



SWPPP Cut Sheet

Last Updated: 7-1-07

Section 1: Erosion and Sediment Control - Construction Activities

1.1 Filtrex SiltSox™ Sediment & Perimeter Control Technology

PURPOSE & DESCRIPTION

Filtrex SiltSox™ are a three-dimensional tubular sediment control and storm water runoff filtration device typically used for perimeter control of sediment and other soluble pollutants (such as phosphorus and petroleum hydrocarbons), on and around construction activities.

APPLICATION

Filtrex SiltSox™ are to be installed down slope of any disturbed area requiring erosion and sediment control and filtration of soluble pollutants from runoff. SiltSox™ are effective when installed perpendicular to sheet or low concentrated flow. Acceptable applications include:

- Site perimeters
- Above and below disturbed areas subject to sheet runoff, interfill and fill erosion
- Above and below exposed and erodible slopes
- Around areas drains or inlets located in a "sump"
- On compacted soils where trenching of silt fence is difficult or impossible
- Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may unnecessarily disturb established vegetation.
- On frozen ground where trenching of silt fence is impossible.
- On paved surfaces where trenching of silt fence is impossible.

INSTALLATION

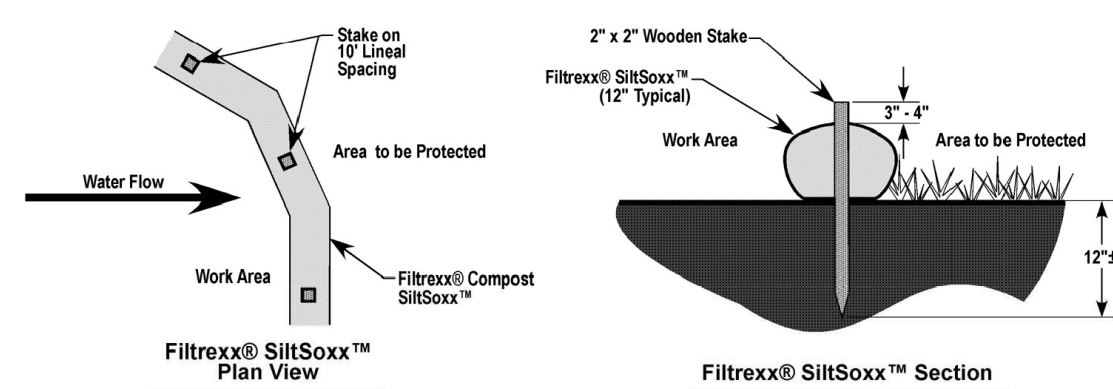
1. SiltSox™ used for perimeter control of sediment and soluble pollutants in storm runoff shall meet Filtrex SiltSox™ Material Specifications and use Certified Filtrex FilterMedia™.
2. Contractor is required to be Filtrex Certified™ as determined by Filtrex International, LLC (440-936-2607 or visit website at www.filtrex.com). Certification shall be considered current if appropriate identification is shown during time of bid or at time of application (current listing can be found at www.filtrex.com). Look for the Filtrex Certified™ Seal.
3. SiltSox™ will be placed at locations indicated on plans as directed by the Engineer.
4. SiltSox™ should be installed parallel to the base of the slope or other disturbed area. In extreme conditions (i.e., 2:1 slopes), a second SiltSox™ shall be constructed at the top of the slope.
5. Stakes shall be installed through the middle of the SiltSox™ on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes. In the event staking is not possible, i.e., when SiltSox™ are used on pavement, heavy concrete blocks shall be used behind the SiltSox™ to help stabilize during rainfall/runoff events.
6. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.
7. Loose compost may be backfilled along the upslope side of the SiltSox™, filling the seam between the soil surface and the device, improving filtration and sediment retention.
8. If the SiltSox™ is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seed requirements.
9. Filtrex SiltSox™ are not to be used in perennial, ephemeral, or intermittent streams.

INSPECTION AND MAINTENANCE

Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. SiltSox™ should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flow-through. If ponding becomes excessive, additional SiltSox™ may be required to reduce effective slope length or sediment removal may be necessary. SiltSox™ shall be inspected until area above has been permanently stabilized and construction activity has ceased.

