



Summary of Updates to Erosion Control Manuals of Practice

(August 2016)





Revisions to Erosion Control Manual of Practice (MOP)

Add geo-ridge berm detail to Class 1 MOP

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 procedure. 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.

CITY OF URBANA
PUBLIC WORKS DEPARTMENT

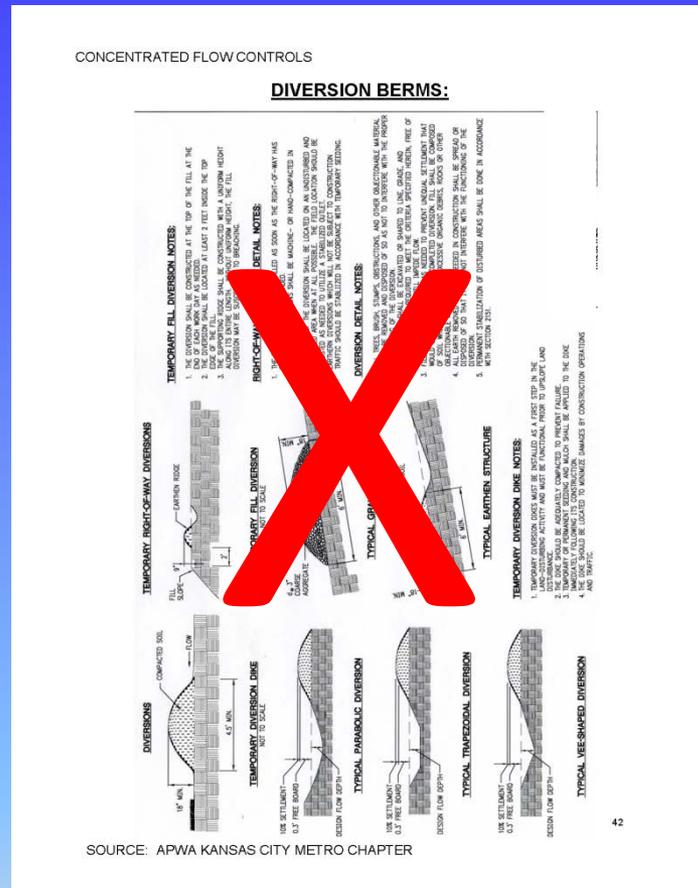
Geo-Ridge® Berms

DATE: 2/25/16 REV: 1 DRAWING NOT TO SCALE



Revisions to Erosion Control Manual of Practice (MOP)

Remove diversion berm detail from Class 1 MOP



Diversion berms are not applicable to typical Class 1 construction projects in Urbana. Other, more suitable concentrated flow controls include Rock Check Dams, Triangular Silt Dikes, Geo-Ridge Berms, Turf Reinforcement Mats, Erosion Control Blankets and Sodding.



Revisions to Erosion Control Manual of Practice (MOP)

Add welded wire inlet basket detail to Class 2 MOP

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 (@ 50hrs) | 80% Strength Retained | ASTM D4355 |
| Permittivity | .05 Sec-1 | ASTM D4491 |
| Flow Rate | 75 gsm/R ² | ASTM D4491 |
| Grab Tensile Strength | 350 / 250 lbs | ASTM D4632 |
| AUS (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.

