CITY OF URBANA

CLASS 1
EROSION CONTROL
PERMIT

MANUAL OF PRACTICE

Revised August 2016

CLASS 1 EROSION CONTROL PERMIT MANUAL OF PRACTICE

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Introduction:

History: For many years, urban storm water runoff has been a source of great concern because of its potential to carry harmful pollutants into nearby watercourses. Some pollutants in urban storm water can damage lakes and streams, harm aquatic life and disrupt sensitive wetland habitats. As a result of these concerns, the 1987 amendments to the Clean Water Act required the United States Environmental Protection Agency (U.S. EPA) to address storm water runoff in two phases.

• Phase I of the National Pollution Discharge Elimination Systems (NPDES) Storm Water Program began in 1990. Phase I of the NPDES Storm Water Program applies to large and medium municipal separate storm sewer systems (MS4s) and eleven industrial categories including construction sites disturbing five or more acres of land.

• Phase II of the NPDES Storm Water Program began March 10, 2003 and applies to small MS4s and construction sites disturbing between 1 acre and five acres of land.

The Illinois Environmental Protection Agency (Illinois EPA) is in charge of implementing both phases of the NPDES Storm Water Program.

Since Urbana is defined as a small MS4, the City is required to comply with Phase II of the NPDES Storm Water Program and they now hold a Phase II Permit that covers stormwater discharge from sewers under City jurisdiction. Among other things, this permit requires the City to control construction site runoff.

City of Urbana Requirements: The City of Urbana (CITY) requires a Class 1 Erosion Control permit for all construction projects that result in more than 1 acre (43,560 sq-ft) of land disturbance. Land disturbance area is defined by CITY ordinance as: *any land change that may result in soil erosion from wind, water and/or ice and the movement of sediments into or upon water, lands or rights-of-way within the CITY, including but not*

limited to building demolition, clearing and grubbing, grading, excavating, transporting and filling of land.

Class I Erosion Control permits are issued and inspected by the City of Urbana Engineering Division located in the Public Works Department at 706 South Glover Avenue in Urbana. For more information, consult the CITY website:

http://urbanaillinois.us/Erosion_Control

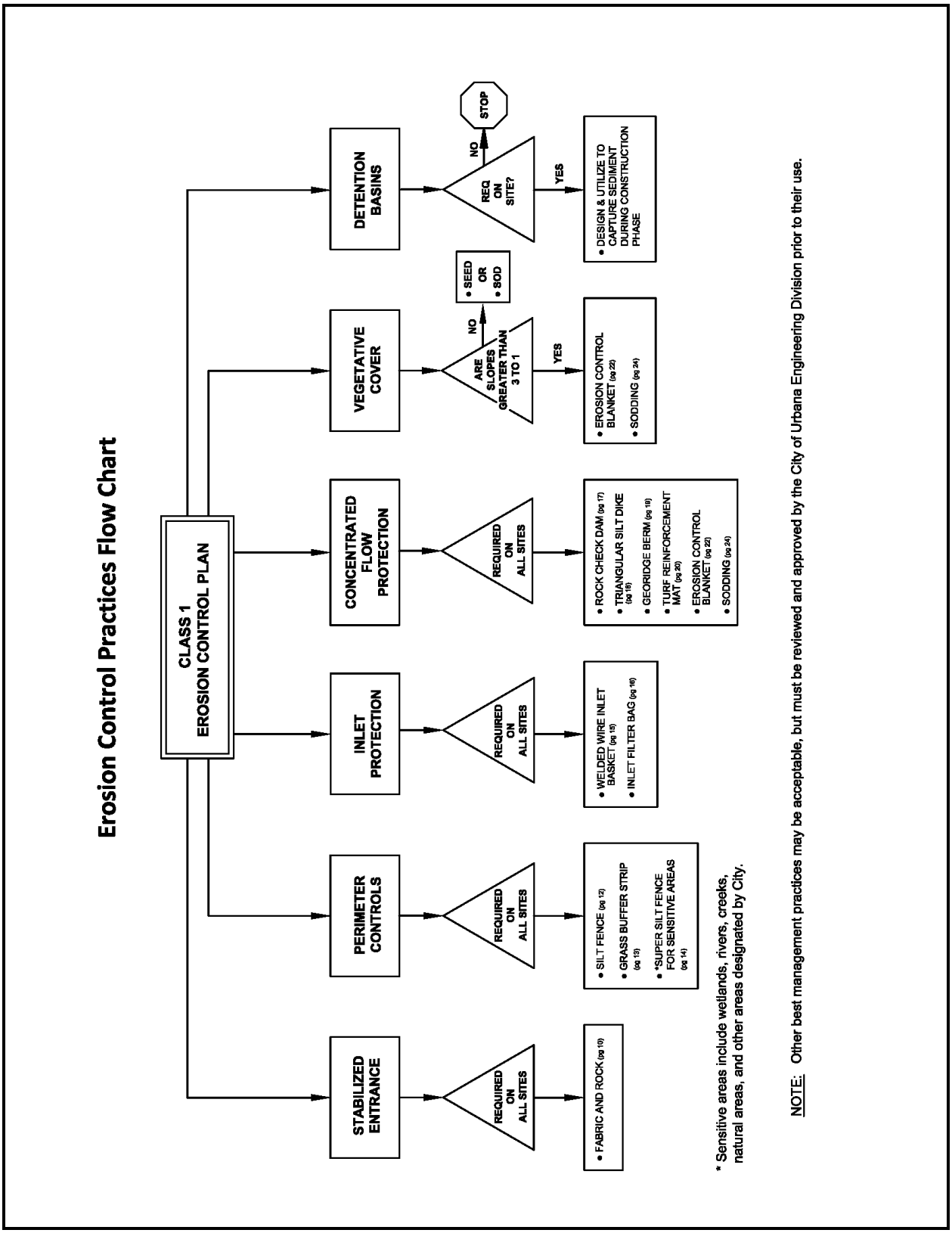
Illinois EPA Requirements: Phase II of the NPDES Storm Water program requires construction sites disturbing 1 or more acres of land to obtain an ILR-10 Permit. This requirement is **in addition to** the Class 1 Erosion Control Permit required by Urbana city ordinance. Sample forms required for the ILR-10 process include the ILR-10 Notice of Intent (NOI), the ILR-10 Incidence of Non Compliance (ION), the ILR-10 Notice of Termination (NOT) and the Storm Water Pollution Prevention Plan (SWPPP). More information about these forms and Illinois EPA requirements for construction sites exceeding 1 acre of disturbed land can be found at the following website:

http://www.epa.illinois.gov/topics/forms/water-permits/storm-water/construction/index

Urbana Erosion Control Details: Details for approved erosion and sediment control best management practices (BMPs) are included in this manual. Other BMPs may be acceptable, but must be reviewed and approved by the City of Urbana Engineering Division prior to their use.

Inspections: Once an erosion control permit is issued, the CITY will make periodic inspections to ensure that all required erosion control measures are in place and remain effective. The CITY inspector will confirm that all construction related dirt and debris stays on site, out of CITY storm sewers and off of CITY sidewalks and roadways. A sample inspection form is included on page 8 of this manual.

Erosion Control Practices Flow Chart



Typical Erosion Control Plan Elements

CLASS 1 PERMIT - TYPICAL EROSION CONTROL PLAN ELEMENTS

① SUPER SEDIMENT FENCE TO PROTECT SENSITIVE AREAS.

② STABILIZED CONSTRUCTION ENTRANCES.

③ STABILIZE PARKING AND LAY DOWN AREA WITH GRAVEL PAD AND SILT FENCE AROUND DOWNHILL SIDES.

④ BUILD DETENTION PONDS AND SEDIMENT TRAPS

⑤ DIVERT UPSTREAM SITE WATER AROUND SITE WITH DIVERSION BERMS

⑥ PROTECT STOCKPILE WITH TEMPORARY VEGETATION AND SILT FENCE.

