

Erosion, Sediment, Dust, and Other Control BMPs

Basis for BMP Selection

- Measure or know the site area.
- Determine all drainage areas contributing run-on to the site.
- Determine the amount of rainfall that would be impacting your site.
- Calculate the estimated run-on and runoff.
- Determine the receiving waters that will receive discharges.

Choose the Correct BMP



Erosion Control

(primary protection)

1. Minimize disturbed areas and protect natural vegetation and features.
2. Phase construction activity.
3. Control storm water flowing onto and through the project.
4. Stabilize as soon as possible/protect slopes.
5. Dust control.

Sediment Control

(Second line of defense)

1. Establish perimeter controls.
2. Protect storm drain inlets.
3. Establish stabilized construction entrances.
4. Retain sediment on-site & control dewatering practices.
5. Inspect and maintain controls.

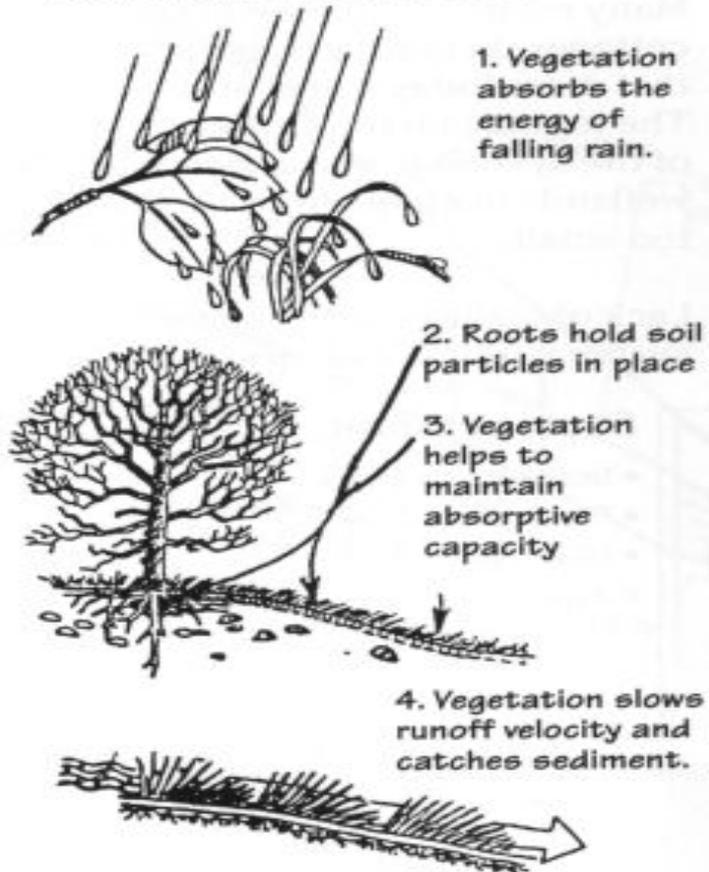
Erosion Control (Advantages)

- Most cost effective.
 - ❖ Costs are very little if anything.
- Largely consist of operational practices.
- Reduces maintenance cost of other controls.
- Fewer public complaints.
 - ❖ Less intervention from local authorities.