1. The Contractor shall maintain the SiltSox™ in a functional condition at all times and it shall be routinely inspected.
2. If the SiltSox™ has been damaged, it shall be repaired, or replaced if beyond repair.
3. The Contractor shall remove sediment at the base of the upslope side of the SiltSox™ when accumulation has reached 1/2 of the effective height of the SiltSox™, or as directed by the Engineer. Alternatively, a new SiltSox™ can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil disturbance.
4. SiltSox™ shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.
5. The FilterMedia™ will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.
6. For long-term sediment and pollution control applications, SiltSox™ can be seeded at the time of installation to create a vegetative filtering system for prolonged and increased filtration of sediment and soluble pollutants (containing vegetative filter strip). The appropriate seed mix shall be determined by the Engineer.

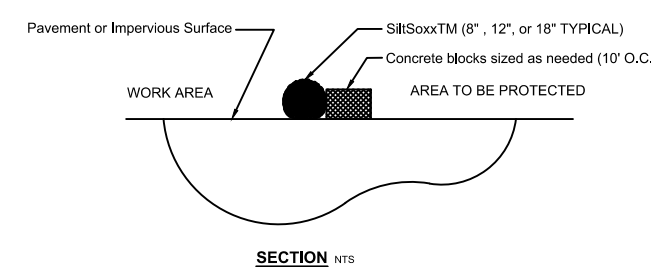
Filtrex® SiltSox™ Details



- Notes:
1. All material to meet Filtrex specifications.
 2. SiltSox™ composed of polypropylene fill to meet application requirements.
 3. SiltSox™ designed for minimum slopes. Greater slopes may require larger stakes per the Engineer.
 4. Compost material to be dispersed on site, as determined by Engineer.

Slope Percent	Maximum Slope Length Above SiltSox™ in Feet (meters)*				
	8 in (200 mm) SiltSox™	12 in (300 mm) SiltSox™	18 in (450 mm) SiltSox™	24 in (600mm) SiltSox™	32 in (800mm) SiltSox™
2 (or less)	600 (180)	750 (225)	1000 (300)	1300 (400)	1650 (500)
5	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)
10	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)
15	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)
20	100 (30)	125 (38)	140 (42)	260 (80)	400 (120)
25	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)
30	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)
35	60 (18)	75 (23)	80 (24)	115 (35)	150 (45)
40	60 (18)	75 (23)	80 (24)	100 (30)	125 (38)
45	40 (12)	50 (15)	60 (18)	80 (24)	100 (30)
50	40 (12)	50 (15)	55 (17)	65 (20)	75 (23)