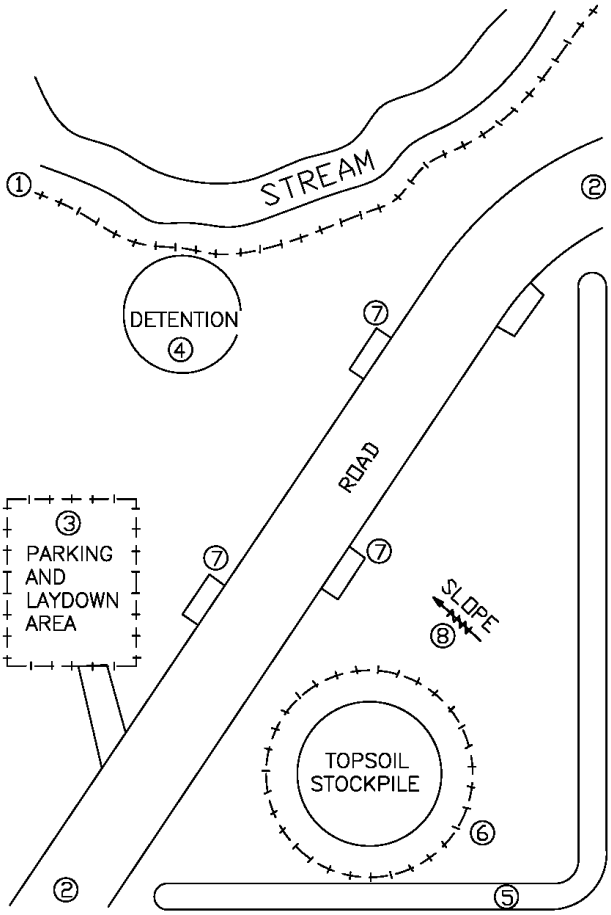
⑦ INLET PROTECTION ONCE STORM SEWERS ARE IN PLACE.

⑧ STABILIZE SOIL WITHIN 14 DAYS OF ROUGH GRADING WITH SOD, SEED BLANKETS, HYDRO MULCH, ETC.

⑨ SLOPES GREATER THAN 3:1 MUST RECEIVE EROSION CONTROL PROTECTION OF BLANKET OR SOD WITHIN 7 DAYS OF BEING PLACED OR STRIPPED.

LEGEND

+-+-+ SILT FENCE OR OTHER LIKE CONTROL



Urbana Class 1 Erosion Control Permit Form Page 1

City of Urbana
Engineering Division
706 South Glover Avenue
Urbana, IL 61802
Phone (217) 384-2385
Fax (217) 384-2400

Date Received: _____ Permit Number: _____
Approved By & Date: _____ Permit Fee: _____
Inspected By & Date: _____ Check #: _____
ILR-10 Permit Verified: ☐ (**ILR-10 verification required for approval)**

Permit Fees - $500 for first 5 acres and $20 per additional acre
Make check payable to City of Urbana

CLASS I LAND DISTURBANCE PERMIT FORM

(Land disturbances that require an IEPA ILR-10 permit for one (1) acre or more land disturbance)

1. APPLICANT (Please check if applicant is the landowner or designated agent)

Name ☐ Landowner ☐ Designated Agent E-mail Address
_____
Address
_____
City State Zip Code Area Code/Phone Number

2. ENGINEER

Name License # State License Expiration Date
_____
Address
_____
City State Zip Code Area Code/Phone Number

3. LOCATION

Subdivision Name
_____
Subdivision Lot Number Tax ID Number Street Address

4. PROPOSED EARTH CHANGE

Project Type: ☐ Residential ☐Commercial ☐ Industrial Disturbed Area (Acres): _____

ILR-10 Permit Number: _____ (COPY MUST BE ATTACHED)

5. ON-SITE RESPONSIBLE CONTACT

Name E-mail Address
_____
Address
_____
City State Zip Code Area Code/Phone Number

6. SIGNATURES

I (we) affirm that the above information is accurate and that I (we) will conduct the above described earth change in accordance with Part 91 Soil Erosion and Sedimentation Control, of the Natural Resource and Environmental Protection Act, 1994 PA No 451 as amended, applicable local ordinances, and the documents accompanying this application.

I (we) request the City's Erosion Control Inspector to inspect and approve work completed in accordance with the approved Erosion and Sediment Control Plan.

_____ _____ _____
Landowner's Signature Print Name Date

_____ _____ _____
Designated Agent's Signature Print Name Date

7. Soil Erosion and Sedimentation Control Plan

Complete the following checklist and include the drawings, specifications, supporting documentation, and application.

8. EROSION AND SEDIMENT CONTROL PLAN CHECKLIST

		Sheet /Page Number
I.	ILR-10 Permit	
	A. Copy of ILR 10 Permit Application attached ☐	_____
	B. Copy of Storm Water Pollution Prevention Plan (SWPPP) attached ☐	_____
II.	Site Drawings	
	A. Sealed by licensed professional engineer ☐	_____
	B. Property lines shown and labeled ☐	_____
	C. Scale, legend and north arrow shown & labeled ☐	_____
	D. Delineation of any wetlands, natural or artificial water storage detention areas and drainage ditches on the site ☐	_____
	E. Delineation of any storm drainage systems including flow direction arrows indicating surface flow ☐	_____
	F. Delineation of any areas of preserved vegetation or trees ☐	_____
	G. Delineation of any grading or land disturbance activity including specific limits of disturbance and stockpile locations ☐	_____
	H. Stabilized construction entrance shown and labeled. Length, width, materials and construction match City specified details ☐	_____
	I. Perimeter erosion control shown and labeled. Materials and construction match City specified details. Options include: ☐	_____
	• Silt fence • Grass buffer strip • Super sediment fence for sensitive areas • Wattles	
	J. Inlet protection shown and labeled. Materials and installation match City specified details. Options include: ☐	_____
	• Inlet baskets • Welded wire inlet protectors • Other product approved by CITY	
	K. Concentrated flow provisions shown and labeled. Materials and construction match City specified details. Options include: ☐	_____
	• Rock Check Dam • Triangular Silt Dike or Geo-Ridge Berm • Erosion Control Blanket or Turf Reinforcement Mat • Sodding	
	L. Vegetative restoration provisions shown and labeled ☐	_____

			Sheet/Page Number
	M. Sediment traps or basins shown and labeled	☐	_____
	N. Plan note stating: "Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days on all perimeter dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1); embankments of ponds, basins, and traps; and within fourteen (14) days on all other disturbed or graded areas. The requirements of this section do not apply to those areas which are shown on the plan and are currently being used for material storage or for those areas on which actual construction activities are currently being performed."	☐	_____
	O. Contractor certification statement verifying that they have read and the understand the project's SWPPP.	☐	_____
III.	Concrete washout facilities		
	A. Location of concrete washout facility shown on plan	☐	_____
	B. Construction of concrete washout facility matches City specified details	☐	_____

Sample Erosion Control Inspection Form Page 1

SWPPP INSPECTION REPORT
City of Urbana, Illinois

PROJECT NAME: _____

EROSION CONTROL PERMIT NO. _____

INSPECTION TYPE: *Routine Weekly* *Post Rain*

DATE: _____ **FOR WEEK ENDING:** _____

WEATHER: _____

DATE AND TIME OF LAST STORM EVENT: _____

INSPECTOR INFORMATION: _____ _____
(PRINT NAME) **(TITLE)**

_____
(SIGNATURE)

NO.	DESCRIPTION	YES	NO	N/A
1.	Are all erosion control devices in-place and functioning in accordance with the SWPPP and erosion control site map?			
2.	Are all sediment traps, barriers, and basins clean and functioning properly?			
3.	Are sediment controls in place at the site perimeter and storm drain inlets?			
4.	Are all discharge points free of any noticeable pollutants?			
5.	Are construction accesses stabilized adequately?			
6.	Is sediment, debris, or mud being cleaned from public roads where they intersect with site access roads?			
7.	Are all exposed slopes protected from erosion?			
8.	Are all temporary stockpiles or construction materials located in approved areas (as shown on map) and protected from erosion?			
9.	Are dust control measures being appropriately implemented?			
10.	Are all materials and equipment properly covered?			
11.	Are all material (paint, fuel, oil, etc.) handling and storage areas clean and free of spills and leaks?			
12.	Are all equipment storage and maintenance areas clean and free of spills and leaks?			
13.	Is concrete washing conducted on-site? If so, are wash-out areas defined and maintained properly?			
14.	Are there areas where construction activities have temporarily or permanently ended?			
15.	Is construction debris or other litter being blown off-site?			
16.	Are off-site material storage areas being managed properly?			
17.	Is the Notice of Permit Coverage posted in a location where the public can view it without entering the site?			
18.	Other:			

If any answer is "No", describe needed corrections on reverse side. Indicate the location of needed corrections and date corrections are made on attached site map.

