STRUCTURAL PRACTICES

CODE	PRACTICE	DESCRIPTION
Cd	CHECKDAM	A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION	Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION	A temporary constructed as part of a construction plan including access roads, subdivision roads, parking areas, and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL	A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION	An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE	A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE	A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING	A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION	Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE	Permanent structures installed to protect natural or artificial channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER	A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM	A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING	A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs or poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP	An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN	A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sr	TEMPORARY STREAM CROSSING	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORM DRAIN OUTLET PROTECTION	A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING	A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tp	TOPSOILING	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL	Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE MEASURES

CODE	PRACTICE	DESCRIPTION
Bf	BUFFER ZONE	A strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)	Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, sod, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)	A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS	Controlling surface and air movement of dust on construction sites, roadways and similar sites.
Mb	EROSION CONTROL MATTING AND BLANKETS	The installation of a protective covering (blanket) or soil stabilization mat on a prepared planting area of a steep slope, channel, or shoreline.
Pm	POLYACRYLAMIDE (PAM)	The land application of product containing anionic polyacrylamide (PAM) as temporary soil binding agents to reduce soil erosion.
Sb	STREAMBANK STABILIZATION (USING PERMANENT VEGETATION)	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Tb	TACKIFIERS AND BINDERS	Substance used to anchor straw or hay mulch by causing the organic material to bind together.

Co MAINTENANCE

- Periodically dress with 1.5"-3.5" stone.
- Maintain in a condition that will prevent tracking or flow of mud onto public rights-of way.
- Immediately remove mud and debris tracked or spilled onto roadways.

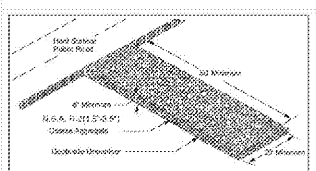


Figure 1. Crushed Stone Construction Exit Installation Requirements

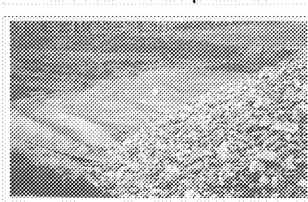
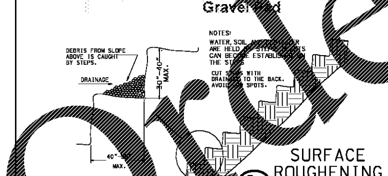


Figure 2. Geotextile Underliner Under Gravel Pad



SURFACE ROUGHENING (Su)
SCALE: NTS

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

MB

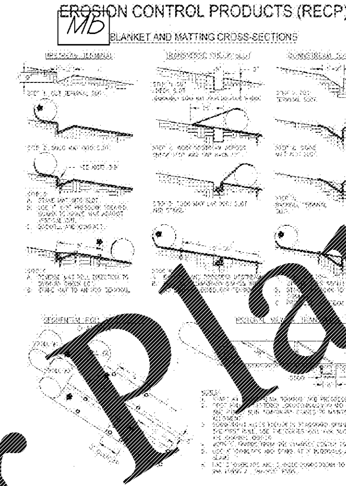
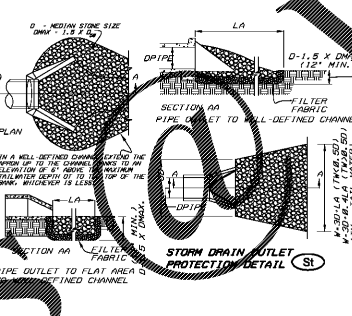


Figure 6-10.1 - Typical Installation Guidelines for Matting and Blankets



STORM DRAIN OUTLET PROTECTION DETAIL (St)

DUST CONTROL ON DISTURBED AREAS (Du)

Method and Materials:

A. TEMPORARY METHODS

Mulches. See standard Ds1- Disturbed Area Stabilization (with mulching only). Synthetic resins may be used instead of asphalt to bind mulch material. Refer to standard Tb- Tackifiers and Binders. Resins such as Curasol or Terratack should be used according to manufacturer's recommendation.
Vegetative Cover. See standard Ds2- Disturbed Area Stabilization (with temporary seeding).
Spray-on adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off of these areas. Refer to standard Tb- Tackifiers and Binders.
Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure which should be used before wind starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are example of equipment which may produce the desired effect. Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.
Barriers. Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.
Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. PERMANENT METHOD

Permanent Vegetation. See Standard Ds3-Disturbed Area Stabilization (with permanent vegetation). Existing trees and large shrubs may afford valuable protection if left in place.
Topsoiling. This entails covering the surface with less erosive soil material. See standard Tp-Topsoiling
Stone. Cover surface with crushed stone or coarse gravel. See standard Cr- Construction Road Stabilization.