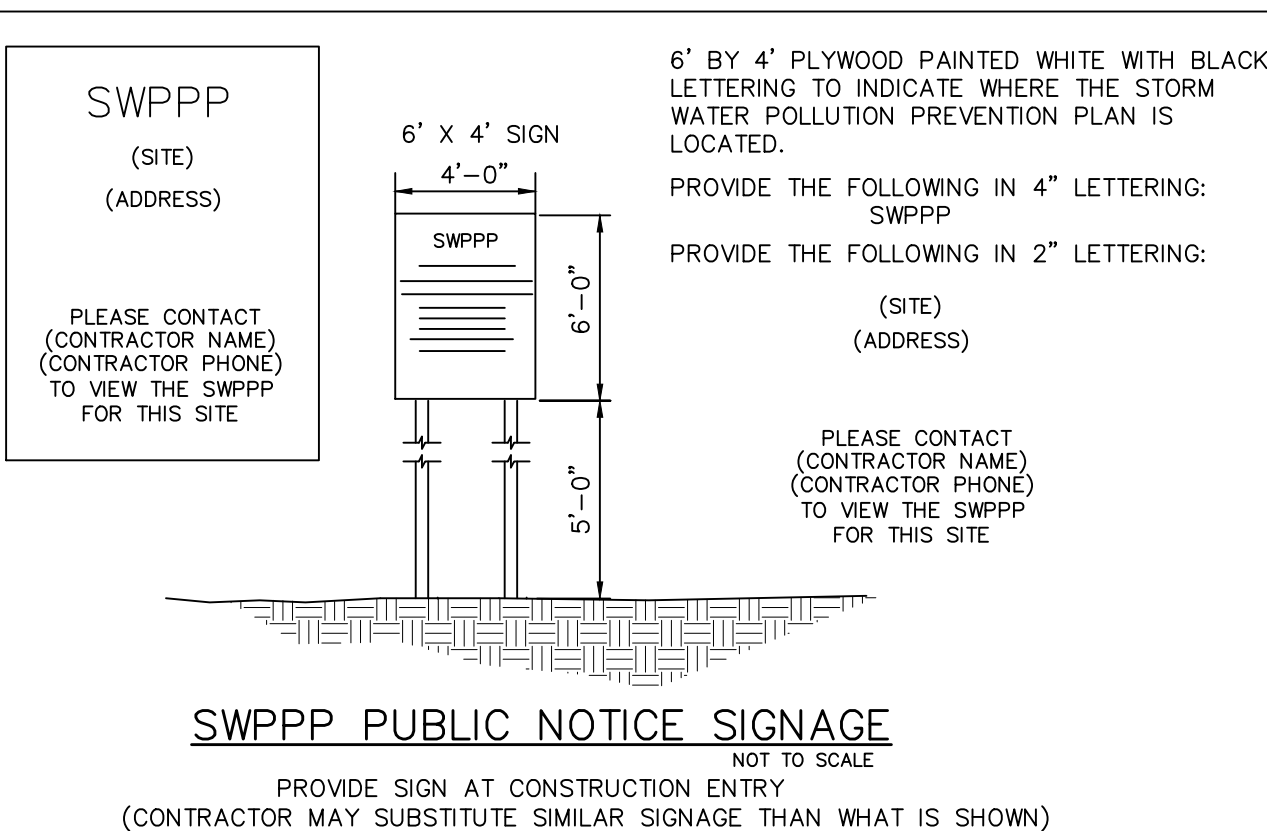
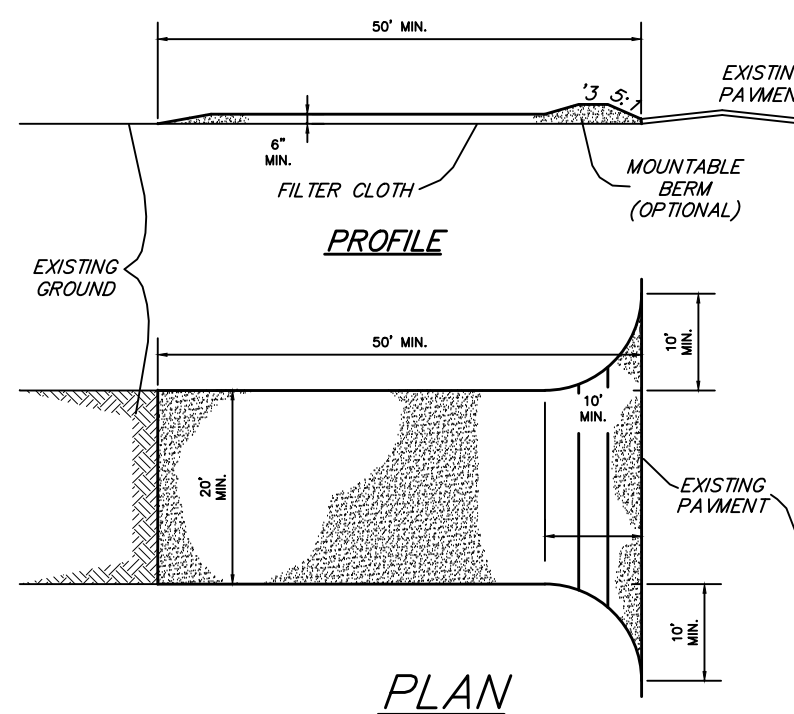
*Based on a failure point of 36 in (0.9 m) super silt fence (wire reinforced) at 1000 lb (303 m) of slope, watershed with equivalent to receiving length of sediment control device, 1 in (2.5 mm) rain event. **Effective height of SiltSox™ after installation and with constant head from runoff as determined by Ohio State University.