Minimize Disturbed Areas

Preserve Existing Vegetation

Natural Vegetation Acts as a Filter



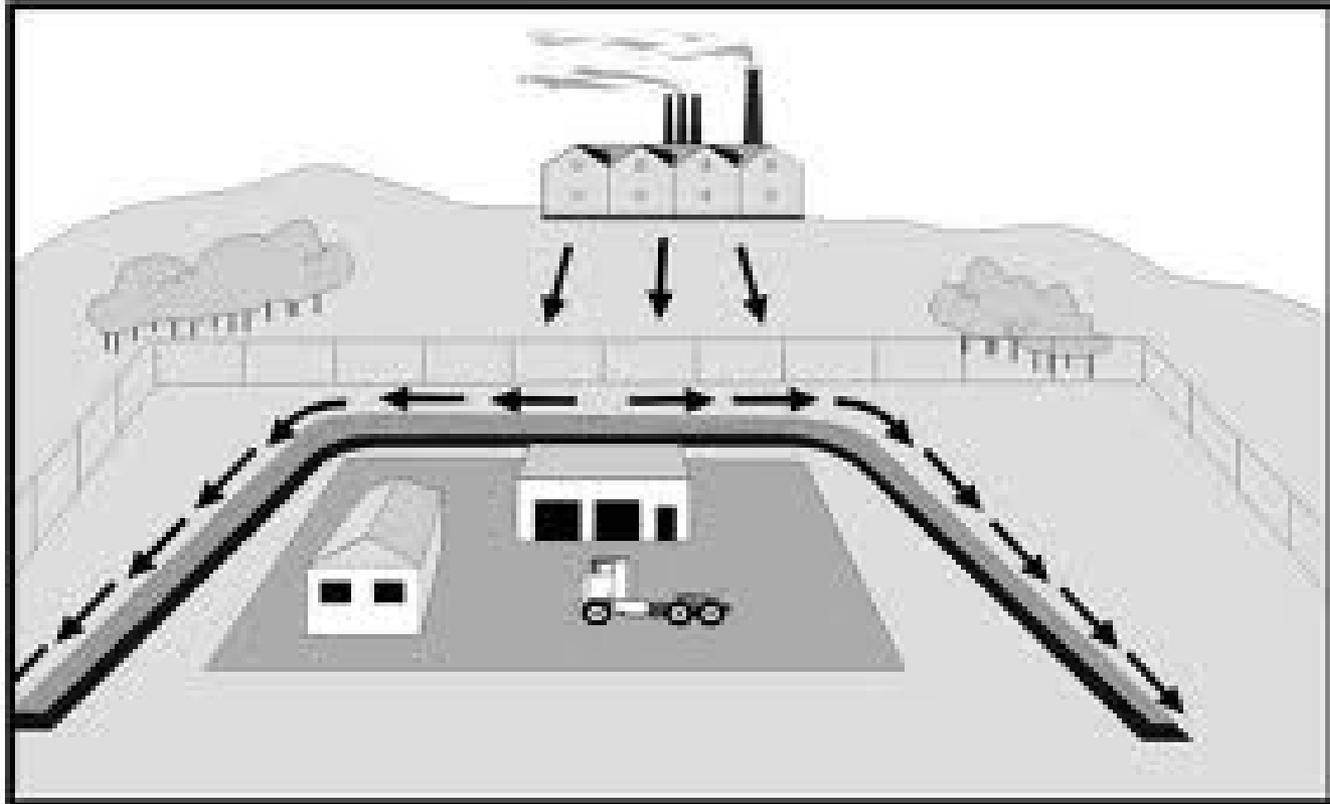




Phase Construction Activity



Control Stormwater





Stabilize and protect slopes

Temporary stabilization BMPs

- Seeding, mulches, blankets and mats, and soil binders.

Permanent stabilization BMPs

- Seeding and planting, sodding, channel stabilization, vegetative buffer strips.

Stabilization required with 14 days on bare inactive areas.









Hydro-Seeding



Erosion Blanket or Sod



Soil Roughening



Improper Soil Roughening



Dust Control



- Sprinkler/irrigation
- Soil stabilizers
- Mulch
- Stabilization
(Temporary/Permanent)
- Maintain existing
vegetation.