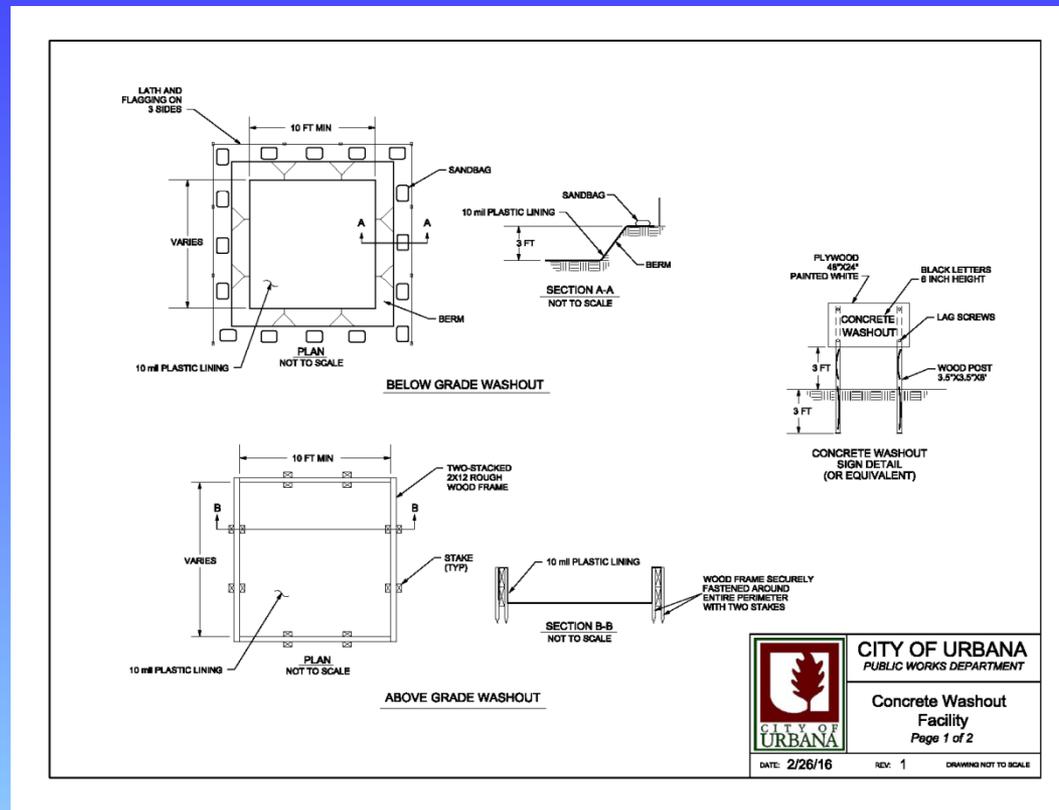
Installation

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.



Revisions to Erosion Control Manual of Practice (MOP)

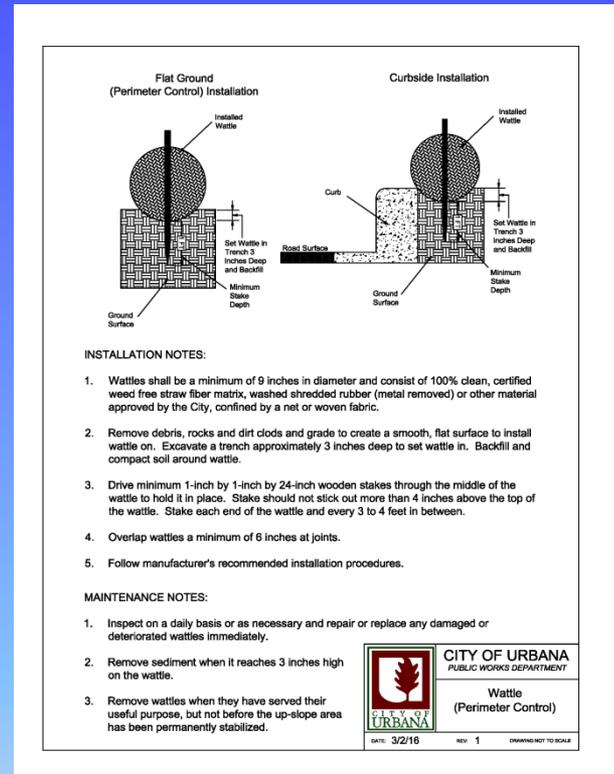
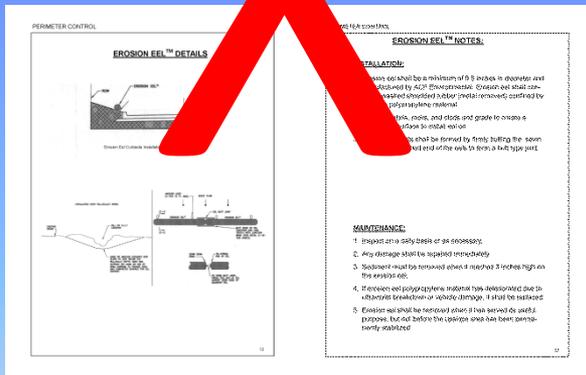
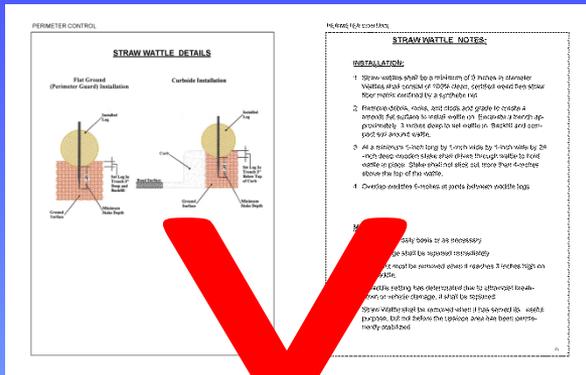
Add concrete washout facility detail to Class 2 MOP