SiltSox™ for Sediment Control on Pavement

- Notes:
1. ALL MATERIAL TO MEET SPECIFICATIONS.
 2. FILTER MEDIA TO MEET APPLICATION REQUIREMENTS.
 3. FILTER MEDIA TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

STABILIZED CONSTRUCTION ENTRANCE



SWPPP PUBLIC NOTICE SIGNAGE
NOT TO SCALE
PROVIDE SIGN AT CONSTRUCTION ENTRY
(CONTRACTOR MAY SUBSTITUTE SIMILAR SIGNAGE THAN WHAT IS SHOWN)

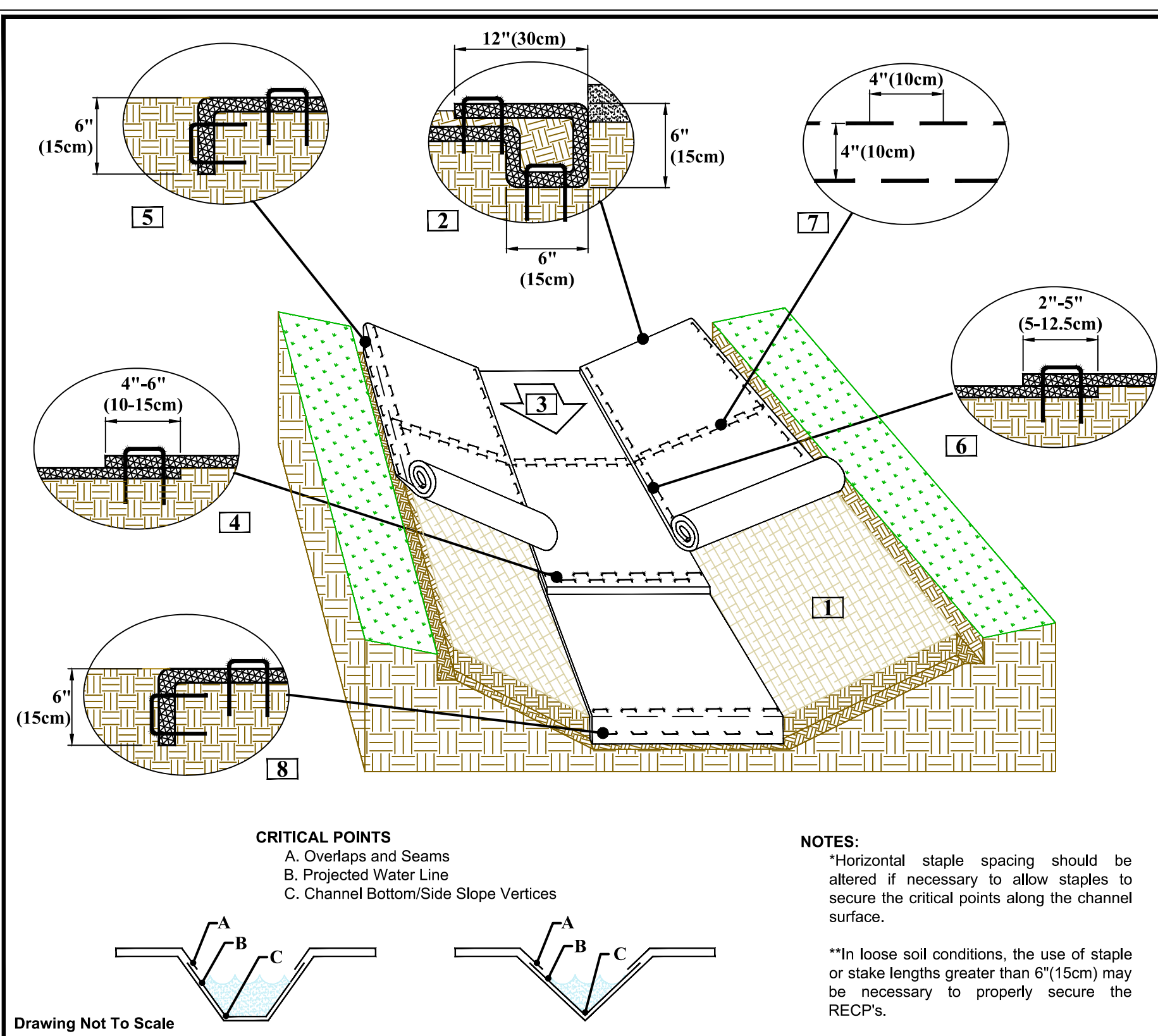
- CONSTRUCTION SPECIFICATIONS
1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - Twenty (20) foot minimum, but not less than the full width at points where ingress or egress occurs.
 5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
 6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 9. Periodic inspection and needed maintenance shall be provided after each rain.