Wind Transport of Sediment



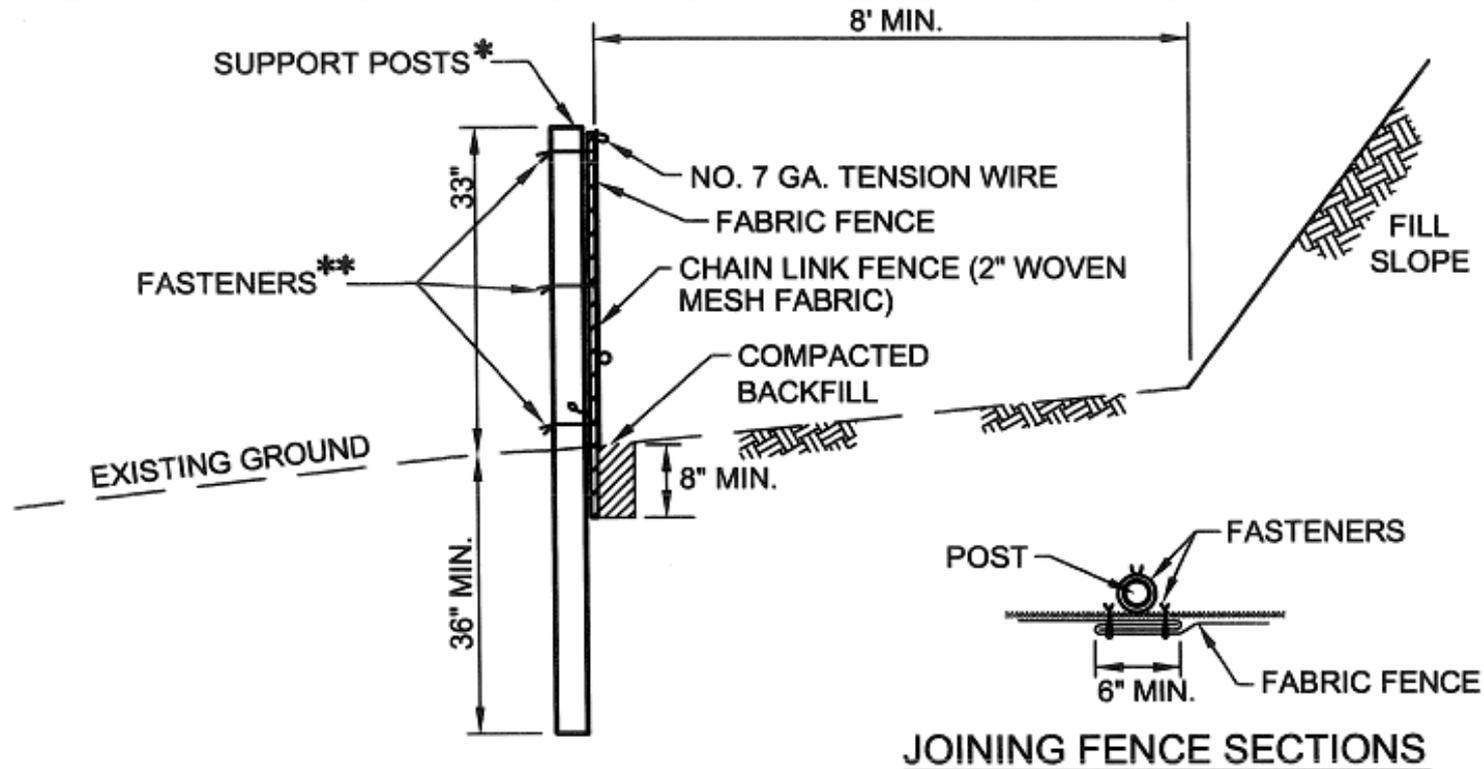
Wind Transport of Sediment



Establish Perimeter Controls

- Silt fence
- Straw wattle (fiber roll)
- Compost filter sock
- Berming

Silt fence detail



* POSTS SPACED @ 10' MAX. USE 2 1/2" DIA. HEAVY DUTY GALVANIZED OR ALUMINUM POSTS.

