



Inspections Plus, Inc.

Engineer Stamp



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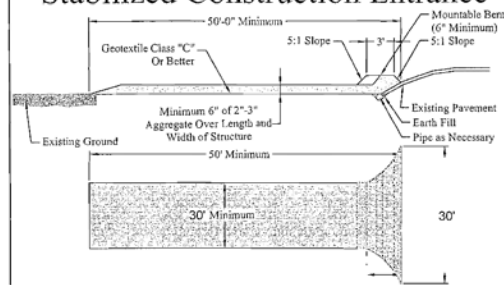
Inspections Plus Inc.  
Erosion Control Plan  
Standard Details

Project:

Ring Road  
Improvements

ECP 2

## Stabilized Construction Entrance



### Definition

A stabilized layer of aggregate that is underlain with Geotextile Class "C" (See Standards for Geotextiles). Stabilized entrances are located at any point where traffic enters or leaves a construction site.

### Purpose

The purpose of the stabilized construction entrance is to reduce tracking of sediment onto streets or public rights-of-way and provide a stable area for entrance or exit from the construction site.

### Conditions where the Practice Applies

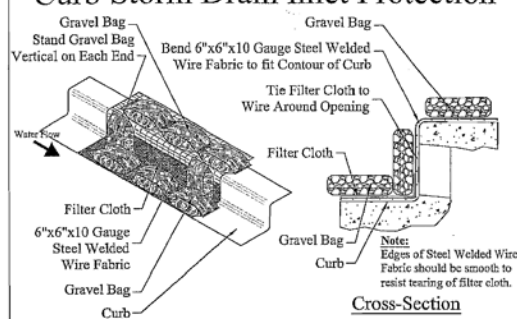
1. Stabilized construction entrances shall be located at points of construction ingress and egress.
2. For single family residences, the entrance should be located at the permanent driveway.
3. Stabilized construction entrances should not be used on existing pavement.

### Design Criteria

1. Length - Minimum of 50'-0"
2. Width - Minimum of 30'-0", should be flared at the existing road to provide a turning radius.
3. Geotextile Class "C" shall be placed over the existing ground prior to placing stone. The Plan approval authority may not require geotextile fabric for single family residence.
4. Stone-crushed aggregate 2"-3" (See Standards for Geotextile and Rock). Recycled concrete equivalent may be used also. The rock should be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - All the surface water flowing to or diverted toward construction entrances shall be piped under the entrance to maintain positive drainage. Pipe installed under the construction entrance shall be protected with a mountable berm. The pipe shall be sized according to the drainage, with the minimum diameter being 6".
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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## Curb Storm Drain Inlet Protection



### Cross-Section

### Definition

A filter constructed around a storm drain inlet.

### Purpose

Storm drain inlet protection is used to filter sediment laden runoff before it enters the storm drain system.

### Conditions where the Practice Applies

Storm drain inlet protection is a secondary sediment control device and is not to be used in place of a sediment trapping device unless approved by the appropriate approval authority.

### Design Criteria

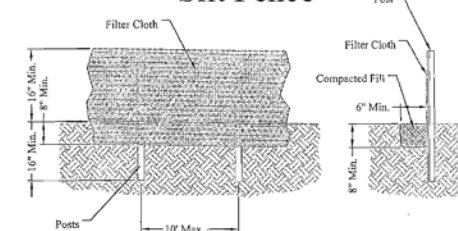
Storm drain inlet protection shall be used when the drainage area to an inlet is disturbed and the following conditions prevail:

1. It is not possible to temporarily divert the storm drain outfall into a sediment trapping device.
2. Waterright blocking of the inlets is not advisable.
3. Drainage area is less than 1/4 acre for curb or standard inlet protections and 1 acre for elevated or yard inlets. For yard inlets, the total for inlets in series must be 1 acre or less and the contributing drainage area must have slopes flatter than 5 percent. Maintenance requirements for storm drain inlet protection are intense, due to the susceptibility to clogging. When the structure does not drain completely within 24 hours after a storm event, it is clogged. When this occurs, accumulated sediment must be removed and the geotextile fabric or filtering device must be cleaned and replaced.

Several methods of covering inlets have been developed recently. It is important to use methods that have been proven effective. Follow local ordinances. Some communities do not allow covering of storm inlets due to the possibility of increased flooding. Several other important design considerations include traffic safety, elimination of seepage at the ends and underneath the filter cloth, and prevention of the filter entering the inlet.

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## Silt Fence



### Definition

A temporary barrier of Geotextile Class "F" used to intercept sediment laden runoff from small drainage areas.

### Purpose

The purpose of silt fence is to reduce runoff where velocity and allow the deposition of transported sediment to occur. Limits imposed by ultraviolet light on the stability of the fabric will dictate the maximum period that the silt fence may be used.

1. Silt fence provides a barrier that can collect and hold debris and soil, preventing the material from entering critical areas, streams, streets, etc.
2. Silt fence can be used where the installation of a dike would destroy sensitive areas; woods, wetlands, etc.

### Conditions where the Practice Applies

Silt Fence is limited to intercepting sheet flow runoff from limited distances according to slope. It provides filtering and velocity dissipation to promote gravity settling of sediment.

### Design Criteria

Wood or Steel Posts may be used in certain instances. Silt fence should be placed as close to the contour as possible. No section of silt fence should exceed a grade of 5 percent for a distance more than 50 feet. Where ends of the geotextile fabric come together, the ends shall be overlapped, folded, and stapled to prevent sediment bypass.