Revisions to Erosion Control Manual of Practice (MOP)

Combine erosion eel and straw wattle details into one wattle detail in Class 2 MOP





Revisions to Erosion Control Manual of Practice (MOP)

Revise Class 1 and Class 2 permit application forms

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 1 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 Email 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 _____ Email 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 _____

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 #: _____
Make check payable to City of Urbana

CLASS 2 LAND DISTURBANCE PERMIT FORM
(Land disturbances between 2,000 square feet and one (1) acre)

TO BE COMPLETED BY APPLICANT

Name: _____ Date: _____
Mailing Address: _____
E-mail: _____ Phone #: _____
Address of Development: _____
Subdivision Name & Lot #: _____
Type of Development: _____ Sq.Ft of Site: _____

On-Site Responsible Contact:

Name: _____
E-mail: _____ Phone #: _____

Erosion Control Plan Attached
 Erosion Control Plan Checklist Completed and Attached
 Class 2 Land Disturbance Permit Fee Submitted

PERMIT FEE SCHEDULE - EFFECTIVE JANUARY, 2008:

- 1 & 2 family new construction, additions and demolitions - \$50
- Commercial new construction, additions, and demolitions under 1 acre - \$200

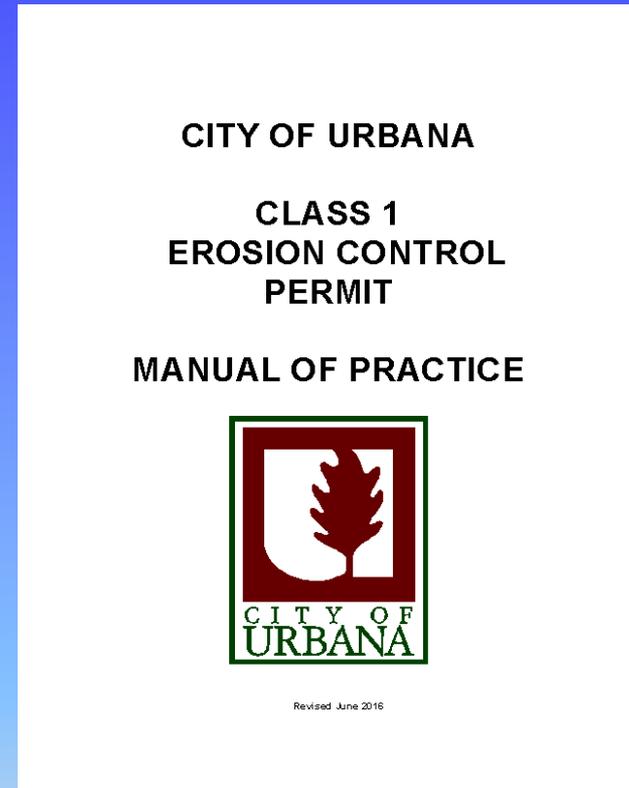
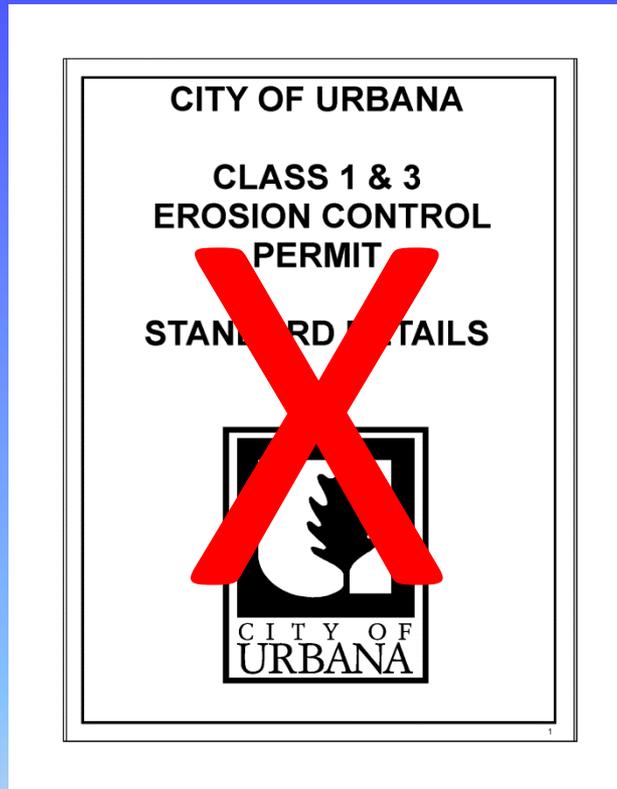
APPLICANT MUST CONTACT CITY AT 384-2385 TO SCHEDULE AN INSPECTION AFTER ALL EROSION CONTROL DEVICES ARE INSTALLED.