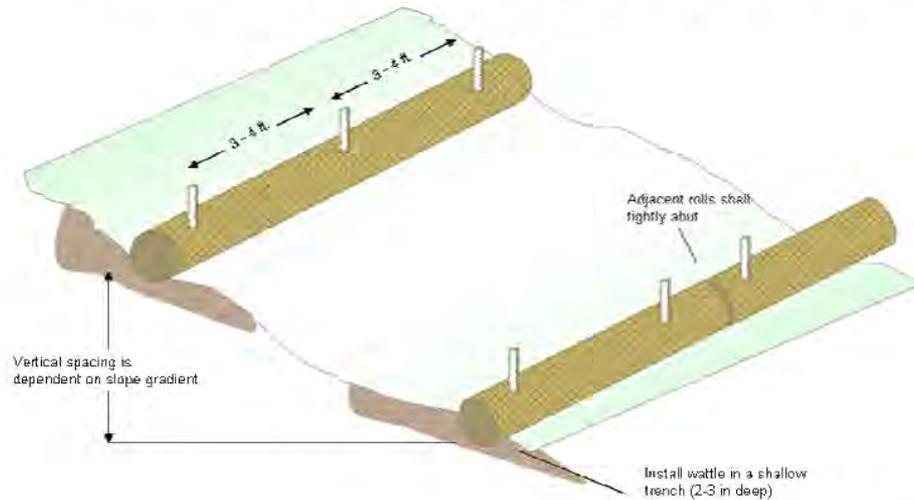
** CHAIN LINK TO POST FASTENERS SPACED @ 14" MAX. USE NO. 9 GA. ALUMINUM WIRE OR NO. 9 GALVANIZED STEEL PRE-FORMED CLIPS. CHAIN LINK TO TENSION WIRE FASTENERS SPACED @ 60" MAX. USE NO. 13.5 GA. GALVANIZED STEEL WIRE. FABRIC TO CHAIN FASTENERS SPACED @ 24" MAX C. TO C.



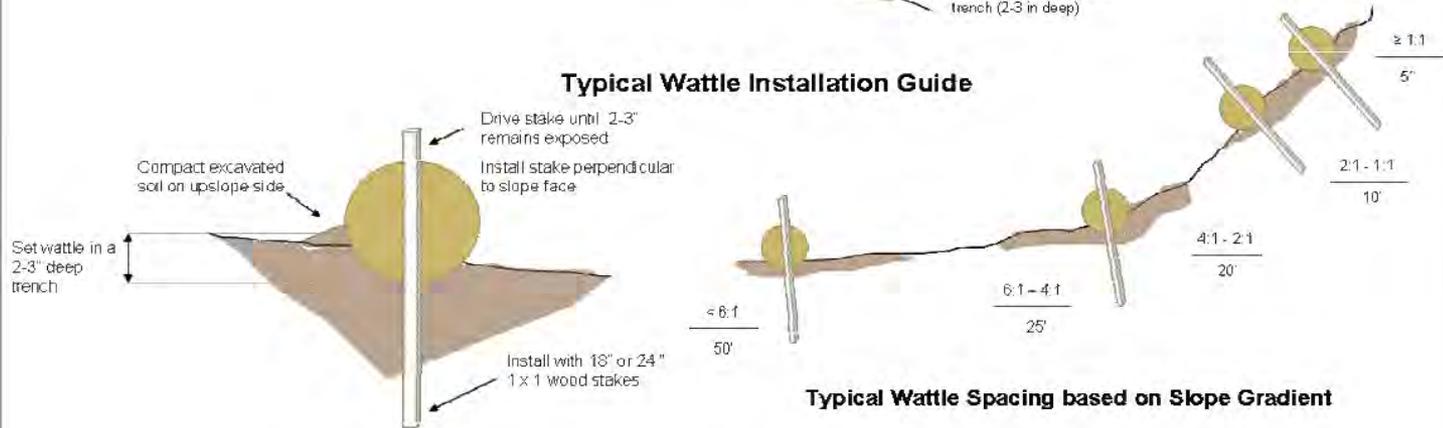
Wattles



Straw Wattle Installation Guide



Typical Wattle Installation Guide



Entrenchment Detail

Typical Wattle Spacing based on Slope Gradient

- BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
- PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
- SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 - 1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.