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or parts.

STATE OF MISSOURI
LARRY S. WALKER
REGISTERED PROFESSIONAL ENGINEER
NO. 2007020343
EXPIRES 12/31/22

Larry S. Walker
Civil Engineer
2007020343
Copyright © 2022
Box Engineering Company, Inc.
Authority No. 000655
All Rights Reserved

REVISIONS
10-18-22 CITY COMMENTS
11-01-22 CITY COMMENTS
11-16-22 SNOOT DETAIL

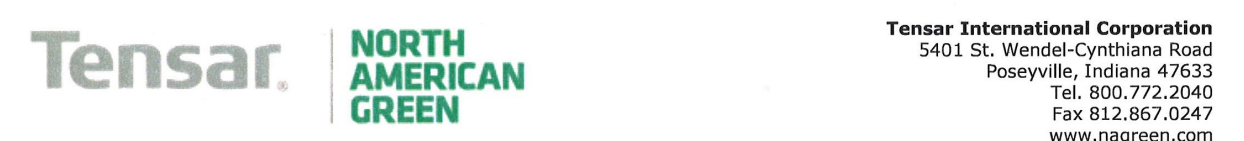


CHANNEL INSTALLATION DETAIL

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the RECPs in a 6'(15cm) deep X 6'(15cm) wide trench with approximately 12'(30cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes approximately 12'(30cm) apart in the bottom of the trench. Backfill and compact the trench after staking. Apply seed to the compacted soil and fold the remaining 12'(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12' apart across the width of the RECPs.
3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. Place consecutive RECPs end-over-end (Shingle style) with a 4'-6" overlap. Use a double row of staples staggered 4' apart and 4" on center to secure RECPs.
5. Full length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12'(30cm) apart in a 6'(15cm) deep X 6'(15cm) wide trench. Backfill and compact the trench after staking.
6. Adjacent RECPs must be overlapped approximately 2'-5" (5-12.5cm) (Depending on RECPs type) and stapled.
7. In high flow channel applications a staple check slot is recommended at 30 to 40 foot (9-12m) intervals. Use a double row of staples staggered 4'(10cm) apart and 4'(10cm) on center over entire width of the channel.
8. The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12' (30cm) apart in a 6'(15cm) deep X 6'(15cm) wide trench. Backfill and compact the trench after staking.

- CRITICAL POINTS
- A. Overlaps and Seams
 - B. Projected Water Line
 - C. Channel Bottom/Side Slope Vertices

- NOTES:
- *Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.
 - **In loose soil conditions, the use of staple or stake lengths greater than 6'(15cm) may be necessary to properly secure the RECPs.



Material and Performance Specification S75 Erosion Control Blanket

Description	Index Property	Test Method	Typical
The short-term single net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a lightweight, photodegradable polypropylene netting having an approximate 0.50 x 0.50 (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.	Thickness	ASTM D6525	0.37 in (9.4 mm)
	Resiliency	ECTC Guidelines	78.6%
	Water Absorbency	ASTM D1117	426%
	Mass/Unit Area	ASTM G475	11.97 oz/yd ² (40.7 g/m ²)
	Swell	ECTC Guidelines	15%
	Smolder Resistance	ECTC Guidelines	Yes
	Stiffness	ASTM D1388	6.31 oz-in
	Light Penetration	ECTC Guidelines	7.3%
	Tensile Strength - MD	ASTM D6818	130.8 lbs/ft (1.94 kN/m)
	Elongation - MD	ASTM D6818	24.4%
Tensile Strength - TD	ASTM D6818	85.2 lbs/ft (1.26 kN/m)	
Elongation - TD	ASTM D6818	26.8%	

