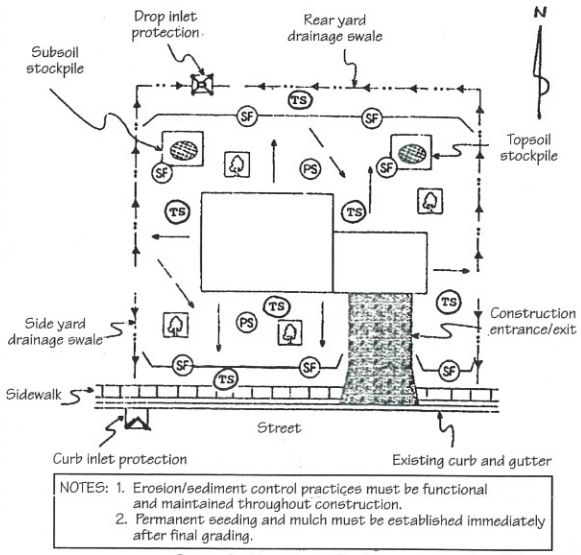
Erosion & Sediment Control for Construction Sites

Technical Note: Individual Lot Protection

Soil erosion is a major concern on the individual building lot or construction site. Building lot erosion results from the area being disturbed during construction activities and installation of utilities. Generally, the site is left unprotected against raindrop impact and subsequent erosion caused by water moving across the bare surface. Erosion control is of utmost importance to reduce soil movement. Sediment moving off the site can clog drainage inlets, as well as cause water quality problems in streams.

Erosion Control Management Plan



Sample Erosion/Sediment Control Practice Plan for a Typical One- or Two-Family Dwelling Under Construction

An erosion and sediment control management plan is the first step in protecting the soil resource on the building lot.

Adequate preparation and installation of vital sediment control structures in the appropriate sequence will provide for protection of the land during the construction phase.

Construction Sequence for Building Site Erosion Control Practices

- Select and mark off areas of trees, shrubs, and vegetation you wish to save with barrier fence.
- Install perimeter erosion and sediment control practices.
- Protect storm sewer inlets with filter fabric devices.
- Perform primary grading operations.
- Establish a temporary seeding on all bare areas and mulch with straw.
- Install stone or gravel for construction access and material delivery.
- Construct the building and install utilities.
- Grade site to final elevations.
- Immediately stabilize graded and bare areas with permanent seeding and mulch.
- Water both temporary and permanent seeded areas as needed until seeding has germinated and becomes established.
- Remove temporary sediment controls after final lawn is established.

Special Note: Inspect site and practices regularly for necessary modification, maintenance or repairs.

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Specifications for Individual Lot Protection

Nearly all soil erosion and sediment problems can be controlled by:

(1) Installing storm drain inlet protection on all inlets on the lot and in the street in front of the lot.
(2) Applying a temporary seeding to the entire lot immediately after back filling against the foundation. This needs to be done before building supplies are delivered to the site.

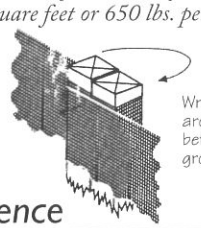
Temporary Seeding

A temporary seeding is an erosion control practice that is needed on all bare areas to provide protection against soil movement. It is not intended to be a permanent lawn seeding, but simply a temporary erosion control practice.

- *The seeding needs to be made within seven days on areas that are not planned to be disturbed for 21 days or more.*
- *Apply as early in the day as possible, but no later than at the end of the day, to benefit from moisture still in the surface layer.*
- *Protect with straw mulch at the rate of 90 lbs. per 1,000 square feet (2-3 bales) or 2 tons per acre.*
- *Apply 15 lbs. of 10-10-10 fertilizer per 1,000 square feet or 650 lbs. per acre.*

Temporary Seeding Species Selection

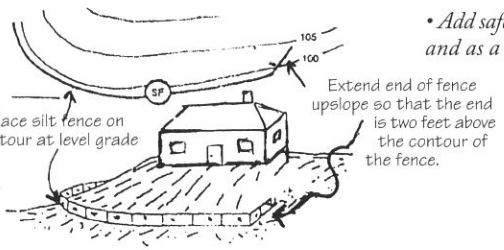
Seeding Dates	Species	Lb./1,000 ft.2	Per Ac.
March 1 - August 15	Oats	3	4 bushel
	Tall Fescue	1	40 lbs.
	Perennial Ryegrass	1	40 lbs.
	Perennial Ryegrass	1	40 lbs.
	Tall Fescue	1	40 lbs.
August 16 - November 1	Rye	3	2 bushel
	Tall Fescue	1	40 lbs.
	Perennial Ryegrass	1	40 lbs.
	Wheat	3	2 bushel
	Tall Fescue	1	40 lbs.
	Perennial Ryegrass	1	40 lbs.
	Perennial Ryegrass	1	40 lbs.
	Tall Fescue	1	40 lbs.
November 1 - February 28	*Use mulch only, sodding practices or dormant seeding.*		



Silt Fence

Silt fence is a sediment control structure made of geotextile fabric that restricts the movement of disturbed soil.

- *Install before upslope excavation/grading begins.*
- *Place along the contour of the land and at least five feet from the base of the slope.*
- *Cut a trench 6 inches deep and bury the bottom 8 inches of the fabric.*
- *Stretch the fence until tight, placing the support stakes on the downslope side.*
- *Backfill the trench and compact.*
- *When joining sections, overlap fabric and wrap around stakes.*
- *Extend ends upslope approximately two feet in elevation.*



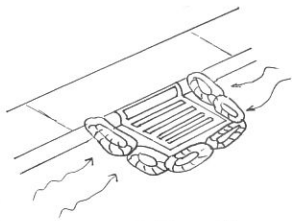
Typical Layout for Silt Fence

Storm Water Drain Inlet Protection

Protection is necessary around storm water inlets. This prevents sediment from entering inlets and clogging storm sewers and sediment being deposited in streams.

Surface inlets:

- *Construct a wood frame around inlet.*
- *Tack wire mesh around outside of frame.*
- *Use geotextile fabric. Fasten one end securely to a corner post. Stretch tightly around outside of frame and overlap to the next end post. Tack the fabric securely around the top of the frame and on corner posts.*



Curb inlets:

- *Fill geotextile bags about half full with two inch stone.*
- *Overlap bags onto curb and tightly place around the perimeter, about six inches away from the inlet.*
- *Layer if needed until height is equal to or higher than the elevation of the curb.*

Safety Note:

- *Add safety barriers to protect the structure and as a warning to vehicles.*

Permanent Seeding

- *A permanent seeding with straw mulch will be made or sod will be applied as quickly as possible after final grading.*
- *The seeding will be established as described in the "Rainwater and Land Development" handbook. This is available at the local soil and water conservation district office.*

Maintenance

Maintenance is needed to assure success of all erosion and sediment control practices.

- *Inspect weekly and after each rainstorm.*
- *Remove accumulated sediment.*
- *Repair damaged structures and reseed as needed.*

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