Compost filter sock

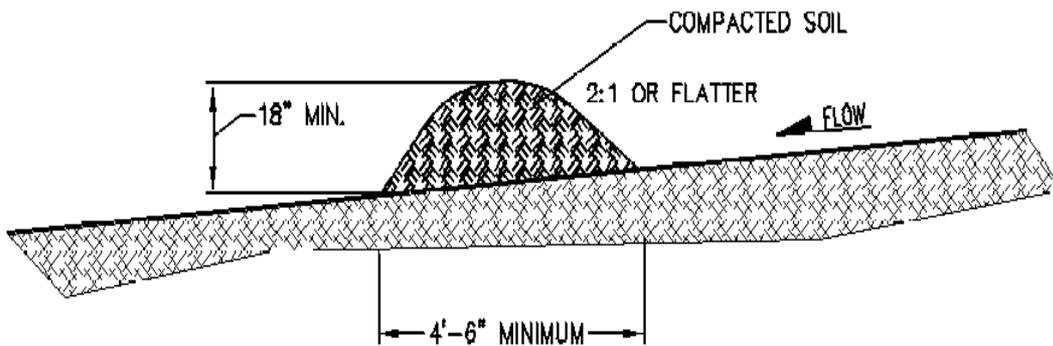


Soil Berm



Unconsolidated berm

Soil Berm



TEMPORARY BERM

NOTES:

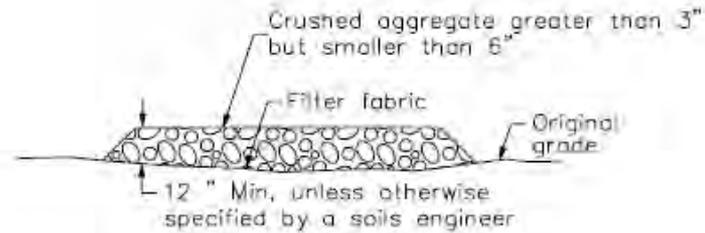
1. BERMS SHALL HAVE A HEIGHT OF 18 INCHES, SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM BASE WIDTH OF 4.5 FEET.
2. BERMS SHALL BE USED TO INTERCEPT AND DIVERT DRAINAGE TO A DESIGNATED OUTLET.
3. BERMS SHALL NOT BE USED WHERE DRAINAGE AREA EXCEEDS 10 ACRES.



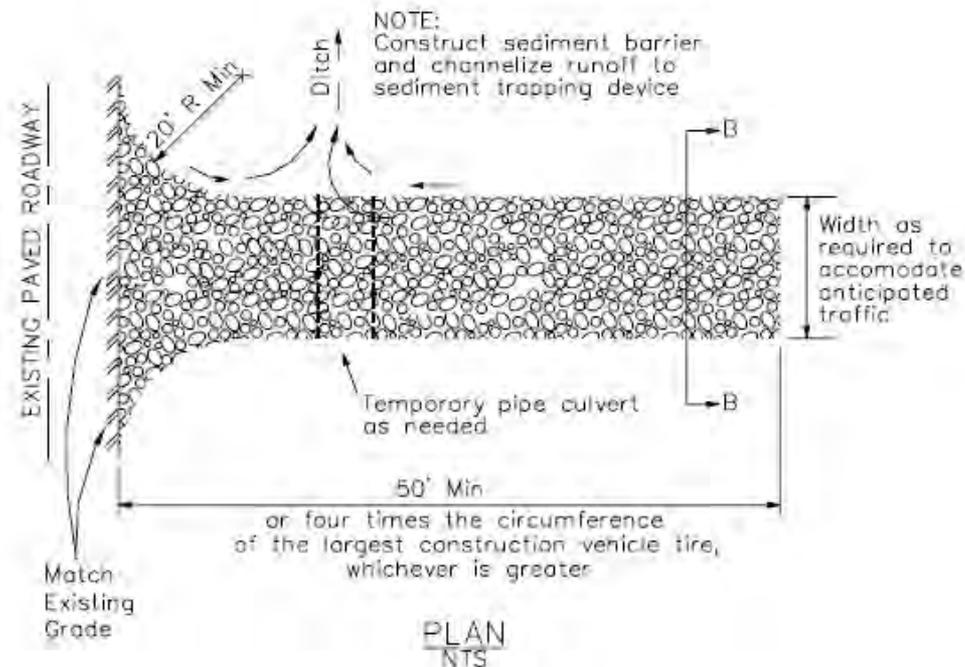
Establish Stabilized Construction Entrances