Sd1 MAINTENANCE

- Inspect barriers at the end of each working day, or after each rain, and repair or clean as necessary.
- Remove sediment from barrier when one-half full.
- Dispose of sediment and stabilize it with vegetation.
- Replace filter fabric when deteriorated.
- Design life of a synthetic silt fence is approximately 6 months.
- Maintain until the project is vegetated or otherwise stabilized.
- Remove barriers and accumulated sediment and stabilize the exposed area when the project is stabilized.
- Approved silt fence fabrics are listed in the Georgia Department of Transportation Qualified Products List #36 (QPL-36).

Table 1. Criteria for Sediment Barrier Placement

Land Slope (percent)	Maximum Slope Length behind Fence (feet)
<2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20	15

Table 1. Criteria for Sediment Barrier Placement

Land Slope (percent)	Maximum Slope Length behind Fence (feet)
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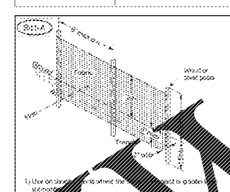


Figure 2. Type "A" Silt Fence (Sd1-A)

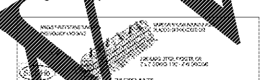


Figure 1. Straw Bale Barrier Installation Requirements

Sandbags (Sd1-S)

- Flow under or between bags should be minimal.
- Anchoring with steel rods may be required if height exceeds two bags.

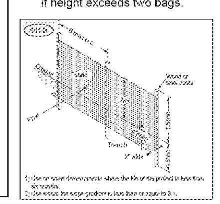


Figure 3. Type "B" Silt Fence (Sd1-b)

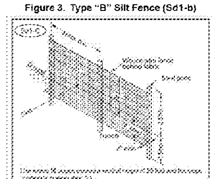


Figure 4. Type "C" (Sd1-C) Wire-Reinforced Silt Fence

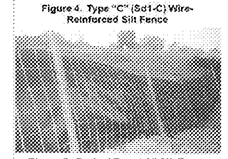
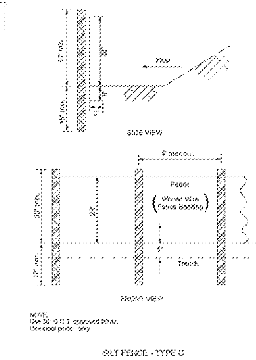
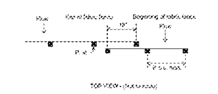