Revised June 2019



Revisions to Erosion Control Manual of Practice (MOP)

Separate Class 1 and Class 3 permit information in the
Class 1 MOP





Revisions to Erosion Control Manual of Practice (MOP)

Add an introductory section to the Class 1 and Class 2 MOPs

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 within 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://urbanaininois.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.



Revisions to Erosion Control Manual of Practice (MOP)

Remove Illinois Environmental Protection Agency (IEPA) erosion and sediment control permit forms

Introduction refers user to IEPA website for the most current erosion & sediment control permit forms required by IEPA for land disturbances larger than 1 Acre.



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Class 1 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://urbana.illinois.gov/Erosion_Control

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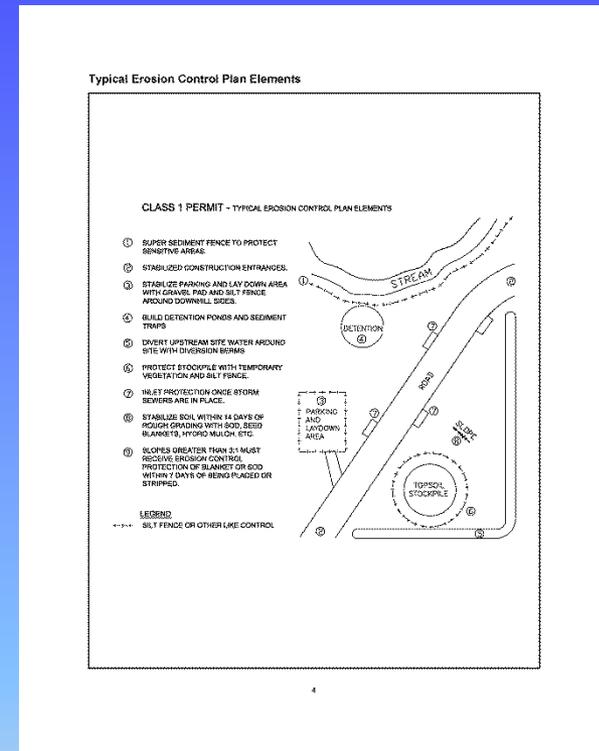
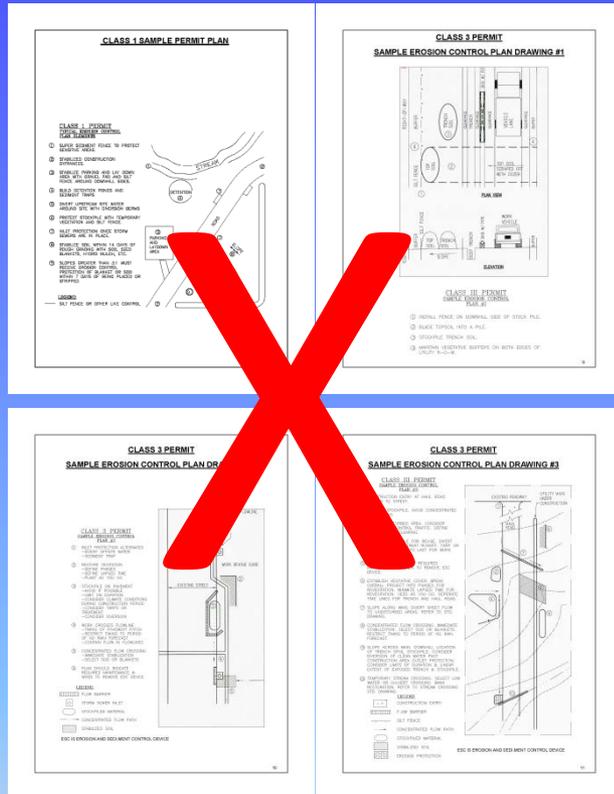
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Revisions to Erosion Control Manual of Practice (MOP)