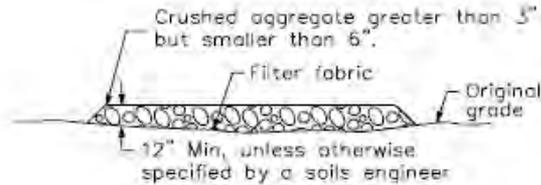
Stabilized Construction Entrance/Exit TC-1



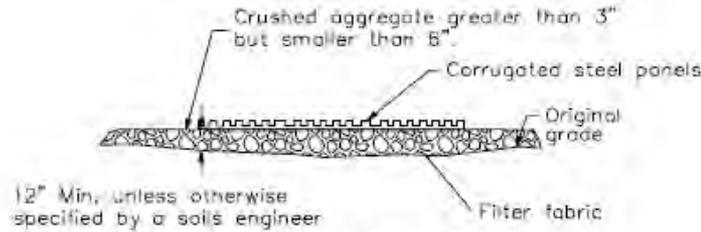
SECTION B-B
NTS



Stabilized Construction Entrance/Exit TC-1

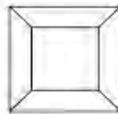


SECTION B-B
NTS

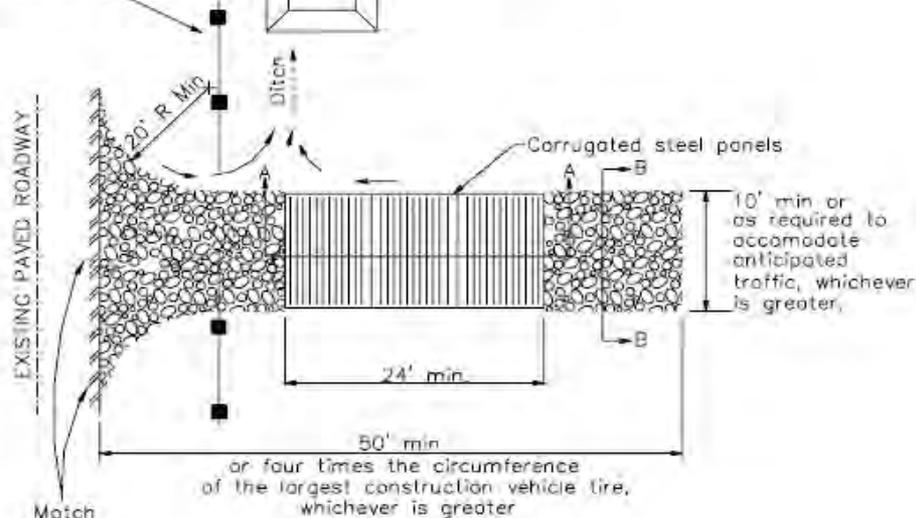


SECTION A-A
NOT TO SCALE

NOTE:
Construct sediment barrier and channelize runoff to sediment trapping device



Sediment trapping device



PLAN
NTS

Protect Storm Drain Inlets



Control Dewatering Practices



Once you Selected the BMPs for your site

- Must have a description of the basis for selecting each BMP in your SWPPP.
- Must have a detailed description of each BMP in your SWPPP.
- Must have instructions for properly installing each BMP in your SWPPP.
- Must have an inspection and maintenance plan for each BMP in your SWPPP.
- SWPPPs need to be site specific.
- The SWPPP should not detail BMPs you are not using.