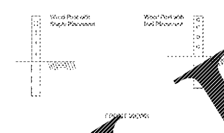
Figure 5. Typical Type "C" Silt Fence



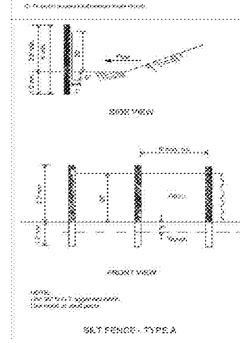
SILT FENCE - TYPE C



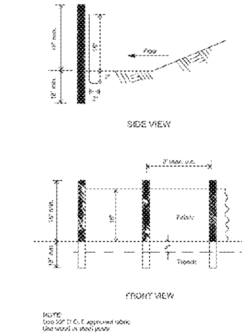
OVERLAP AT FABRIC ENDS



FASTENERS FOR SILT FENCES



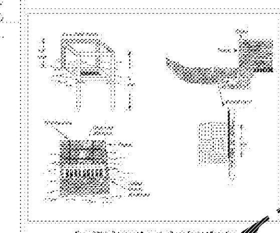
SILT FENCE - TYPE A

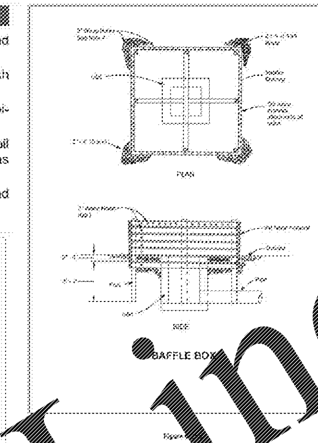


SILT FENCE - TYPE B

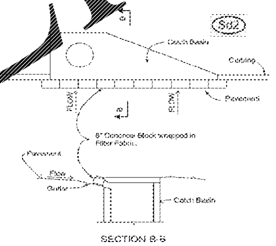
Sd2 MAINTENANCE

- Inspect, clear, and/or repair trap at the end of each working day.
- Do not remove inlet protection and wash sediment into the storm drain.
- Remove sediment from the trap and stabilize it with vegetation.
- Remove all materials and any unstable soil once the contributing drainage area has been adequately stabilized.
- Appropriately stabilize all bare areas around the inlet.





BAFFLE BOX



NOTE: Install filter after any asphalt pavement installation.

Figure 3. Curb Inlet Filter Installation Requirements (Sd2-P)

Ds2

MAINTENANCE

- Re-seed areas where an adequate stand of temporary vegetation fails to emerge or where a poor stand exists.

Table 1. Some Temporary Plant Species, Seeding Rates and Planting Dates (continued)

Table 2. Fertilizer Requirements for Temporary Vegetation

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	N Top Dressing Rate (lbs./acre)
Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 -- 30
Cool season grasses & legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50 -- --
Temporary cover crops seeded alone	First	10-10-10	500	30
Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 500 400	50-100 50-100 30

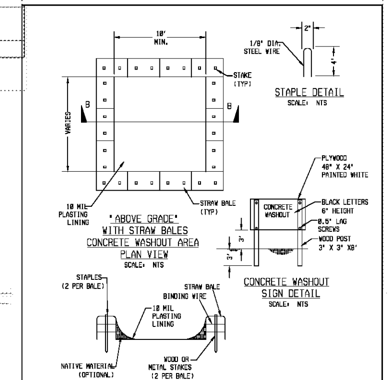
Ds1

Table 1. Mulching Application Requirements

Material	Rate	Depth
Straw or hay	-	2" to 4"
Wood waste, chips, sawdust, bark	-	2" to 3"
Cutback asphalt	1200 gal./acre, 1/4 gal./sq. yd. or See manufacturer's recommendations	---
Polyethylene film	Secure with soil, anchors, weights	---
Geotextiles, jute matting, netting, etc.	See manufacturer's recommendations	---

MAINTENANCE

- Add mulch as needed to maintain the suggested depth.
- If organic mulch is to be left and incorporated into the soil, apply 20-30 pounds of Nitrogen in addition to the fertilizer required for vegetation.



NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM STORM DRAINS.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
5. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARD, THE CONCRETE SHOULD BE BROKE UP, REMOVED, AND DISPOSED OF PER THE MUNICIPALITIES REGULATIONS. DISPOSE OF HARDENED CONCRETE ON A REGULAR BASIS.
6. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
7. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 4 INCHES FOR ABOVE GRADE FACILITIES AND 12 INCHES FLOW BELOW GRADE FACILITIES.
8. HAYBALES MAY SUBSTITUTE WOOD FRAME (IF ALLOWED BY LOCAL GOVERNMENT AGENCY).

CONCRETE WASH AREA DETAIL
SCALE: NTS

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GEORGIA REGISTERED No. 031249 PROFESSIONAL ENGINEER PAUL K. HAMMON

Project Name: WISE AVENUE PARK
Project Number:
Drawn By: Ck'd By:
Date: Scale: As shown

Rev:	Description:	Date:
1.	SUBMITTED TO COUNTY	11/16/17
2.	REVISED PER COUNTY COMMENTS	03/12/18

EROSION CONTROL DETAILS

D-01