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Sample Erosion Control Inspection Form Page 2

Development Name:_____

Development Address:

File No._____

Inspection Date:_____

Time:_____

NOTES

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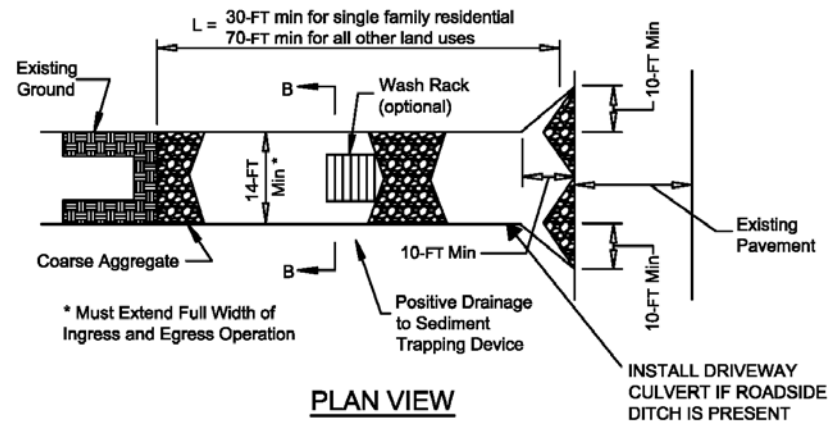
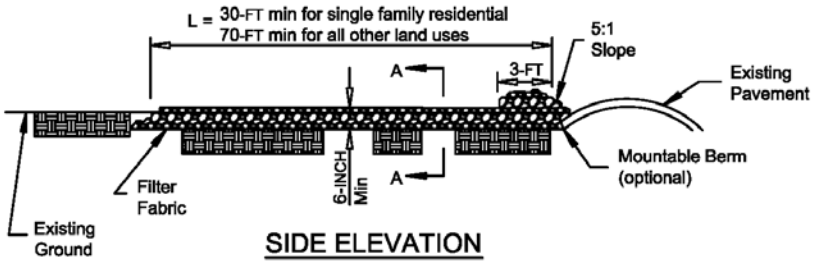
PAGE 2 OF 2

Stabilized Construction Entrance Details: Fabric and Rock Page 1



PLAN VIEW



SIDE ELEVATION

NOTES:

1. Filter fabric shall be placed over the entire area prior to placing of stone.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradations: CA-1, CA-2, CA-3 or CA-4.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. Wash rack or tire wash facilities shall be required if stabilized construction entrance is creating a mud tracking issue.
5. If wash racks are used they shall be installed according to the manufacturer's specifications.
6. Other approved products such as Tracking Pads (www.trackingpads.com) may be considered for use.

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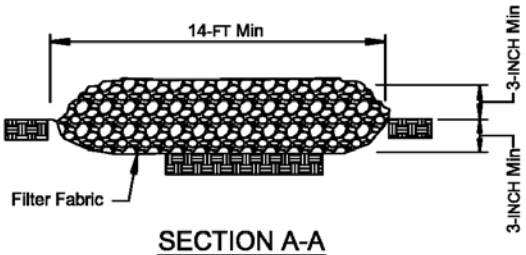
PUBLIC WORKS DEPARTMENT

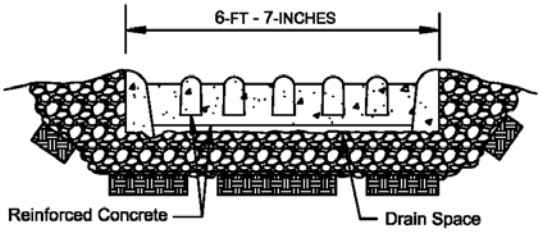
Stabilized Construction Entrance
Page 1 of 2

DATE: 2/26/16 REV: 1 DRAWING NOT TO SCALE

Stabilized Construction Entrance Details: Fabric and Rock Page 2



SECTION A-A



SECTION B-B

MAINTENANCE:

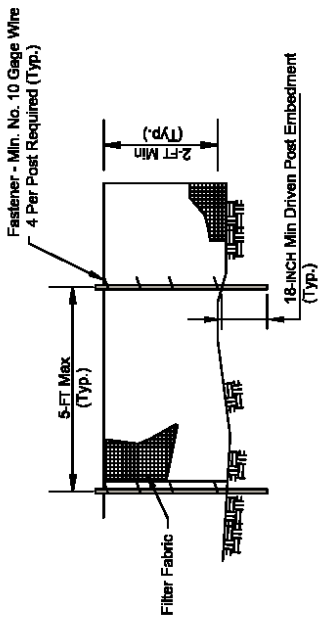
1. Inspect on a daily basis or as necessary
2. Immediately remove mud or sediment tracked onto road
3. Add or remove aggregate material as necessary to maintain a viable construction entrance
4. Silt or construction fencng may be required at entrance apron to ensure that construction entrance is used

CITY OF URBANA
PUBLIC WORKS DEPARTMENT

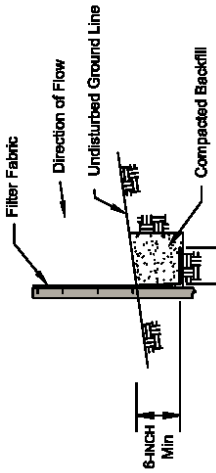
Stabilized Construction Entrance
Page 2 of 2

DATE: 2/26/16 REV: 1 DRAWING NOT TO SCALE

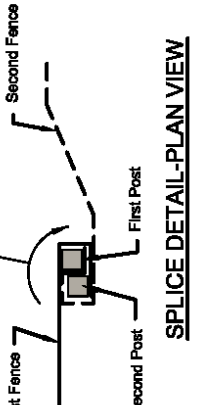
Perimeter Control Details: Silt Fence



ELEVATION



FABRIC ANCHOR DETAIL



SPLICE DETAIL-PLAN VIEW

NOTES:

1. Temporary silt fence shall be installed prior to any grading work in the area to be protected. Fence shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 1080.02 Geotextile Fabric.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3 square inches.
4. When splices are necessary make splice at post according to splice detail. Place the end post of the second fence inside the end post of the first fence. Rotate both posts together at least 180 degrees to create a tight seal with the fabric material. Cut the fabric near the bottom of the posts to accommodate the 6 inch flap. Then drive both posts and bury the flap. Compact backfill well.

MAINTENANCE:

1. Inspect on a daily basis or as necessary.
2. Repair any damage immediately.
3. Remove sediment when the level of deposition reaches one-half the height of the silt fence.
4. Replace geotextile fabric that has deteriorated due to ultraviolet breakdown.
5. Remove silt fence once it has served its useful purpose, but not before the upslope area has been permanently stabilized.

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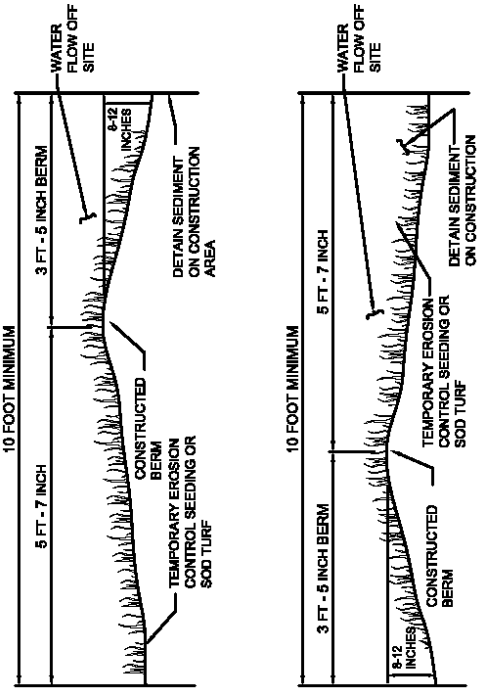
Silt Fence

DATE: 2/26/16 REV: 1 DRAWING NOT TO SCALE

Perimeter Control Details: Grass Buffer Strip



DESCRIPTION:
Grass buffers are wide strips of undisturbed vegetation consisting of grass or other erosion resistant plants surrounding the disturbed site. They provide infiltration, intercept sediment and other pollutants, and reduce stormwater flow and velocity. They can also act as a screen for visual pollution and reduce construction noise.

PLANNING CONSIDERATIONS:
Grass strips should be fenced off prior to construction. Avoid storing debris from clearing and grubbing, and other construction waste material in these strips during construction.

DESIGN CRITERIA:
The minimum length of strip must be at least as long as the contributing runoff area. The minimum width should conform to the table below.

MINIMUM WIDTHS OF FILTER STRIPS

SLOPE OF LAND %	WIDTH OF FILTER STRIP FOR GRASSED AREAS (FT)
0	10
2	12
4	14
6	16
8	18
10	20
15	25

INSPECTION AND MAINTENANCE:
1. Maintain moist soil conditions immediately after seeding and/or sod installation.
2. Maintain moist soil conditions throughout vegetation establishment period.
3. Remove sediment deposits after each storm event.