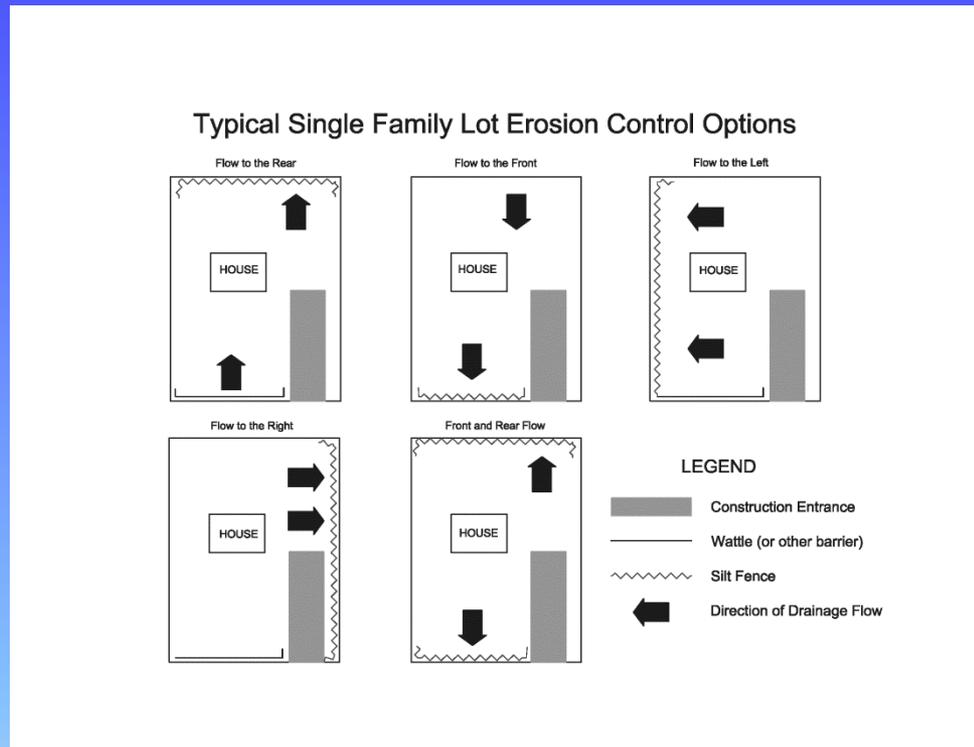
Consolidate sample erosion control plans into one typical plan illustration for the Class 1 MOP





Revisions to Erosion Control Manual of Practice (MOP)

Add typical single family lot erosion control option illustrations to the Class 2 MOP





Revisions to Erosion Control Manual of Practice (MOP)

Update erosion control sequence summary in the Class 2 MOP

NEW

GENERAL NOTES

GENERAL INSTALLATION/CONSTRUCTION SEQUENCE:

- 1.) Install stabilized lot entrance.
- 2.) Install perimeter controls. (Silt Fence or Landscape Buffer)
 - Place where storm water runoff leaves the site.
 - Place adjacent to all public sidewalks and streets.
- 3.) Install inlet protection at downstream sewer inlets, grates, drains, and manholes.
- 4.) Contact Engineering Division to inspect erosion control measures.
- 5.) Excavate and backfill foundations.
 - Spoil pile must not extend beyond property line.
 - Do not cover with silt or other materials or back filling materials.
- 6.) Construction activities.
 - Maintain and repair erosion controls until final certificate of occupancy is issued.
 - Clean dirt off sidewalks and roads each day.
- 7.) Final grading and seed or sod placement.
- 8.) Remove erosion control measures.
 - Remove erosion control measures after permanent ground cover is obtained at a density sufficient to control erosion.

CONCENTRATED FLOW:

- 1.) Provide erosion blanket or sod for concentrated flow areas.
- 2.) Provide soil protection and energy dissipation at gutter downspouts if they are in place prior to full vegetative cover over the area.

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Erosion Control Sequence

- 1) Install stabilized construction entrance.
- 2) Install perimeter controls (silt fence, vegetative buffer, wattles). Perimeter controls are typically placed where storm water runoff leaves the site and adjacent to all public sidewalks and streets.
- 3) Install inlet protection at downstream sewer inlets, grates, drains and manholes.
- 4) Provide erosion blankets or sod for concentrated flow areas.
- 5) Contact the Urbana Public Works Engineering Division to inspect erosion control measures.
- 6) Excavate and backfill foundations. Note: Spoil piles must not extend beyond property lines or cover sidewalks.
- 7) Provide soil protection and energy dissipation at gutter downspouts and sump pump outlets if they are in place prior to full vegetative cover over the area.
- 8) Maintain and repair all erosion controls until disturbed areas are fully restored.
- 9) Clean dirt off sidewalks and roads each day.
- 10) Complete final grading and seed or place sod.
- 11) Remove erosion control measures after permanent ground cover is obtained at a density sufficient to control erosion, typically 70%.

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Revisions to Erosion Control Manual of Practice (MOP)

Incorporate miscellaneous formatting changes in Class
1 and Class 2 MOPs

- Moved from Publisher to Word/PDF for easier edits
- Created all detail drawings in CAD for easier edits
- Added Urbana title bar to all drawings
- Used uniform font style throughout