Material Content	Parameters	Results
Matrix	100% Straw Fiber	0.5 lbs/yd ² (0.27 kg/m ²)
Netting	Top side only, lightweight photodegradable	1.5 lb/1000 ft ² (0.73 kg/100 m ²) approx. weight
Thread	degradable	

Standard Roll Sizes	Length	Weight
Width	6.67 ft (2.03 m)	8.0 ft (2.44 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)
Weight ± 10%	40 lbs (18.14 kg)	50 lbs (22.68 kg)

Area	80 yd ² (66.9 m ²)	100 yd ² (83.61 m ²)	192 yd ² (165.5 m ²)
Matrix	40 lbs	50 lbs	96 lbs
Netting	60 lbs	75 lbs	144 lbs
Thread	0.5 lbs	0.5 lbs	0.5 lbs

Test Method	Parameters	Results
ECTC 2 Rainfall	50 mm (2 in)/hr-30 min	SLR** = 8.80
	100mm (4 in)/hr-30 min	SLR** = 8.16
ECTC 3 Shear at 0.50 inch soil loss	150 mm (6 in)/hr-30 min	SLR** = 7.81
	300 mm (12 in)/hr-30 min	SLR** = 7.81

Test Method	Parameters	Results
ECTC 4 Germination Inclusion	Top Soil, Fescue, 21 day	228% improvement of biomass
	Incubation	1.80 lbs/ft ²

Proud Participant of:

Tensar International Corporation warrants that at the time of delivery the product furnished hereunder shall conform to the specification stated herein. Any other warranty including merchantability and fitness for a particular purpose, are hereby executed. If the product does not meet specifications on this page and Tensar is notified prior to installation, Tensar will replace the product at no cost to the customer. This product specification supersedes all prior specifications for the product described above and is not applicable to any products shipped prior to January 1, 2011.

Tensar NORTH AMERICAN GREEN
5401 St. Wendel - Cynthia Rd. POSEYVILLE, IN 47633
PH: 800-722-2040
www.nagreen.com

Disclaimer: The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.
Drawn on: 3-16-11

VEGETATION ESTABLISHMENT For Urban Development Sites APPENDIX A	
SEEDING RATES:	
PERMANENT:	
Tall Fescue	30 lbs./ac. Smooth
Brome	20 lbs./ac.
Combined	@ 15 lbs./ac. AND Brome @ 10 lbs./ac.
TEMPORARY:	
Wheat or Rye	150 lbs./ac. (3.5 lbs. per 1,000 s.f.)
Oats	120 lbs./ac. (2.75 lbs. per 1,000 s.f.)
SEEDING PERIODS:	
Fescue or Brome	March 1 to June 1
Wheat or Rye	August 1 to October 1
Oats	March 15 to September 15
MULCH RATES:	
100 lbs. per 1,000 sq. ft. (4,356 lbs. per ac.)	
FERTILIZER RATES:	
Nitrogen	30 lbs./ac.
Phosphate	30 lbs./ac.
Potassium	30 lbs./ac.
Lime	600 lbs./ac. ENM*
* ENM = effective neutralizing material as per State evaluation of quarried rock.	

Table 60-5 Soil Stabilization Schedule	
Soil Disturbance Activity or Condition	Required Stabilization Time
Soil disturbance has ceased in areas greater than 2,000 square feet.	14 days
After construction of dikes, swales, diversions, and other concentrated flow areas	5 days
When slopes are steeper than 3% horizontal to 1 vertical	7 days
When slopes are greater than 3% and longer than 150 feet.	14 days
Perimeter controls around soil stockpiles.	End of workday
Stabilization or covering of inactive stockpiles.	30 days
When land disturbance is completed, permanent soil stabilization must be installed.	30 days

ENGINEER SEAL DOES NOT APPLY TO FILTREX AND TENSAR DETAILS

Developer / Owner:
The Crossing Church
1145 Tom Ginnever Avenue
O'Fallon, MO 63366
(636) 497-6909

P+Z No. 22-005741
Approved: 07-07-22

City No. #

Page No. 7 of 14

Box Project # 97-9203X Issue Date: 09/19/2022