

Source: Caltrans Construction Site Best Management Practices Manual, 2003.

Description

Devices installed at storm drain inlets to detain and/or filter sediment-laden runoff. These devices trap and prevent sediment from entering into the storm drain system.

Applications

Every storm drain inlet that may intercept sediment-laden runoff shall be covered or protected.

Installation and Implementation Requirements

- Five types of inlet protection are described below.
 - Geotextile Filter Fabric Fence: Applicable to drainage basins less than one acre and with less than a 5 percent slope.
 - Block and Stone Filter: Applicable to flows exceeding 0.5 cfs.
 - Stone and Wire Mesh Filter: Applicable to curb or drop inlets subjected to traffic from construction equipment.
 - Sandbag Barrier: Applicable to sloped, paved streets; creates a small sediment trap upstream of inlets.
 - Excavated Drop Inlet Sediment Trap: Applicable to areas requiring overflow capability due to expected high flows; an excavated area around the inlet which detains runoff and allows sediment to settle.
- In addition to the methods of inlet protection described above, there are other effective methods and proprietary devices, which may also be used.
- Limit to drainage areas less than one acre, unless a sediment trap intercepts the runoff prior to the inlet protection device.
- Provide an area for water to pond around inlet without flooding nearby structures and property.

Storm Drain Inlet Protection

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Installation and Implementation Requirements (Continued)

- Other proprietary devices may be used and shall be installed per manufacturer's recommendations.

Limitations

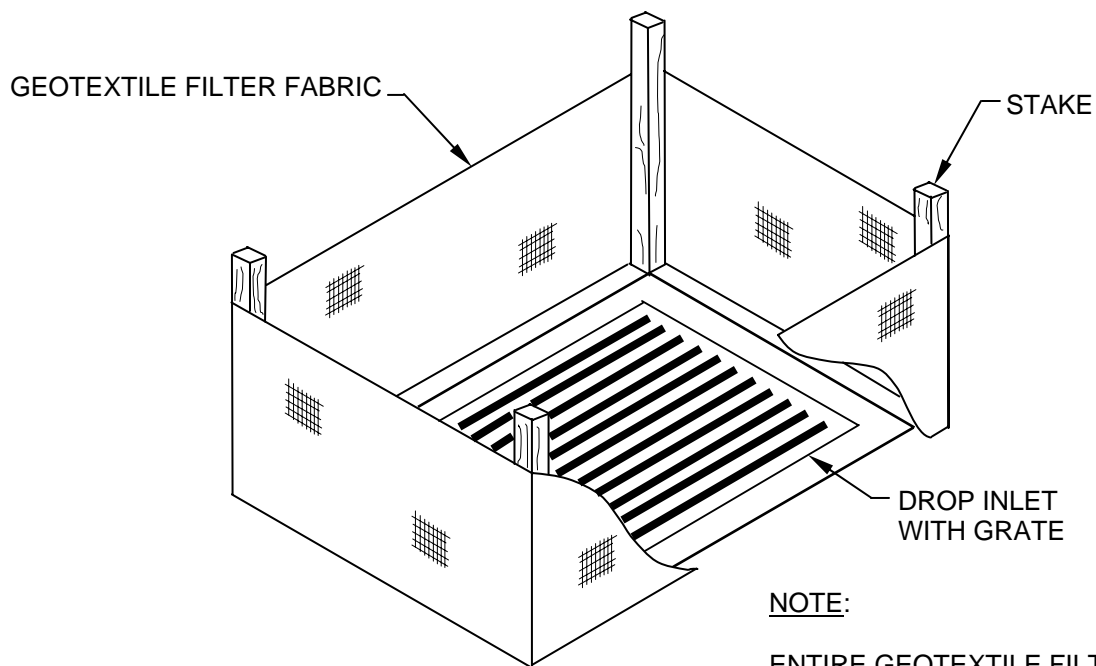
- Short-term flooding at a protected inlet will occur but must not become a traffic hazard.
- Drainage area limited to one acre or less.
- Straw bales shall not be used for inlet protection.
- Runoff on slopes may bypass protected inlets

Inspections and Maintenance

- Inspect weekly during dry periods as well as within 24 hours of any rainfall of 0.5 inch or greater which occurs in a 24-hour period and daily during periods of prolonged rainfall.
- Immediately replace clogged geotextile filter fabric or stone filters.
- Remove accumulated sediment when depth reaches half of the filter height or half of the sediment trap depth.
- Remove inlet protection after stabilization of upstream soils and sweeping of streets is completed. Properly dispose of trapped sediment.

Storm Drain Inlet Protection

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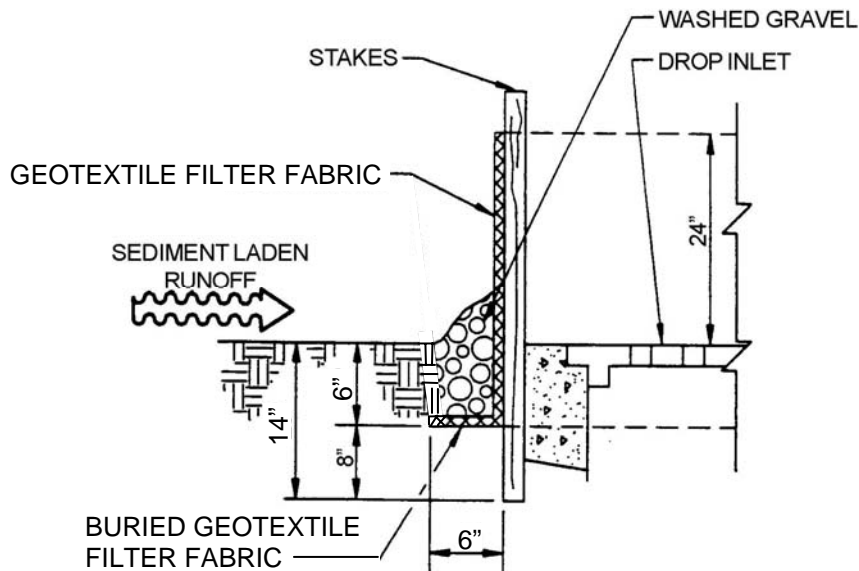


NOTE:

ENTIRE GEOTEXTILE FILTER FABRIC NOT SHOWN FOR ILLUSTRATIVE PURPOSES.

PERSPECTIVE VIEW

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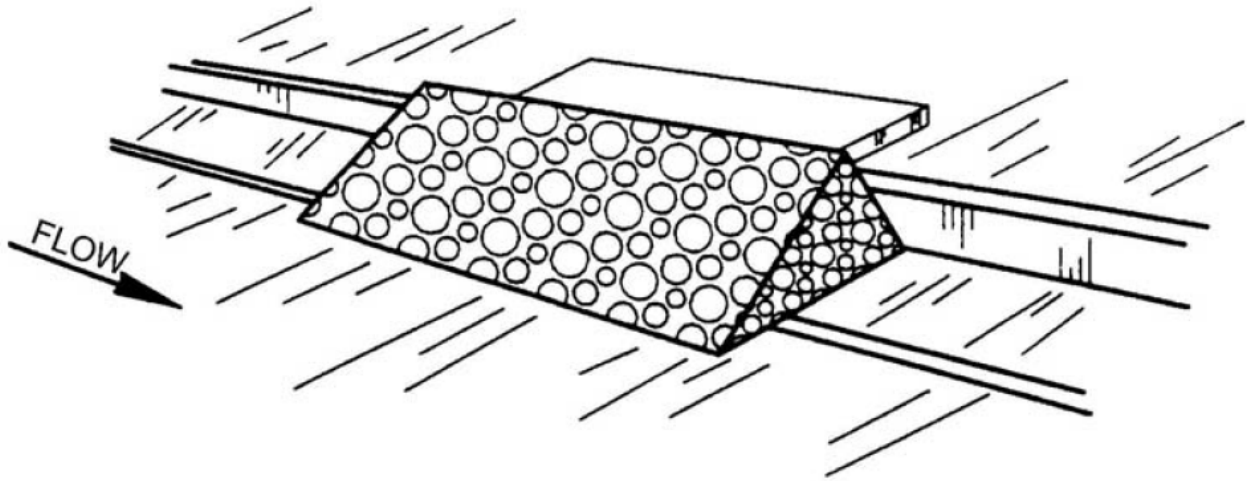
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GEOTEXTILE FILTER FABRIC FENCE FOR DROP INLET FILTER

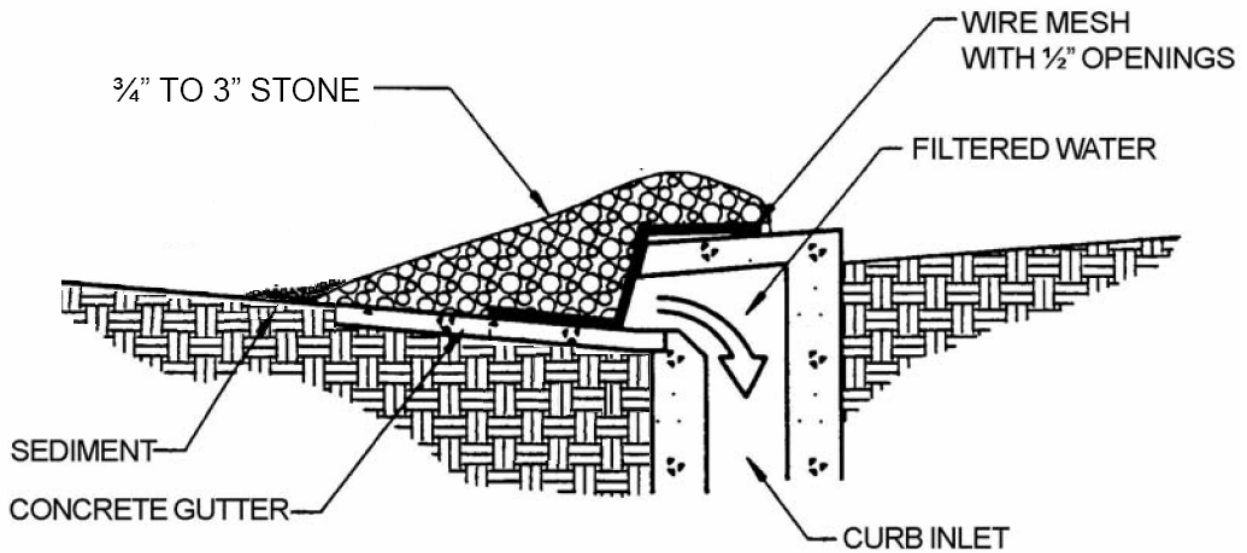
Source: Modified from CCH Best Management Practices Manual for Construction Sites in Honolulu, 1999.

Storm Drain Inlet Protection

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PERSPECTIVE
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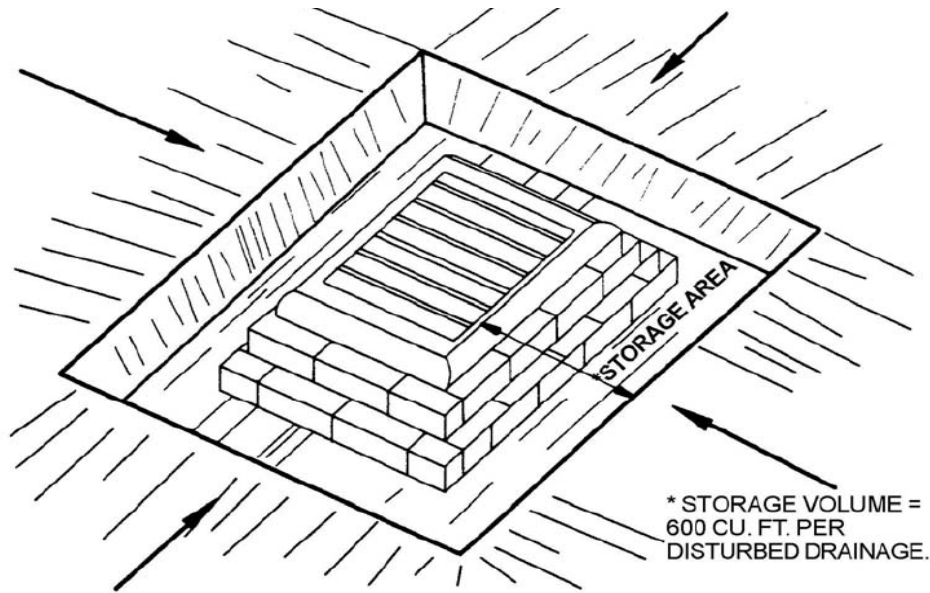


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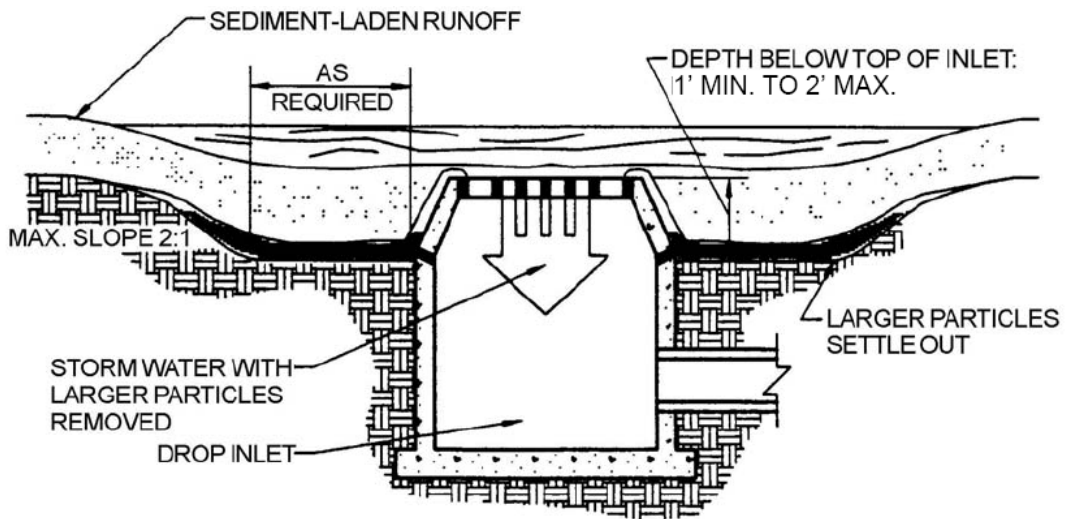
NOTE: NOT APPLICABLE TO AREAS WITH HIGH TRAFFIC VOLUMES.

STONE AND WIRE MESH FILTER FOR CRUB INLET

Source: CCH Best Management Practices Manual for Construction Sites in Honolulu, 1999.



PERSPECTIVE
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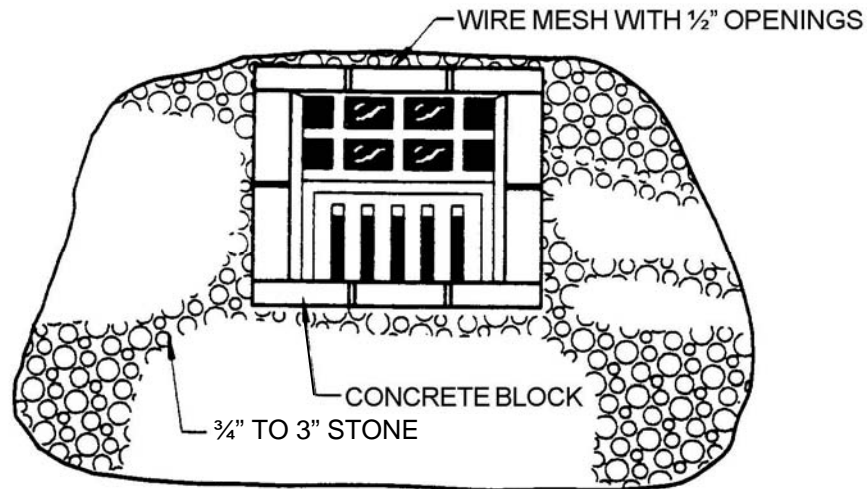


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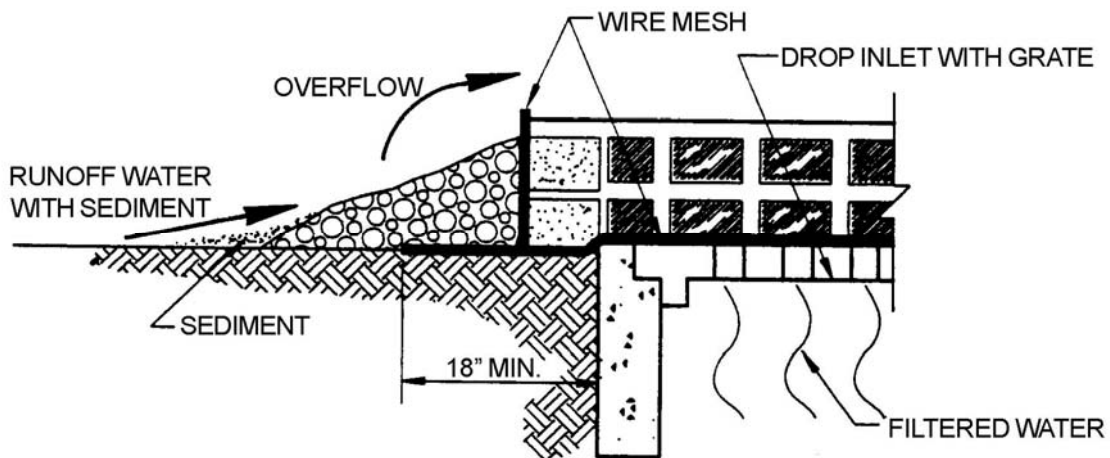
NOTE: THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE OVERFLOW CAPABILITY AND EASE OF MAINTENANCE ARE DESIRABLE.

EXCAVATED DROP INLET SEDIMENT TRAP

Source: CCH Best Management Practices Manual for Construction Sites in Honolulu, 1999.



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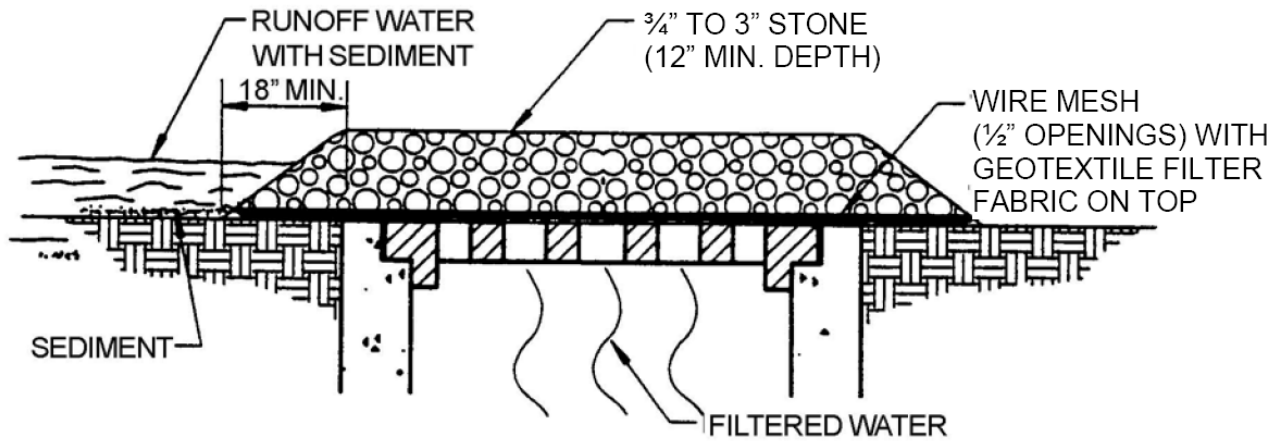
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BLOCK AND STONE FILTER AT DROP INLET

Source: CCH Best Management Practices Manual for Construction Sites in Honolulu, 1999.

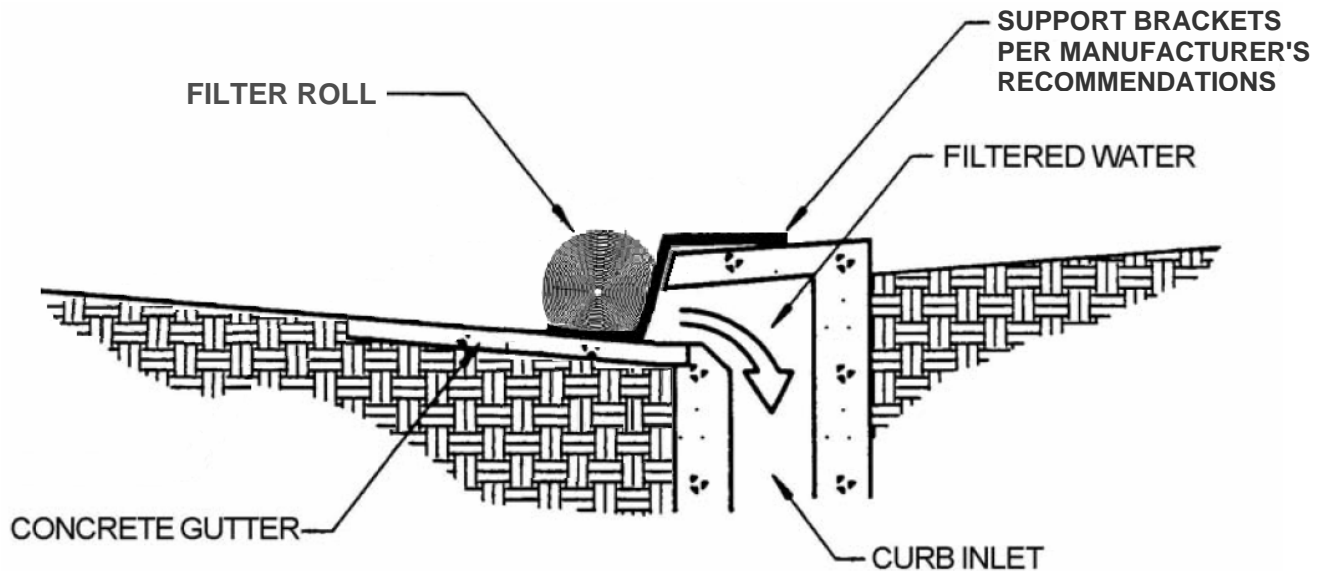
Storm Drain Inlet Protection

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STONE AND WIRE MESH FILTER FOR DROP INLET

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FILTER ROLL WITH SUPPORTS FOR CURB INLET

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