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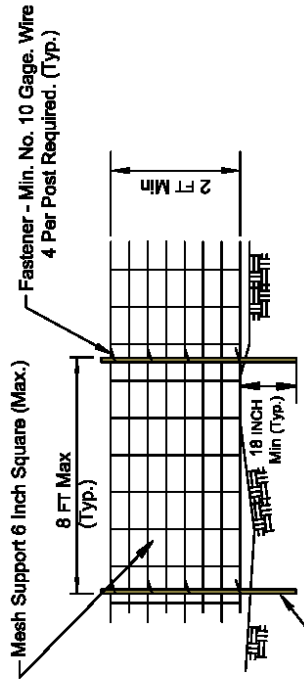
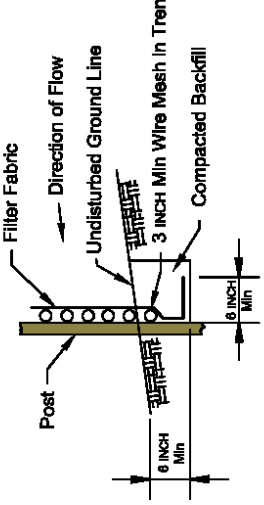
Grass Buffer Strip

DATE: 2/26/16 REV: 1 DRAWING NOT TO SCALE

Perimeter Control Details: Super Silt Fence



ELEVATION



FABRIC ANCHOR DETAIL

INSTALLATION:

1. Silt fence shall be a minimum of 24 inches above the original ground surface and shall not exceed 36 inches above ground surface.
2. Excavate a trench approximately 6 inches wide and 6 inches deep on the upslope side of the proposed location of the fence. A slicing machine may be used in lieu of trenching.
3. Posts shall be a maximum of 8 feet apart. Fabric shall be fastened securely to the upslope side of posts using minimum one-inch long, heavy-duty wire staples or tie wires. Eight inches of the fabric should be extended into the trench. The fabric shall not be stapled to existing trees.
4. The 6-inch by 6-inch trench shall be backfilled and the soil compacted over the textile unless a slicing machine is used.

MAINTENANCE:

1. Inspect on a daily basis or as necessary.
2. Repair any damage immediately.
3. Remove sediment when it reaches 6 inches high on the fence.
4. Replace any geotextile that has deteriorated due to ultraviolet breakdown.
5. Remove silt fence when it has served its useful purpose, but not before the upslope area has been permanently stabilized.

NOTES:

1. Wires of mesh support shall be minimum gage no. 12.
2. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. Fence shall be maintained throughout the construction period and be removed in conjunction with the final grading and site stabilization.
3. Filter fabric shall meet the requirements of material specification 1080.2 Geotextile Fabric.
4. Fence posts shall be either a standard steel post or a wood post with a minimum cross-sectional area of 3.0 square inches.

CITY OF URBANA
PUBLIC WORKS DEPARTMENT

Super Silt Fence
(Silt Fence with Wire Support)

DATE: 2/26/16 REV: 1 DRAWING NOT TO SCALE

Inlet Protection Details: Welded Wire Inlet Basket

WELDED WIRE MONOFILAMENT PROTECTORS

MAINTENANCE:

1. **Inspect on a daily basis.**
2. **Repair any damage immediately.**
3. **Remove sediment when it reaches 6 inches high on the basket.**
4. **Replace geotextile fabric that has deteriorated due to ultraviolet breakdown.**
5. **Remove inlet protector when it has served its useful purpose, but not before the upslope area has been permanently stabilized.**

SPECIFICATIONS

Description: Weld Wire monofilament protector shall consist of three (3) parts:

1. 36 inch wide geotextile fabric shall be WinFab 2098. Geotextile fabric is composed of monofilament polypropylene yarns, which are woven into a stable network such that the yarns retain their relative position.

2. 6 inch x 6 inch welded wire mesh geotextile composite, shall be 30 inches tall, formed and secured into a 42 inch minimum diameter circle.

3. Fastening rings shall be constructed of wire conforming to ASTM A-641, A-809, A-370, and A-938.

Assembly
Geotextile shall be wrapped a minimum of one inch over the top member of the 6 inch x 6 inch welded wire mesh and secured with fastening rings at six inches on center. Geotextile shall be secured to the sides of the welded wire mesh with fastening rings at a spacing of one per square foot. The fastening rings shall penetrate both layers of geotextile and securely close around a steel member. The bottom 2 inches +/- of fabric shall be left unsecured to allow for entrenchment.

Geotextile

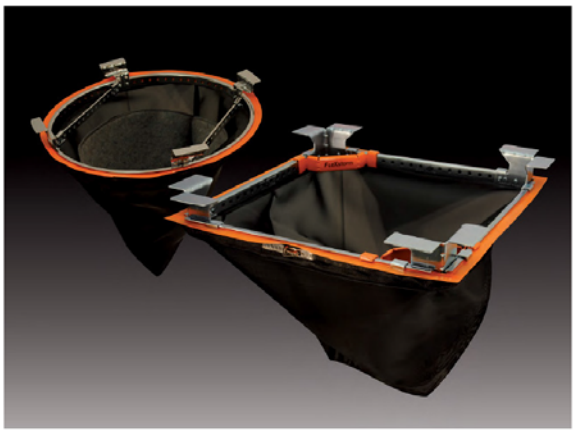
Mechanical/ Physical Properties	Description/Minimum Average Roll Values	Test Method
Structure	Woven Monofilament	
Polymer	Polypropylene	
U.V. Resistance (@ 500hrs)	80% Strength Retained	ASTM D4355
Permittivity	.05 Sec-1	ASTM D4491
Flow Rate	75 gpm/ft²	ASTM D4491
Grab Tensile Strength	350 / 250 lbs	ASTM D4632
AOS (U.S. Sieve)	40	ASTM D4751
Mullen Burst Strength	450 psi	ASTM D3786
Color	Black	

Welded Wire Mesh
6 inch x 6 inch welded wire mesh shall be formed of 10ga. steel conforming to ASTM A-185.

Installation
Install welded wire protector in a 6 inch deep trench overlapping the ends a minimum of 3 inches. Use wire or zip ties to secure the overlap, then compact soil back into trench over the flap. Follow all manufacturer instructions.

SILT FENCE FABRICATORS, LLC 771 International Dr. FRANKLIN, IN 46131
PHONE: (317) 736-5293 info@siltfencefabricators.com Rev. 11/30/2011

Inlet Protection Details: Inlet Filter Bag



DESCRIPTION:

The purpose of an inlet filter bag is to collect silt and sediment from surface storm water runoff at drainage structures entering the storm sewer system. The inlet filter bag system is comprised of a corrosion resistant steel frame and a replaceable geotextile sediment bag attached to the frame with a stainless steel locking band. The sediment bag hangs suspended from the rigid inlet frame at a distance below the grate which allows full water flow into the drainage structure if the bag is completely filled with sediment. Inlet filter bags are made to fit a number of standard inlet shapes and sizes.

