permits may include but are not limited to the following:
  - a. NPDES Permit for Construction Activities

### SILT FENCE NOTES:

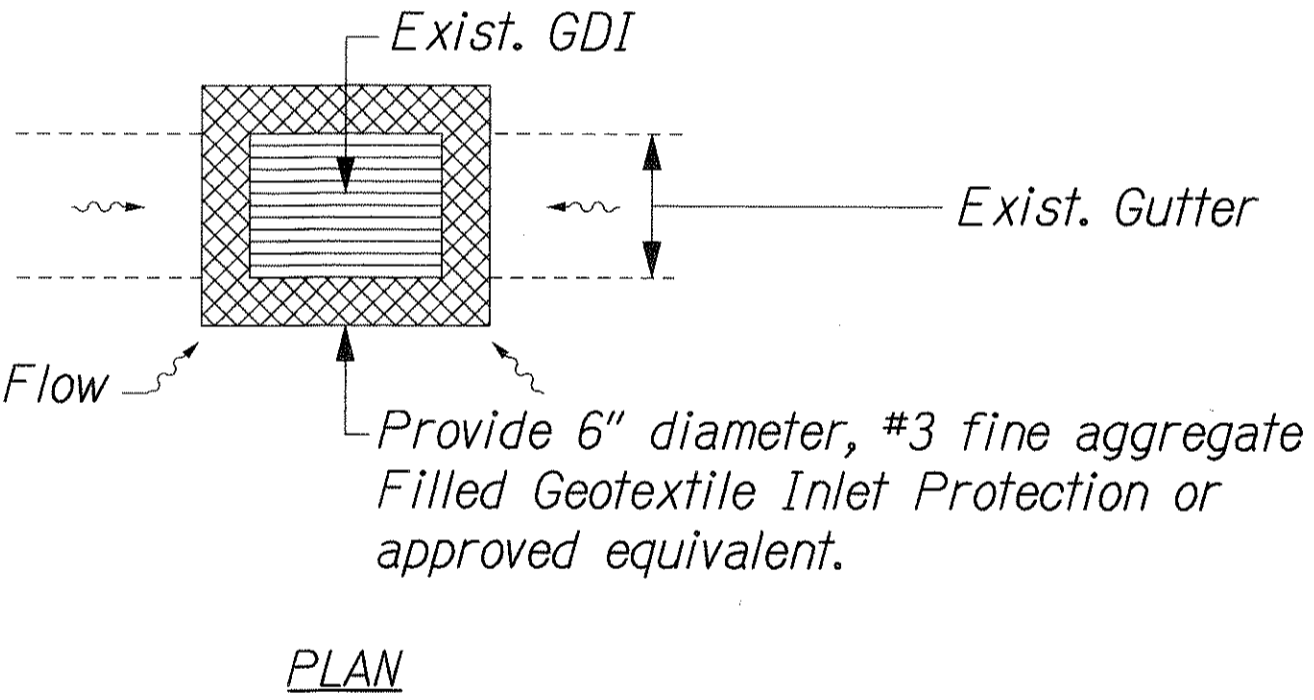
1. Filter fabric shall be of the type specified and installed in combination with a support net of polyester netting or approved equal. The filter fabric shall be a minimum of 36 inches wide and the support net a minimum of 30 inches.
2. If silt fence is obtained from manufacturer as a package (i.e. fabric attached to post) the manufacturers installation instructions shall be adhered to.
3. Posts shall be metal where possible, cross section of post will be substantial enough to support a loaded silt fence without bending. Post spacing shall be 4 feet to 8 feet, depending on post size.
4. Some manufacturers only supply silt fence with wooden post. During installation, measures should be taken to prevent damage to post.



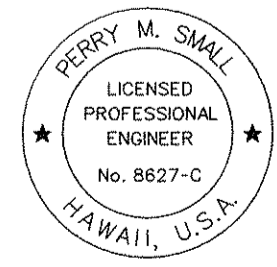
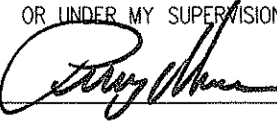
**SILT FENCE DETAIL**  
Not to Scale



**INLET PROTECTION  
AT EXISTING CATCH BASIN**  
Not to Scale



**SANDBAG PROTECTION  
AT EXISTING INLET**  
Not to Scale

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