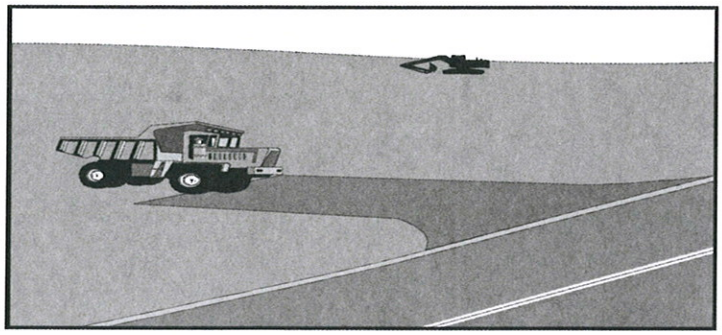
ACTIVITY: Stabilized Construction Entrance

WTCP-05



Targeted Constituents				
● Significant Benefit		◗ Partial Benefit		○ Low or Unknown Benefit
◗ Sediment	○ Heavy Metals	○ Floatable Materials	○ Oxygen Demanding Substances	
◗ Nutrients	◗ Toxic Materials	◗ Oil & Grease	○ Bacteria & Viruses	○ Construction Wastes

Implementation Requirements				
● High		◗ Medium		○ Low
◗ Capital Costs	○ O & M Costs	○ Maintenance	○ Suitability for Slopes >5%	○ Training

Description

The construction entrance practice is a stabilized pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk or parking area. Stabilizing the construction entrance significantly reduces the amount of sediment (dust, mud) tracked off-site, especially if a washrack is incorporated for removing caked on sediment. If soil and stormwater runoff conditions warrant removal of mud from construction vehicles, see WTCP-02. This management practice is likely to create a significant reduction in sediment, nutrients, toxic materials, and oil and grease.

Suitable Applications

- All points of construction ingress and egress.
- Unpaved areas where sediment tracking occurs from site onto paved or public roads.

Approach

- Construct on level ground where possible.
- Stones should be 2-3 inch (5.1-7.6 cm) crushed, washed, and well graded rock to at least a 6-inch (15.2) depth.
- Length should be 100-foot (30.5 m) minimum, and 20-foot (6.1 m) minimum width.
- Provide ample turning radii as part of entrance.
- Should be used in conjunction with street sweeping on adjacent public right-of-way.
- It is strongly suggested that perimeter fencing be installed proximate to the construction entrance that will limit egress to the designated construction exit(s).

Maintenance

- Inspect weekly and after each rainfall.
- Requires periodic top dressing with additional stones; add gravel material when soil subgrade becomes visible.
- Remove all sediment deposited on paved roadways at the end of the work day.
- Remove gravel and filter fabric at completion of construction.

Limitations

- Stabilized construction entrances are rather expensive to construct, especially when a wash rack is included. Most construction sites will already require some measure of sediment trap. A sediment trap of some kind must also be provided to collect wash water runoff. The cost of a sediment trap for a construction entrance should be incremental or much less expensive than other BMPs to control sediment from a construction entrance.

Additional Information

A stabilized construction entrance is a pad of aggregate, that may be enhanced with an underlain filter cloth, located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets. Reducing trackout of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains and production of airborne dust.

A stabilized construction entrance should be used at all points of construction ingress and egress. The NPDES permits administered by TDEC require that appropriate measures be implemented to prevent trackout of sediments onto paved roadways, which is a significant source of sediments derived from mud and dirt carryout from the unpaved roads and construction sites.

Stabilized construction entrances are moderately effective in removing sediment from equipment leaving a construction site. Advantages of the Stabilized Construction Entrance is that it does remove some sediment from equipment and serves to channel construction traffic in and out of the site at specified locations. Efficiency is greatly increased when a washing rack is included as part of a stabilized construction entrance.

The entrance must be properly graded to prevent runoff from leaving the construction site. When wash areas are provided, washing is done on a reinforced concrete pad (if significant washing is necessary) or in an area stabilized with crushed stone which drains into a properly constructed sediment trap or basin (WTCP-03 and 04). Sediment barriers, such as swales with check dams, must be provided to prevent sediments from entering into the stormwater sewer system, ditch, or waterway.

Primary References

California Storm Water Best Management Practice Handbooks, CDM et.al. for the California SWQTF, 1993.

Caltrans Storm Water Quality Handbooks, CDM et.al. for the California Department of Transportation, 1997.

Tennessee Erosion and Sediment Control Handbook, Tennessee Department of Environment and Conservation, July 1992.

Subordinate References

Best Management Practices and Erosion Control Manual for Construction Sites, Flood Control District of Maricopa County, Arizona, September 1992.

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, June 1981.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group Working Paper, USEPA, April, 1992.

Stormwater Management Water for the Puget Sound Basin, Washington State Department of Ecology, The Technical Manual – February 1992, Publication # 91-75.

Virginia Erosion and Sedimentation Control Handbook, Virginia Department of Conservation and Recreation, Division or Soil and Water Conservation, 1991.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency – November 1988.

Inspection Checklist

- Are there indications that vehicles are leaving the site in areas other than the designated construction exit(s)?
- Are there indications that mud, dust or dirt is tracked onto the adjacent road via the construction exit(s)?
- Is the construction exit sufficiently maintained to prevent mud, dirt, and dust from being tracked off-site?

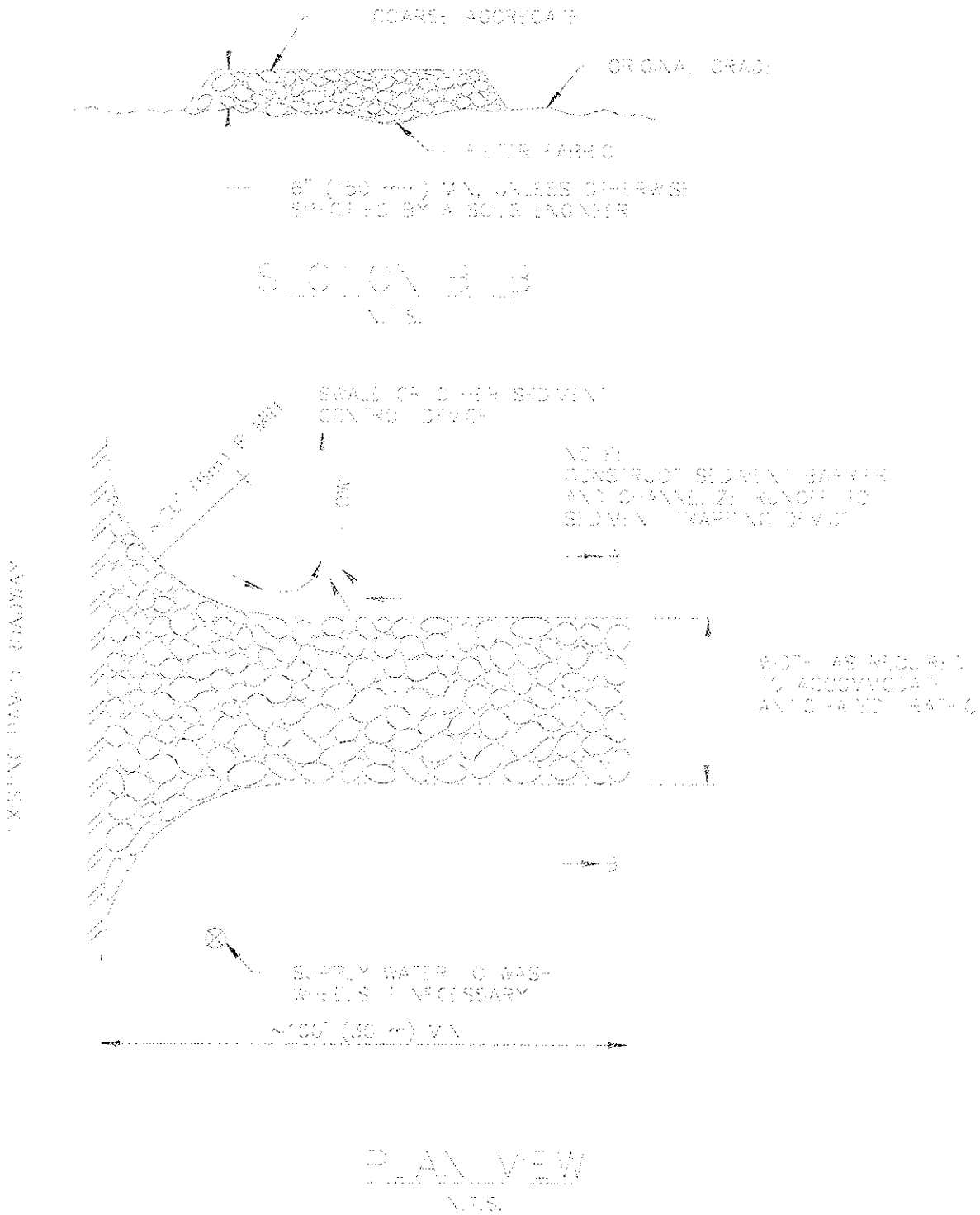


Figure WTCP-05-1
Stabilized Construction Entrance