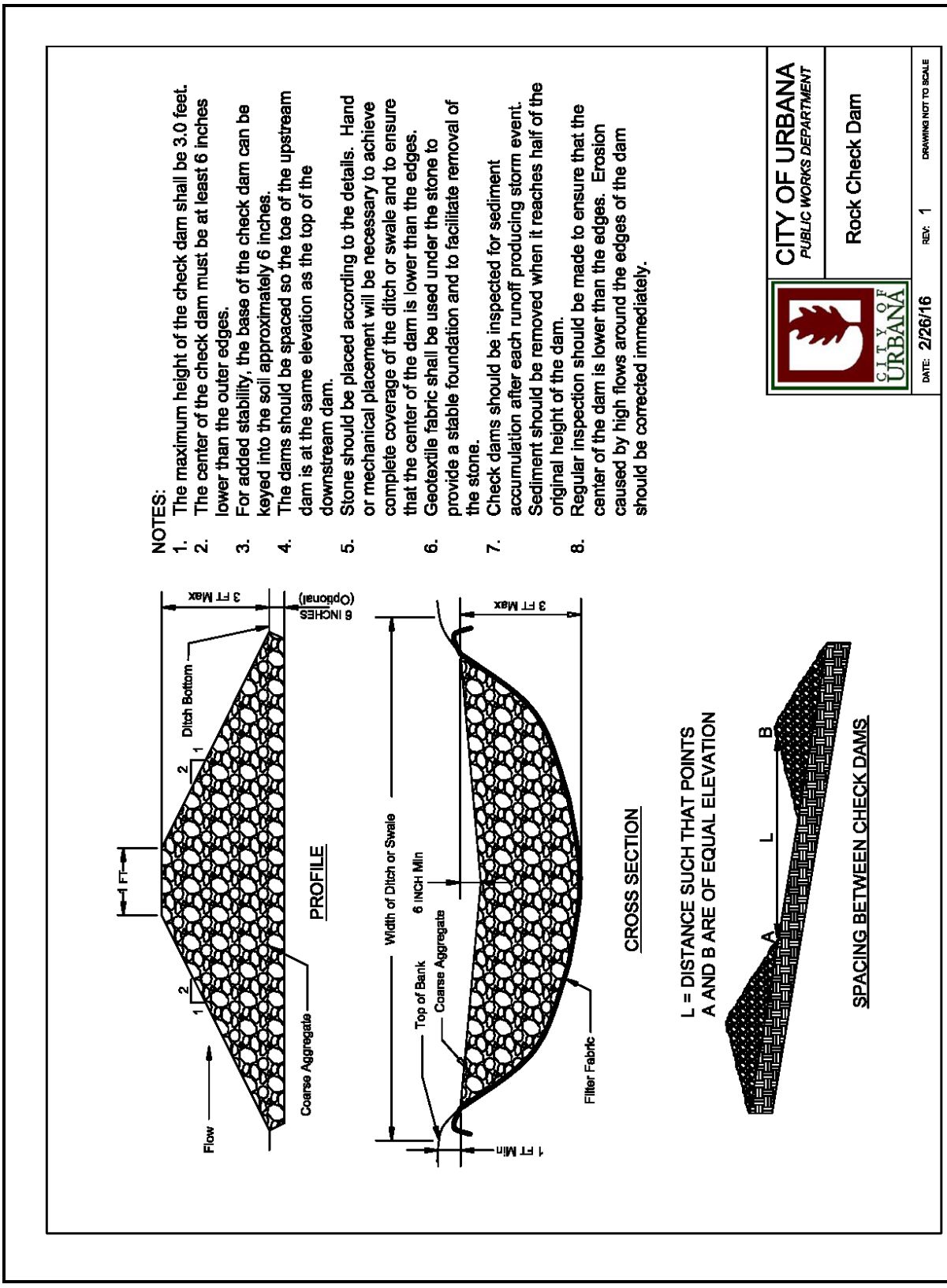
INSTALLATION:

All inlet filter protectors shall be installed in accordance with manufacturer's instructions.

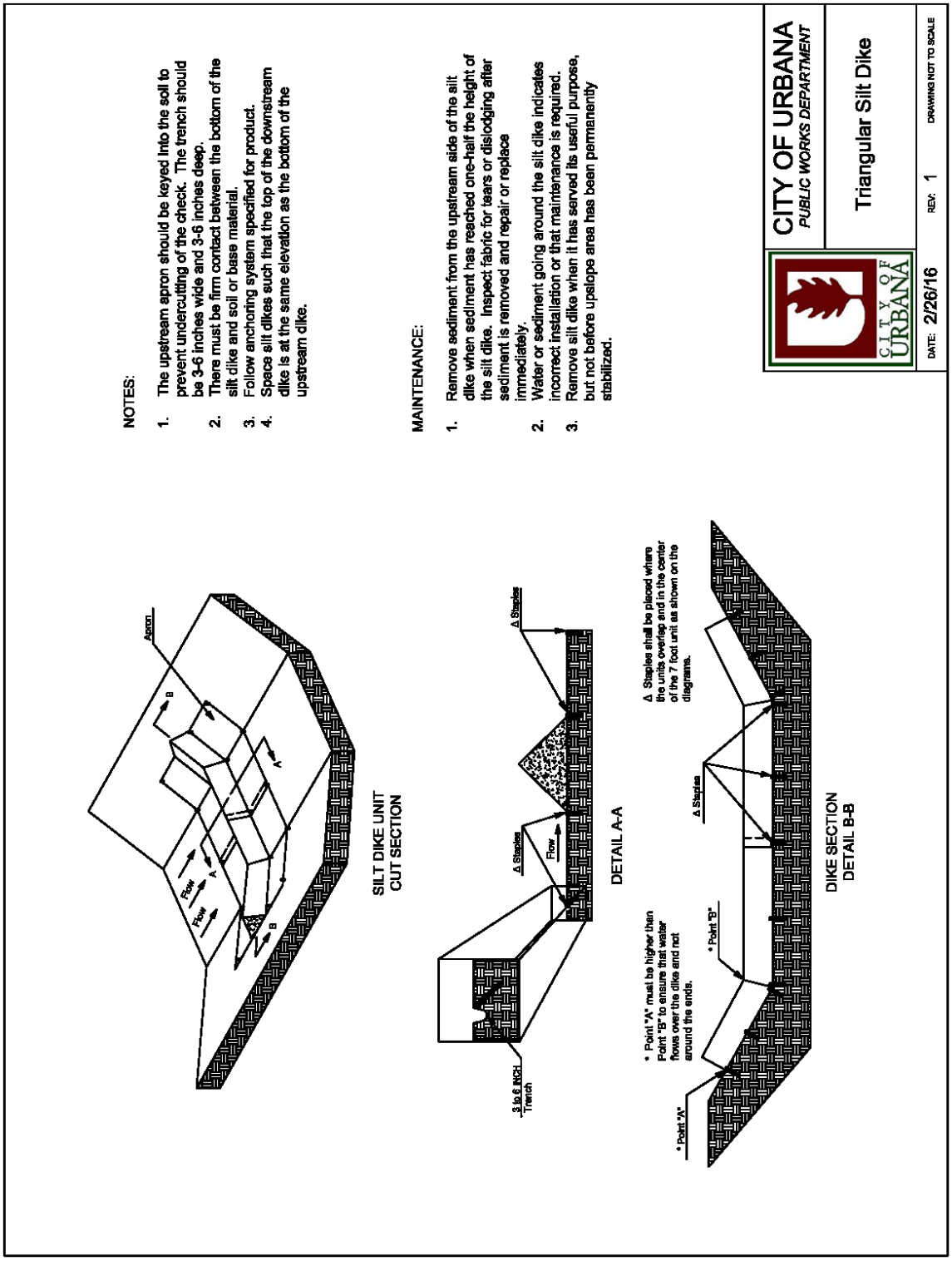
MAINTENANCE:

1. Inspect weekly and following each ½ inch or more rain event.
2. Replace the bag if the geotextile is torn or punctured to ½ inch diameter or greater on the lower half of the bag.
3. Empty the filter bag when it is more than half filled with sediment and debris or as directed by the Engineer. Dispose of the sediment or debris as directed by the Engineer.
4. Remove inlet protection when it has served its useful purpose, but not before upslope area has been permanently stabilized.

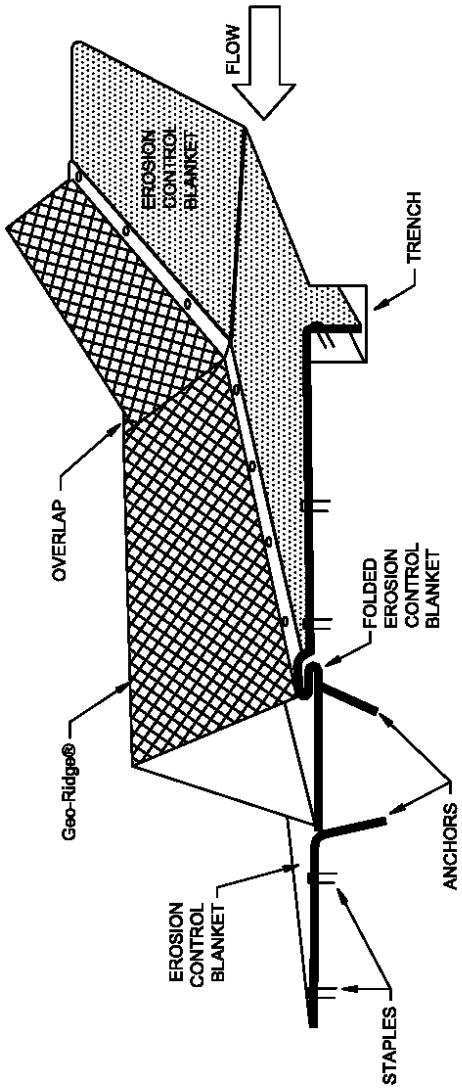
Concentrated Flow Control Details: Rock Check Dam