\* If wood post are to be used they must meet the following specifications:

1 1/2" x 1 1/2" minimum square posts, or 1 1/2" minimum diameter round post

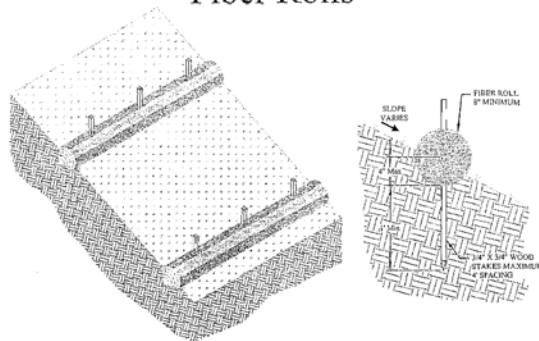
\* If metal posts are to be used they must be standard "T" or "U" post weighing not less than 1 lb. per linear foot.

The length of the flow contributing to silt fence shall conform to the following limitations.

Slope (%)	Slope Steepness	Silt Fence Length (ft) (Maximum)	Silt Fence Length (ft) (Minimum)
2	6:50-1	Unlimited	Unlimited
2-10	50:1-10:1	125	1,000
10-20	10:1-5:1	100	750
20-33	5:1-3:1	60	500
33-50	3:1-2:1	40	250
50 +	> 2:1	20	125

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## Fiber Rolls



### Definition

Tubes of straw or fiber used for erosion control, sediment control, and stormwater runoff control. Plastic netting or burlap contain the straw or fiber.

### Purpose

Fiber rolls allow water to pass through while decreasing runoff velocity, increasing infiltration rates, and trapping sediments. Also known as sediment logs or wattles, they can provide temporary or permanent controls and biodegrade with time.

### Conditions where the Practice Applies

- \* Along the face of slopes to reduce the slope length.
- \* At grade breaks where slopes transition from shallow to steep.
- \* In drainage swales.
- \* Along streambanks.
- \* On flat ground such as urban development projects.

### Limitations

- \* Applicable where surface flows do not exceed 1 cfs and on slopes of less than 3H:1V
- \* Fiber rolls are not to be used at the base of slopes in place of linear sediment barriers such as silt fences.
- \* Not recommended in concentrated flow areas.

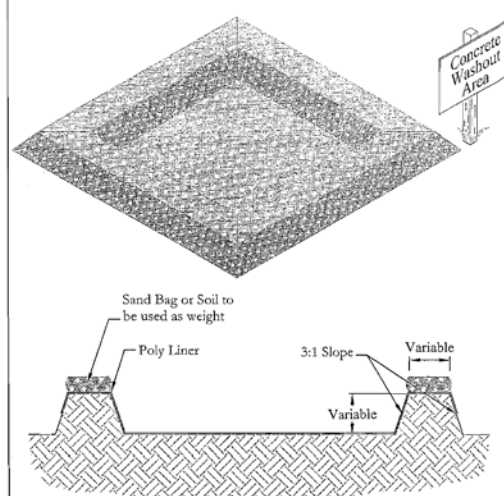
### Standards and Specifications

- \* Fiber rolls are either prefabricated rolls or rolled tubes of erosion control blankets 8-9" in diameter.
- \* Remove debris and larger stones from the sloped area before installing the fiber roll.
- \* Slope ends slightly down slope to prevent ponding in middle.
- \* Must be installed in shallow trenches.

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## Concrete Washout Area

For use in High Water Table Areas



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### Erosion Control Notes

1. All perimeter erosion and sediment control measures shall be installed prior to the execution of any grading work and maintained by the grading contractor for the duration of the grading project. Failure to install and maintain erosion control is a violation of State Law and subject to fine.
2. The appropriate erosion control device(s) shall be installed prior to the inception of any land disturbing activity and shall be properly maintained for construction activities.
3. All Erosion Control devices and their installation shall meet the standards prescribed in the current guidelines for storm water management for construction activities.
4. Sediment collected behind the sediment filters and silt fences shall be removed when sediment reaches one third the height of the barrier.
5. Sediment filters and silt fences shall be inspected and maintained no less than weekly or within 24 hours of a rainfall event of 0.5 inches or more. Maintenance shall include but not be limited to sediment removal, barrier repair and / or replacement.
6. Construction Site Entrance: The contractor shall construct as a minimum one stabilized construction entrance at the location shown on the plans. If additional ingress and egress to the construction site is required, the contractor shall coordinate with the construction manager the location of these additional stabilized construction entrances. Usage of non-stabilized for ingress and egress will not be permitted. The stabilized entrances shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way and paved driving lanes. This may require periodic top dressing with additional stone as conditions warrant. Repair of the entrances or cleaning of the right-of-way and paved driving lanes that have been soiled shall be performed by the contractor at his own expense satisfactory to the construction manager. When necessary, vehicle wheels and tires shall be cleaned to remove sediment prior to entering onto public right-of-way and public streets. When washing is required, it shall be done on an area stabilized with crushed stone.
7. The contractor shall at his own expense, periodically water the site to control dust.
8. Sedimentation and erosion control measures shall be removed following construction or upon permanent stabilization of the disturbed and graded areas, whichever occurs last.
9. All disturbed areas that are not to be paved shall be re-seeded unless noted otherwise.
10. The contractor shall keep the site clean at all times and control dust resulting from the earthwork operation. The contractor shall not track mud onto the public streets.