Concentrated Flow Control Details: Triangular Silt Dike



Concentrated Flow Control Details: Geo-Ridge® Berms



INSTALLATION:

1. Prepare the channel by forming the shape and grade of the channel and compacting the subgrade.
2. Apply soil additives such as fertilizer and lime, and seed as required.
3. Install erosion control blankets.
   a. For full channel lining, follow manufacturer's recommended Installation procedures. Leave a 4 inch flap of erosion control blanket to fold over the upstream leg of the Geo-Ridge®.
   b. For erosion control blankets under the Geo-Ridge® only, use a coconut blanket as a minimum grade of erosion control blanket. Install a 3.3 foot wide erosion control blanket perpendicular to the direction of flow, centered under the Geo-Ridge®. Allow 4 inches of slack across erosion control blanket width for folding over the upstream foot of the Geo-Ridge® berm. Provide a 6 X 6 inch trench at the upstream edge of the erosion control blanket. Staple the erosion control blanket onto the bottom of the trench with minimum 6 inch staples at 20 inch spacing on center. Re-compact the soil into the trench.
4. Place Geo-Ridge® berms perpendicular to the direction of flow. Overlap panels by a minimum of 2 inches. Cut a slot in the crest of the overlapping berm to allow contact between the foot of the berm and the soil.
5. Secure berms with 10 inch pins and 1.5 inch washers through the folded erosion control blanket and the foot of the unit. The pin spacing across the width of the panel should be 19.7 inches on center for the upstream leg and 39.6 inches on center for the downstream leg.

INSPECTION AND MAINTENANCE:

1. Inspect all Geo-Ridge® after each rain event of 1/2 inch or greater. Repair any deficiencies or damage immediately.
2. Remove accumulated sediment or debris as directed by the engineer. If the Geo-Ridge® is damaged or inadvertently moved during sediment removal, re-establish continuity immediately.

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Geo-Ridge® Berms

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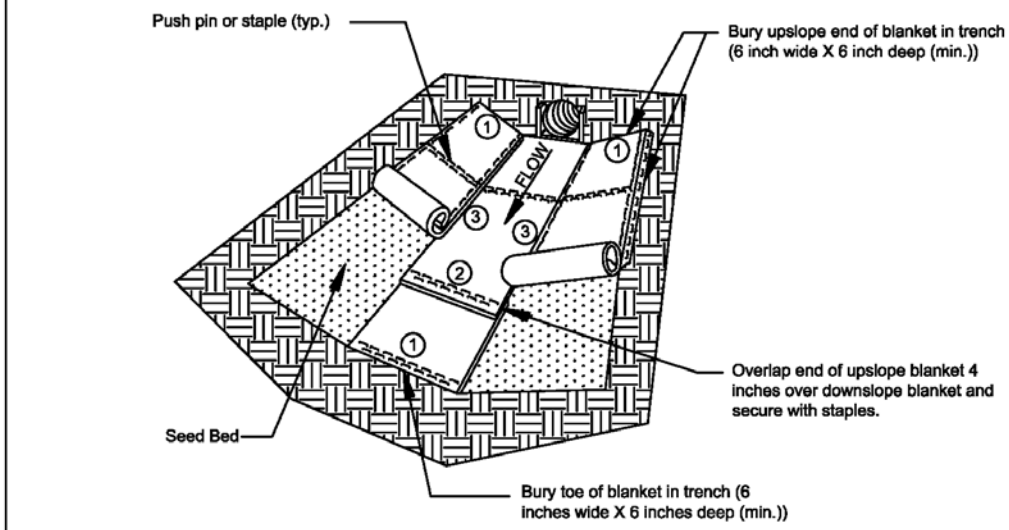
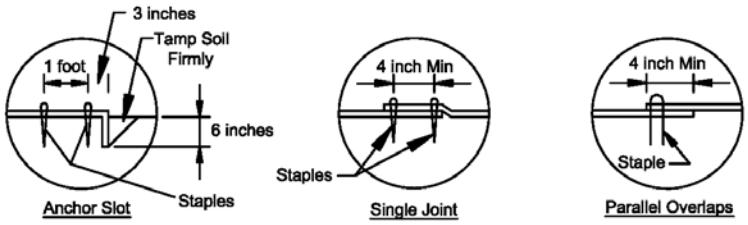
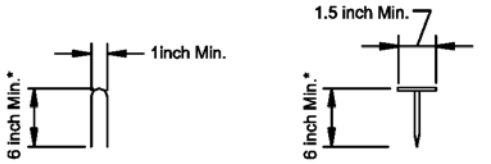
Concentrated Flow Control Details: Turf Reinforcement Mat Page 1





DETAIL 1 DETAIL 2 DETAIL 3



STAPLE DETAIL PUSH PIN DETAIL

* Note:
For sandy soil conditions, staple or push pin shall be a minimum 8 inches.

SOURCE: Illinois Urban Manual 2013

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Turf Reinforcement Mat
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Concentrated Flow Control Details: Turf Reinforcement Mat Page 2

TURF REINFORCEMENT MATS (TRMs) SHOULD BE USED:

1. In areas of concentrated flow where natural vegetation alone will not sustain expected flow conditions or provide sufficient long term erosion protection.
2. In areas where shorelines are susceptible to ice and wave action or hard armoring is inappropriate due to landscape features such as mowing.

NOTES

1. The turf reinforcement mat (TRM) shall be selected based on shear stress, steepness of slope and expected flow velocities.
2. Install per manufacturer's details.
3. The TRM shall be placed the same day as seed placement.
4. Degradable staples shall not be used in areas where turf establishment will not happen quickly.
5. The TRM shall be in firm contact with the soil. All rocks or soil clods 1.5 inches or larger must be removed prior to installation. The TRM shall be anchored per manufacturer recommendations and using the proper number and spacing of staples. The staples/pins shall be the proper width and length to meet the manufacturer's recommendations.
6. Soil filled TRMs shall have an appropriate erosion control blanket installed over the top to hold the soil in place.
7. In concentrated flow channels, the TRMs shall be unrolled upstream to downstream, parallel to the direction of flow. The upstream edge of the TRM shall be toed into an anchor trench a minimum of 6 inches wide by 6 inches deep. All overlaps shall be a minimum of 4 inches.
8. Staple check slots are recommended at 40 foot intervals using a double row of staples staggered 4 inches apart and 4 inches on center over the width of the channel.

MAINTENANCE

1. When mowing, mower decks shall remain raised all season until TRM has either dropped down into the soil or incorporated into the root structure.

2. Inspect all TRMs periodically during establishment. Repair or replace any areas that may be failing. If the TRM has failed due to high flow, more substantial TRMs or hard armament may be needed.

SOURCE: Illinois Urban Manual 2013

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Turf Reinforcement Mat
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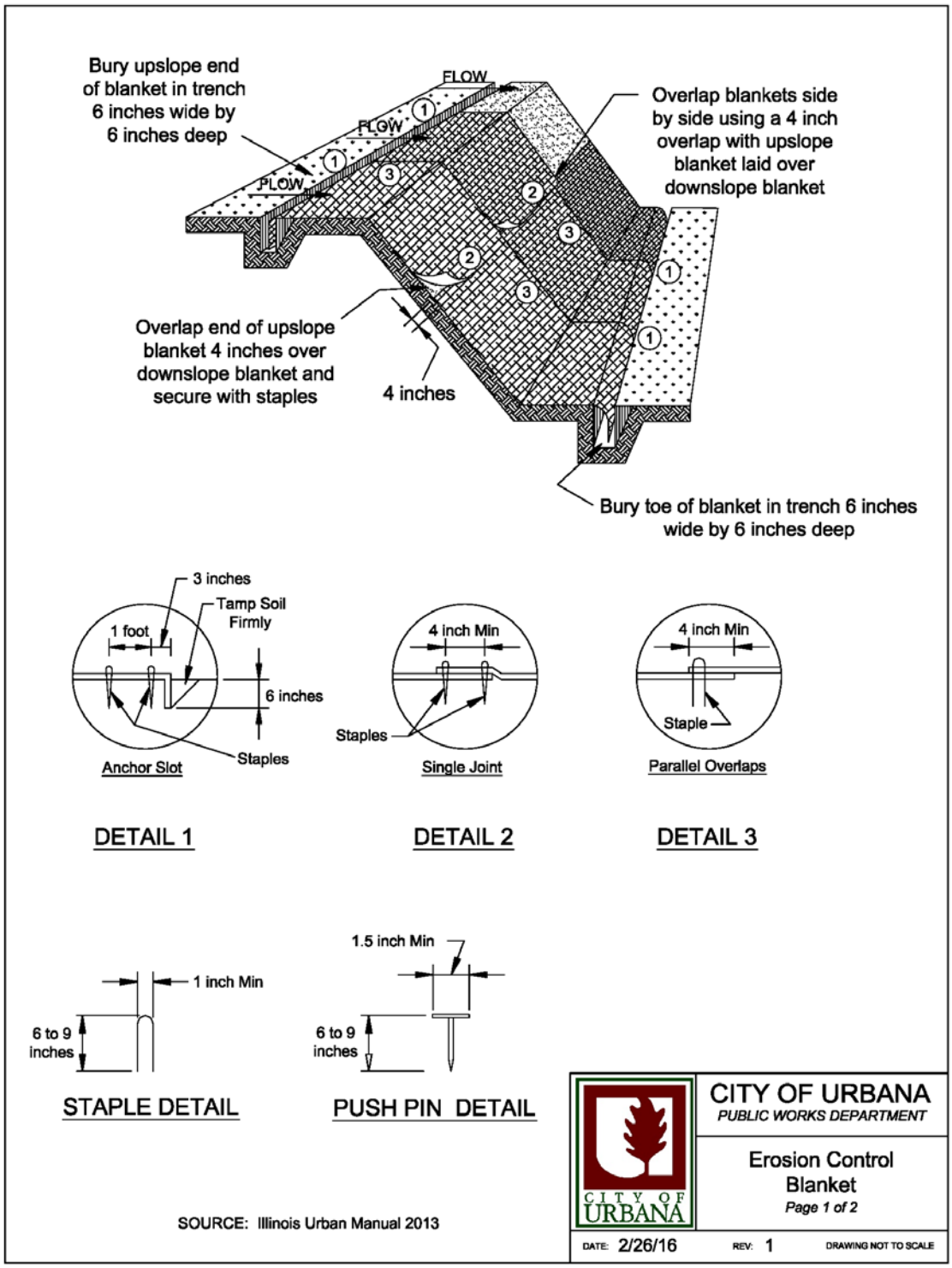
Concentrated Flow Control Details: Erosion Control Blanket Page 1



Concentrated Flow Control Details: Erosion Control Blanket Page 2

EROSION CONTROL BLANKETS SHOULD BE USED

1. On exposed slopes and newly seeded areas that are 1.5:1 or flatter.

2. On slopes and flat areas where turf will need to be established.

For swales, channels and slopes steeper than 1.5:1, please refer to Turf Reinforcement Mat (TRM) detail.

NOTES

1. On slopes and in flow channels, the blanket shall be unrolled upstream to downstream parallel to the direction of flow. The upstream end of each blanket shall be anchored in a minimum 6-inch deep anchor trench, backfilled and compacted.

2. When laid side by side, blankets shall overlap a minimum of 4 inches.

3. When more than one blanket length is needed, the materials shall be shingled at a minimum of 4 inches over the downstream piece as shown in the drawing on page 1.

4. All edges shall be stapled as per manufacturer's recommendation or at least as stringent as shown in the drawing on page 1.

5. Staple or push pin lengths shall be selected based on soil type and conditions, but minimum staple length is 6 inches.

6. Erosion control material shall be placed in contact with the soil or over a prepared seedbed.

7. All anchor slots shall be stapled at approximately 12 inch intervals.

MAINTENANCE

1. Check for damage due to water running under the blanket, tenting of the blanket, or displacement of the blanket by wind.

2. Check for erosion under blankets in flow channels where the blanket terminates and transitions into another surface. In areas where water has seeped under the blanket, more staples may be needed per given area or more frequent anchoring trenches may need to be installed with better compaction. If significant erosion has occurred under the blanket, grading and reseeding may also be necessary.

3. Any blankets that have been displaced will need to be reinstalled and re-stapled. This may indicate that the wrong type of blanket was chosen or improper final site grading was performed. One may also need to revisit the site characteristics and select a different type of Erosion Control Blanket or different erosion control practice.

SOURCE: Illinois Urban Manual 2013

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Erosion Control Blanket
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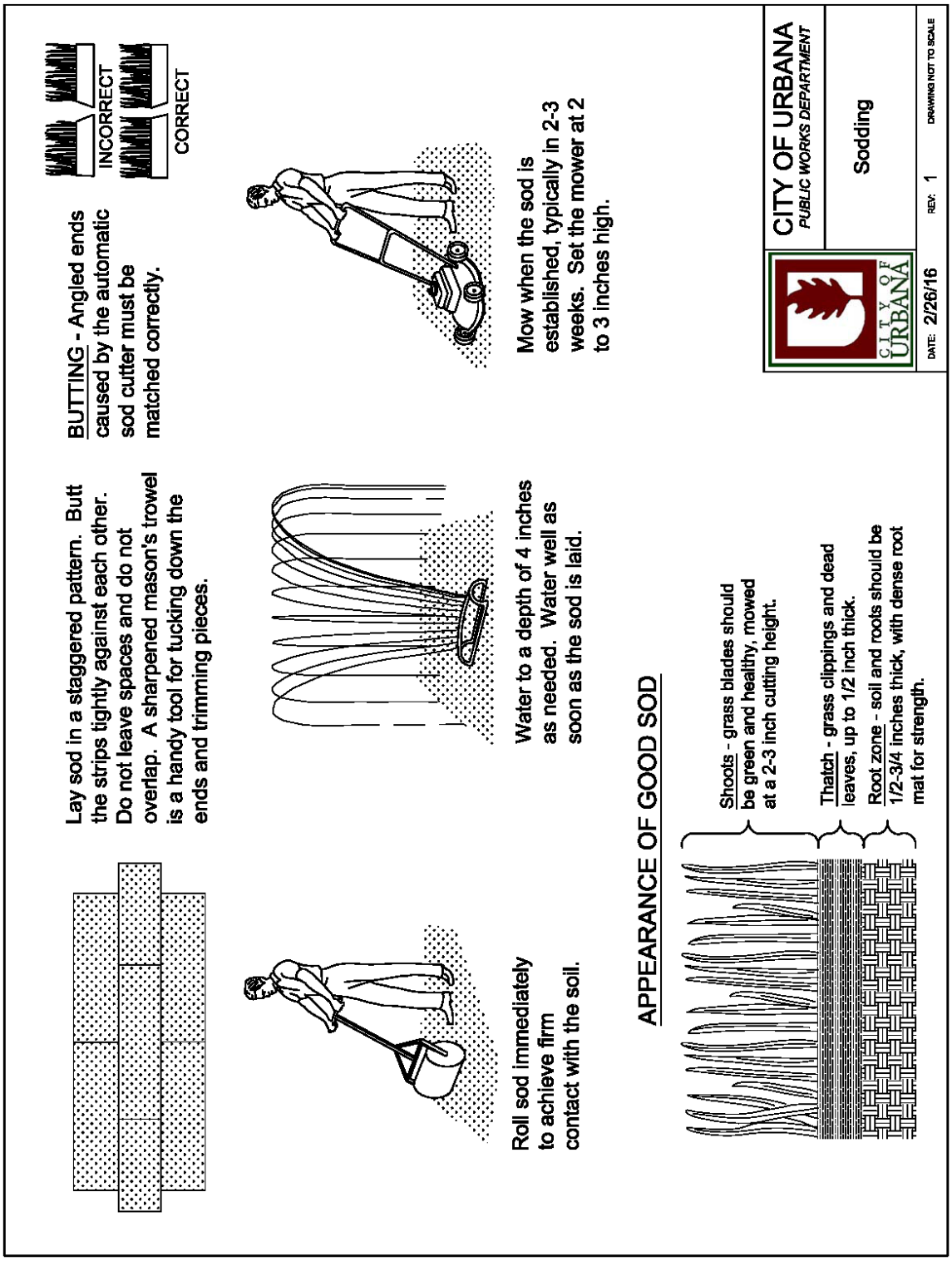
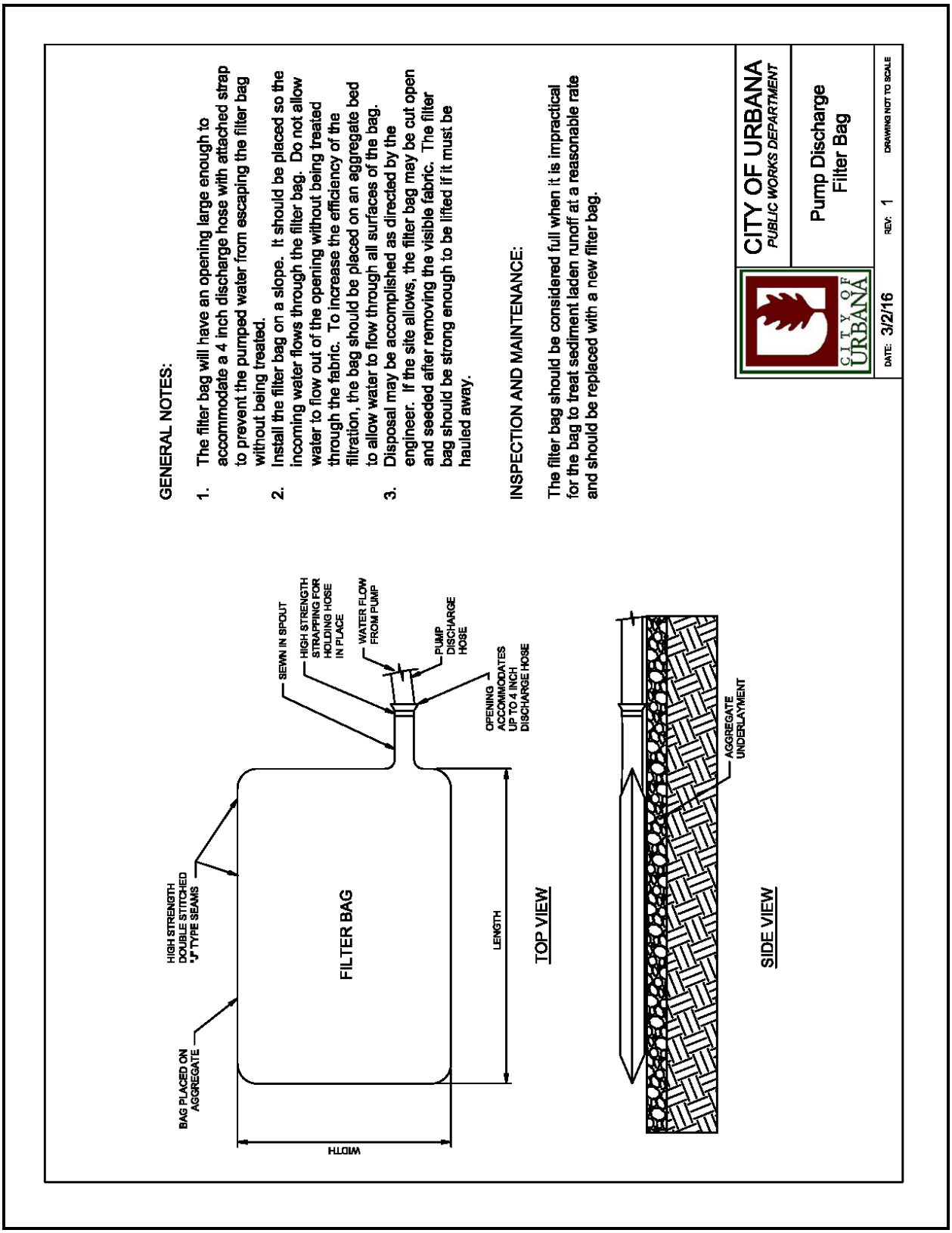
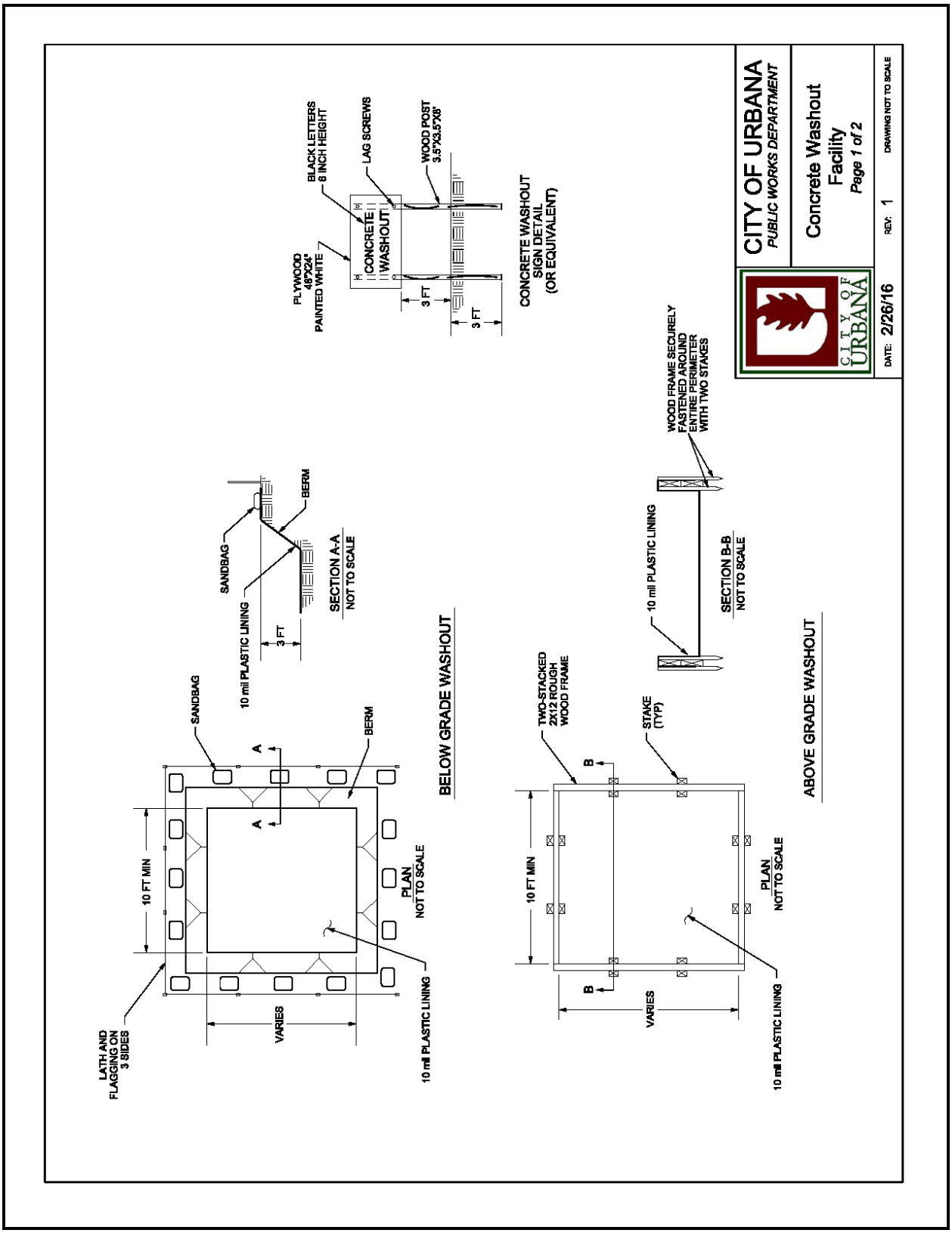
Concentrated Flow Control Details: Sodding



Pump Discharge Filter Bag Details



Concrete Washout Facility Details Page 1



General Notes:

- PCC and AC wastes shall be collected and disposed of or placed in a concrete washout facility. No PCC or AC wastes shall enter the storm sewer system or watercourses.
- A sign shall be installed adjacent to each facility to inform concrete equipment operators to utilize proper facilities.
- Below grade facilities are typical. Above grade facilities are utilized if excavation is not practical.
- Washout facilities shall have sufficient volume to contain all liquid and waste concrete materials generated by washout and construction activities.
- Once concrete wastes are discharged to facility and allowed to harden, the concrete waste should be broken up and disposed of in accordance with state and local law.
- Plastic lining shall be free of holes, tears, or other defects that compromise the impermeability of the material.
- A minimum freeboard 12 inches is required for below grade facilities and a minimum of 4 inches freeboard is required for above grade facilities.

Maintenance Notes:

- Concrete washout facilities must be cleaned or new facilities constructed once the washout is 75% full.
- Remove and dispose of hardened concrete materials to return facilities to a functional condition.
- Inspect washout facility on a weekly basis.

Removal Notes:

- When facilities are no longer required for construction work, the materials used to construct the facility shall be removed from the site and disposed of in accordance with state and local law.
- Holes, depressions or other ground disturbance caused by removal of the facility shall be backfilled and restored to its pre-existing condition or use.

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Concrete Washout Facility
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NOTES: