Small Construction Erosion Control Plan

City of Kelso

The **Small Construction Erosion Control Plan** is an abbreviated plan for describing how a small construction site will be managed to prevent sediment and pollutants from leaving the site during construction. Sediment and pollutants from construction must be kept out of the City's drainage system, streets, streams, rivers, lakes, and wetlands.

The City-approved **Small Construction Erosion Control Plan** must be located at the construction site during construction and must be made available to a City inspector when requested. The property owner is responsible for implementing and maintaining the measures described in this plan. It is advisable to include the approved plan in the construction contract with the builder.

This plan template is intended for use by property owners and is not a substitute for Kelso Municipal Code. We have substituted some technical language contained in the code and engineering standards with plainer terms. We have

ELIGIBLE PROJECTS:

The instructions in this plan template apply to new construction and additions/remodels that are eligible to use the **Abbreviated Stormwater Site Plan**.

ELEMENTS OF ABBREVIATED STORMWATER SITE PLAN:

The **Small Construction Erosion Control Plan** is a required attachment to the **Abbreviated Stormwater Site Plan**. The plan consists of a narrative and drawing. Use the last page of this form (**Erosion Control Site Plan**) as a template for drawings.

Attach the completed plan (this form) and drawings to the **Abbreviated Stormwater Site Plan** and the Civil Permit application.

PROJECT SITE INFORMATION			
Parcel #:			
Address/Location:			
APPLICANT/PROPERTY OWNER			
Business Name:	Contact Name:		
Mailing/Billing Address:	City	State	Zip
Phone Number:	Email:		
AUTHORIZED REPRESENTATIVE OR CONTRACTOR (If applicable)			
Business Name:	Contact Name:		
Mailing/Billing Address:	City	State	Zip
Phone Number:	Email:		
WA State License # (Not UB#):	Expiration Date:		
City of Kelso Business License #	Expiration Date:		

PROPERTY OWNER OR AUTHORIZED AGENT

I hereby certify that I have read and examined this application and know the same to be true and correct, and I am authorized to apply for this permit.

Signature: **Printed Name:** **Date:**

Erosion Control Inspector

Designate an Erosion Control Inspector who has the skills to assess the site conditions and construction activities that could impact stormwater quality. The inspector must be on-site or on-call at all times. The applicant or construction contractor may act as the Erosion Control Inspector.

❑ The person identified below will be on-site or on-call at all times.

Inspector Name: _____

Phone: _____ **Alternate Phone:** _____

Construction Schedule

Determine the approximate start and end dates of construction.

Any clearing, grading, or construction from October 1 through April 30 shall only be permitted if shown to the satisfaction of the City that silt-laden runoff will be prevented from leaving the site through proper use of best management practices (BMPs).

Start Date: _____ **End Date:** _____

Describe any construction activities that will occur between October 1 and April 30:

SITE NARRATIVE:

The site narrative describes the site and expected construction activities. The site narrative is contained in Section 1: Site and Project Description of the **Abbreviated Stormwater Site Plan**.

❑ Section 1 of the **Abbreviated Stormwater Site Plan** is attached.

Calculate the project impacts.

	Impact	**Impact**
A	Total land disturbed	(sq. ft.)
B	Total volume of proposed cut and fill	(cu. ft.)

EROSION CONTROL REQUIREMENTS:

The applicant and contractor must prevent eroded soils from leaving the site during construction.

At least one BMP for each of the 13 requirements below must be selected, unless the element is not applicable.

To select the appropriate BMP, review the applicability and design requirements on the **Erosion Control Site Plan** template or in the 2014 Stormwater Management Manual for Western Washington (SWMMWW), Volume II (http://www.ecy.wa.gov/programs/wq/stormwater/manual/2014SWMMWWinteractive/2014%20SWMMWW.htm).

This form includes the most common erosion control BMPs for small construction sites. The BMPs detailed on the **Erosion Control Site Plan** template are marked with ✎. Refer to the SWMMWW for BMPs marked with a 🕮. Other approved BMPs from the SWMMWW may also be used.

Element #1: Preserve Vegetation and Mark Clearing Limits		
Requirements	*Select One or More BMPs*	
Prior to clearing and construction, install highly visible fence to show the limits of construction activity and to protect vegetation and soils to be preserved. Use orange construction fence, chain link fence, or high visibility silt fence.	❑ C101 Preserving Natural Vegetation ❑ C103 High Visibility Fence ❑ C233 High Visibility Silt Fence – high visibility silt fence can act as both perimeter marking *and* sediment control (Element #4) (See KEDM standard detail WSDOT I-30.17-00)	🕮 🕮 ✎
Show selected BMPs on the Erosion Control Site Plan.		

Element #2: Construction Access		
Requirements	*Use the Following BMP*	
Keep the street outside of the construction site clean by establishing and monitoring a single construction entrance. Restrict all traffic into the site to one entrance. If an existing driveway will be used, sweep and pick up dirt and debris from the driveway at the end of construction each day. Do not sweep into the street or drainage system. For sites without an existing driveway, use a gravel construction entrance.	❑ C105 Stabilized Construction Entrance/Exit ❑ N/A (explain):	✎
Show the BMP on the Erosion Control Site Plan.		

Element #3: Control Flow Rates		
Requirements	*Choose One or More BMPs*	
Protect slopes, ditches, properties, and waterways downstream of the construction site from erosion due to increases in volume and velocity of stormwater runoff from the site.	❑ C209 Outlet Protection ❑ C235 Wattles (See KEDM standard detail WSDOT I-30.30-01) ❑ N/A (explain):	🕮 ✎
Show selected BMPs on the Erosion Control Site Plan.		

Element #4: Sediment Control		
Requirements	*Select One or More BMPs*	
Prior to leaving a construction site, runoff from disturbed areas must pass through a sediment removal device. Sediment barriers are used to slow stormwater and allow the sediment to settle out behind the barrier. Install/construct the sediment control BMP before site grading.	❑ C103 High Visibility Silt Fence – high visibility silt fence can act as both perimeter marking *and* sediment control (Element #4) (See KEDM standard detail WSDOT I-30.17-00) ❑ C235 Wattles (See KEDM standard detail WSDOT I-30.30-01) ❑ N/A (explain):	🖉 🖉
Show the selected BMP(s) on the Erosion Control Site Plan.		

Element #5: Stabilize Soils		
Requirements	*Select One or More BMPs*	
Soils without grass or other vegetation can easily erode. Exposed soils must be protected from rain and flowing water. Soils are protected by covering them with various materials, such as grass/sod, tarp, compost, or mulch. Check one or both options below: ❑ Construction will take place during the dry season (May 1 to September 30). No soils shall remain exposed and unworked for more than 7 days. ❑ Construction will take place during the wet season (October 1 through April 30). No soils shall remain exposed and unworked for more than 2 days.	❑ C121 Mulching ❑ C123 Plastic Covering/Tarp Covering ❑ N/A (explain):	🕮 🕮
Show the selected BMP(s) on the Erosion Control Site Plan.		

Element #6: Protect Slopes		
Requirements	*Use the Following BMP*	
Design and construct cut and fill slopes in a way that minimizes the potential for erosion.	❑ C121 Mulching ❑ N/A (explain):	🕮
Show the selected BMP(s) on the Erosion Control Site Plan.		

🕮 Refer to the SWMMWW 🖉 Refer to the Erosion Control Site Plan template

Refer to the Kelso Engineering Design Manual, online at www.kelso.gov/engineering/engineering-documents, for more information or clarification of stormwater requirements within Kelso. You may also contact the City of Kelso's Engineering Department at (360) 423-6590 or at www.kelso.gov/departments-services/engineering-department.

Element #7: Protect Drain Inlets		
Requirements	*Use the Following BMP*	
Protect all storm drain inlets and catch basins in the road near the site during construction. Prevent runoff from the site from entering the inlets without first being filtered to remove sediment. Install catch basin protection on all catch basins within 500 feet downstream of the project.	❑ C220 Storm Drain Inlet Protection (See KEDM standard detail WSDOT I-40.20-00) ❑ N/A (explain):	🖉
Show the selected BMP(s) on the Erosion Control Site Plan.		

Element #8: Stabilize Channels and Outlets		
Requirements	*Select One or More BMPs*	
Stabilize all temporary and permanent conveyance channels and their outlets. If a ditch or pipe from the site discharges to a ditch in the street or to a stream, outlet protection must be used.	❑ C207 Check Dams (See KEDM standard detail WSDOT I-50.20-01) ❑ C209 Outlet Protection ❑ N/A (explain):	🕮 🕮
Show the selected BMP(s) on the Erosion Control Site Plan.		

Element #9: Control Pollutants		
Requirements	*Select One or More BMPs*	
Handle and dispose of all pollutants, including demolition debris and other solid wastes, to keep them out of rain and flowing water. Provide cover and containment for all chemicals, liquid products (including paint), petroleum products, and other materials. Apply fertilizers and pesticides following manufacturers' instructions for application rates and procedures. Handle all concrete and concrete waste appropriately.	❑ C151 Concrete Handling ❑ C152 Sawcutting and Surface Pollution Prevention ❑ C153 Materials Delivery, Storage, and Containment ❑ N/A (explain):	🕮 🕮 🕮
Show location(s) of materials delivery, storage, and handling areas on Erosion Control Site Plan.		

Element #10 – Control Dewatering		
Requirements	*BMPs*	
Many small sites will not require dewatering.	If dewatering is needed consult the SWMMWW Vol. II, Ch. II, Section 3.3 and list the selected BMPs below:	🕮
Show location(s) of selected BMP(s) on the Erosion Control Site Plan.		

🕮 Refer to the SWMMWW 🖉 Refer to the Erosion Control Site Plan template

Refer to the Kelso Engineering Design Manual, online at www.kelso.gov/engineering/engineering-documents, for more information or clarification of stormwater requirements within Kelso. You may also contact the City of Kelso's Engineering Department at (360) 423-6590 or at www.kelso.gov/departments-services/engineering-department.

Element #11: Maintain BMPs		
Requirements	*Select One or More BMPs*	
Maintain and repair BMPs as needed. The designated Erosion Control Inspector (see page 2) should inspect all BMPs at least weekly and after every storm event. Keep an inspection log on site and available for review by the City inspector at all times. Remove all temporary erosion and sediment control BMPs within 30 days after final site stabilization or if the BMP is no longer needed. Any trapped sediment should be removed or stabilized on the site. No sediment shall be discharged into the street storm drainage system or streams, lakes, rivers, or wetlands. Keep a small supply of materials on hand, such as an extra tarp or plastic covering, filled sandbags, wattles, and any materials needed to repair or stabilize any of the BMPs selected for the project.	❑ C150 Materials On Hand ❑ C160 Certified Erosion and Sediment Control Lead	

Element #12: Manage the Project		
Requirements	*Select One or More BMPs*	
Coordinate all work before initial construction with subcontractors and other utilities to ensure no areas are prematurely worked. The Erosion Control and Pollution Prevention measures must be installed in the order described in the Scheduling of BMP Installation section, below.	❑ C150 Materials On Hand ❑ C160 Certified Erosion and Sediment Control Lead ❑ C162 Scheduling (see page 7)	

Element #13: Protect Low Impact Development BMPs		
Requirements	*Select One or More BMPs*	
Protect LID BMPs from compaction, erosion, and sedimentation during construction. LID BMPs include Rain Garden, Dispersion (all kinds), Roof Downspout Full Infiltration, Permeable Pavement, and Perforated Stub-out Connections.	❑ C103 High Visibility Fence ❑ C207 Check Dams (See KEDM standard detail WSDOT I-50.20-01) ❑ C233 Silt Fence (See KEDM standard detail WSDOTC220 I-30.15-02) ❑ N/A (explain):	🖉 🕮 🖉
Show location(s) of selected BMP(s) on the Erosion Control Site Plan.		

🕮 Refer to the SWMMWW 🖉 Refer to the Erosion Control Site Plan template

Refer to the Kelso Engineering Design Manual, online at www.kelso.gov/engineering/engineering-documents, for more information or clarification of stormwater requirements within Kelso. You may also contact the City of Kelso's Engineering Department at (360) 423-6590 or at www.kelso.gov/departments-services/engineering-department.

Scheduling of BMP Installation

Prior to Clearing and Construction

❑ 1. Mark clearing limits (Element #1)

❑ 2. Install or designate stabilized construction entrance (Element #2)

❑ 3. Install protection for drainage systems and sediment control (Elements #3, #4, and #7)

❑ 4. Designate staging areas for storage and handling of materials (Element #9)

With Land Disturbance, As Areas are Disturbed

❑ 5. Install sediment control

❑ 6. Stabilize unworked soils

❑ 7. Protect slopes and channels

❑ 8. Maintain BMPs

After Construction

❑ 9. Continue to maintain BMPs until the site is stabilized with vegetation

❑ 10. Remove BMPs within 30 days after site stabilization.

EROSION CONTROL SITE PLAN:

The **Erosion Control Site Plan** is a drawing which shows the location of the proposed BMPs.

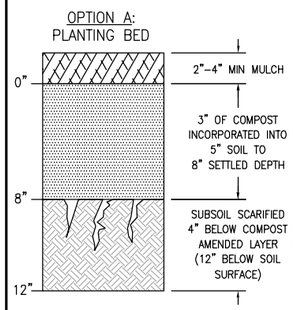
Submit the **Erosion Control Site Plan** on the provided template or on 8½ x 11 or 11 x 17 paper. The site plan may be either drawn by hand or drafted electronically.

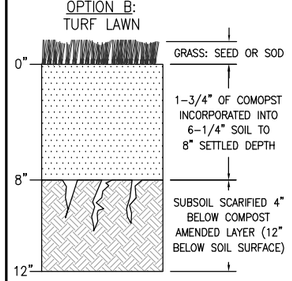
The **Erosion Control Site Plan** must show the location of improvements, grading, filling, and erosion control BMPs. Show the following listed items on the site plan.

Applicant Use	Required Elements	City Use
❑	Site address and/or parcel number	❑
❑	North arrow	❑
❑	Legend (if symbols are used)	❑
❑	Property boundary and dimensions	❑
❑	Adjoining street names	❑
❑	Location of highest and lowest elevations and arrows indicating slope (from high to low ground)	❑
❑	Areas that are to be cleared and/or graded	❑
❑	Cut and fill slopes, indicating top and bottom	❑
❑	Locations where upstream water enters the site	❑
❑	Existing surface water flow direction(s)	❑
❑	Location and direction of flow in all ditches, swales, pipes	❑
❑	Identify and locate all areas to be protected or preserved (vegetation protection, LID protection)	❑
❑	Identify and locate all BMPs described in the Erosion Control Plan	❑
❑	Post-construction soil amendment if required	❑

ADDITIONAL BEST MANAGEMENT PRACTICES REFERENCED IN THE KELSO ENGINEERING DESIGN MANUAL (KEDM) MAY BE USED. FIND A LINK AT THE BOTTOM OF THE PAGE HERE:

HTTP://WWW.KELSO.GOV/DOCUMENT/KELSO-ENGINEERING-DESIGN-MANUAL-KEDM





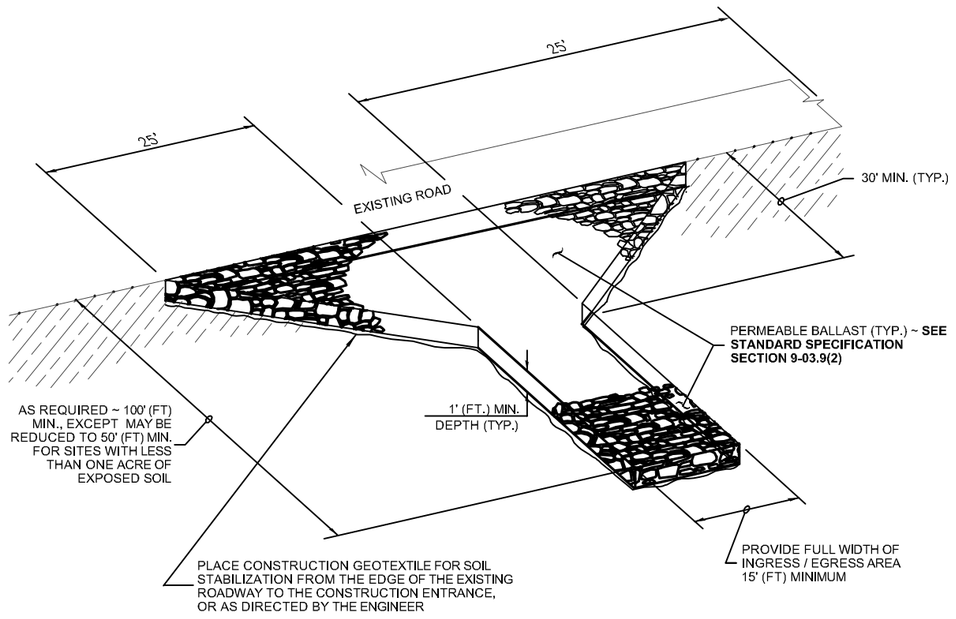
NOTES:
1. COMPOST SHALL HAVE ORGANIC MATTER CONTENT BETWEEN 40-65% AND CARBON TO NITROGEN RATIO BELOW 25:1.

2. COMPOST MUST BE PRODUCED AT A PERMITTED COMPOSTING FACILITY.

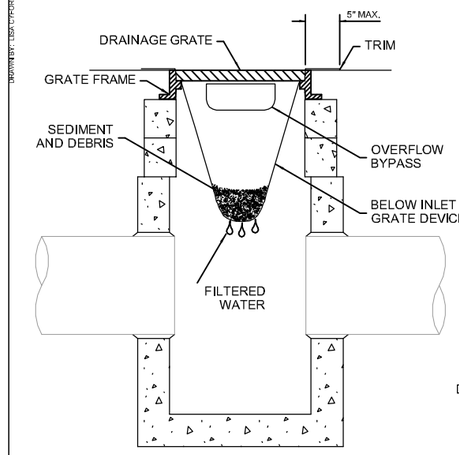
3. THE ORGANIC CONTENT FOR "PRE-APPROVAL" AMENDMENT RATES CAN BE MET ONLY BY USING COMPOST THAT MEETS THE DEFINITION FOR THE "COMPOSTED MATERIALS" IN WAC 173-350-220.

BMP T5.13

POST-CONSTRUCTION SOIL QUALITY AND DEPTH



C105 / WSDOT 1-80.10-02 STABILIZED CONSTRUCTION ENTRANCE



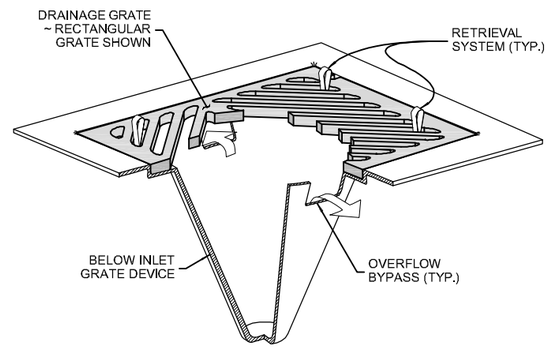
NOT TO SCALE

NOTES
1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.

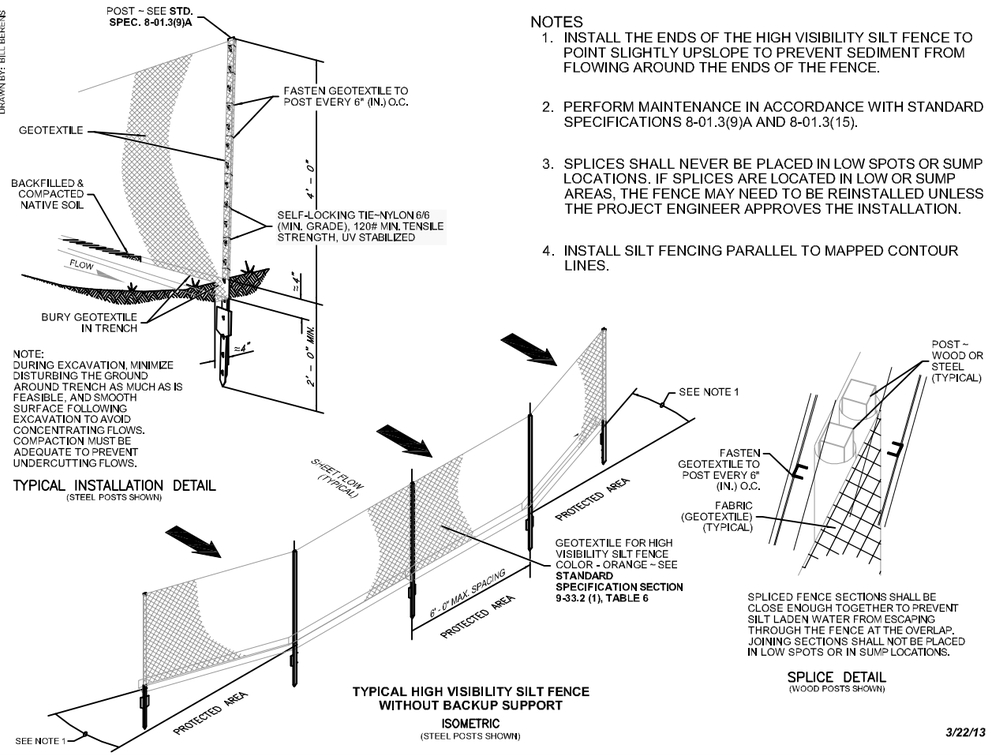
2. THE BIGD SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).

3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL.

4. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATION 8-01.3(15).



C220 / WSDOT 1-40.20-00 STORM DRAIN INLET PROTECTION



NOTES
1. INSTALL THE ENDS OF THE HIGH VISIBILITY SILT FENCE TO POINT SLIGHTLY UPSLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.

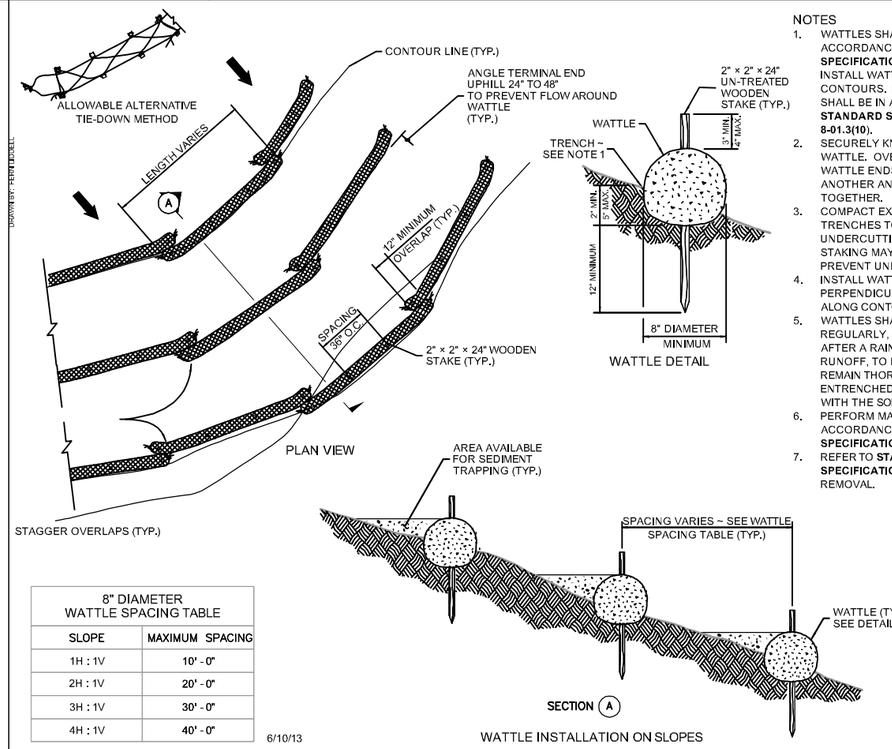
2. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATIONS 8-01.3(9)A AND 8-01.3(15).

3. SPLICES SHALL NEVER BE PLACED IN LOW SPOTS OR SUMP LOCATIONS. IF SPLICES ARE LOCATED IN LOW OR SUMP AREAS, THE FENCE MAY NEED TO BE REINSTALLED UNLESS THE PROJECT ENGINEER APPROVES THE INSTALLATION.

4. INSTALL SILT FENCING PARALLEL TO MAPPED CONTOUR LINES.

3/22/13

C233 / WSDOT 1-30.17-00 HIGH VISIBILITY SILT FENCE



NOTES
1. WATTLES SHALL BE IN ACCORDANCE WITH **STANDARD SPECIFICATION 9-14.5(5).** INSTALL WATTLES ALONG CONTOURS. INSTALLATION SHALL BE IN ACCORDANCE WITH **STANDARD SPECIFICATION 8-01.3(10).**
2. SECURELY KNOT EACH END OF WATTLE. OVERLAP ADJACENT WATTLE ENDS 12" BEHIND ONE ANOTHER AND SECURELY TIE TOGETHER.
3. COMPACT EXCAVATED SOIL AND TRENCHES TO PREVENT UNDERCUTTING. ADDITIONAL STAKING MAY BE NECESSARY TO PREVENT UNDERCUTTING.
4. INSTALL WATTLE PERPENDICULAR TO FLOW ALONG CONTOURS.
5. WATTLES SHALL BE INSPECTED REGULARLY, AND IMMEDIATELY AFTER A RAINFALL PRODUCES RUNOFF, TO ENSURE THEY REMAIN THOROUGHLY ENTRENCHED AND IN CONTACT WITH THE SOIL.
6. PERFORM MAINTENANCE IN ACCORDANCE WITH **STANDARD SPECIFICATION 8-01.3(15).**
7. REFER TO **STANDARD SPECIFICATION 8-01.3(16)** FOR REMOVAL.

8" DIAMETER WATTLE SPACING TABLE	
SLOPE	MAXIMUM SPACING
1H : 1V	10' - 0"
2H : 1V	20' - 0"
3H : 1V	30' - 0"
4H : 1V	40' - 0"

6/10/13

C235 / WSDOT 1-30.30-01 WATTLE INSTALLATION ON SLOPE

TEMPLATE VERSION: 2017-09-20

SHEET # 2

COMMON EROSION CONTROL BMPs

APPLICANT PLAN SET

OWNER/CONTRACTOR: _____

ADDRESS: _____

TEMPLATE VERSION: 2017-09-20

SHEET # 1

EROSION CONTROL SITE PLAN

APPLICANT PLAN SET

OWNER/CONTRACTOR: _____

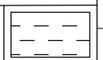
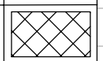
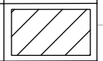
ADDRESS: _____

USE THIS SHEET TO DRAW THE LOCATION OF THE PROPOSED BMPS. SHEET 2 CONTAINS DETAILS FOR SELECT BMPS.

LEGEND:
SYMBOLS FOR BMPS ON SHEET 2.

C233 HIGH VISIBILITY SILT FENCE	
C235 / WSDOT I-30.30-01 WATTLES	
C105 / WSDOT I-80.10-02 STABILIZED CONSTRUCTION ENTRANCE	CE
C220 / WSDOT I-40.20-00 STORM DRAIN INLET PROTECTION	IP

SYMBOLS FOR SELECT ADDITIONAL BMPS FROM THE SWMMWW:

BMP T5.13 POST-CONSTRUCTION SOIL QUALITY AND DEPTH	
C121 MULCHING	
C123 PLASTIC COVERING	
C207 / WSDOT I-50.20-01 CHECK DAMS	CD
C209 OUTLET PROTECTION	OP

INDICATE NORTH:

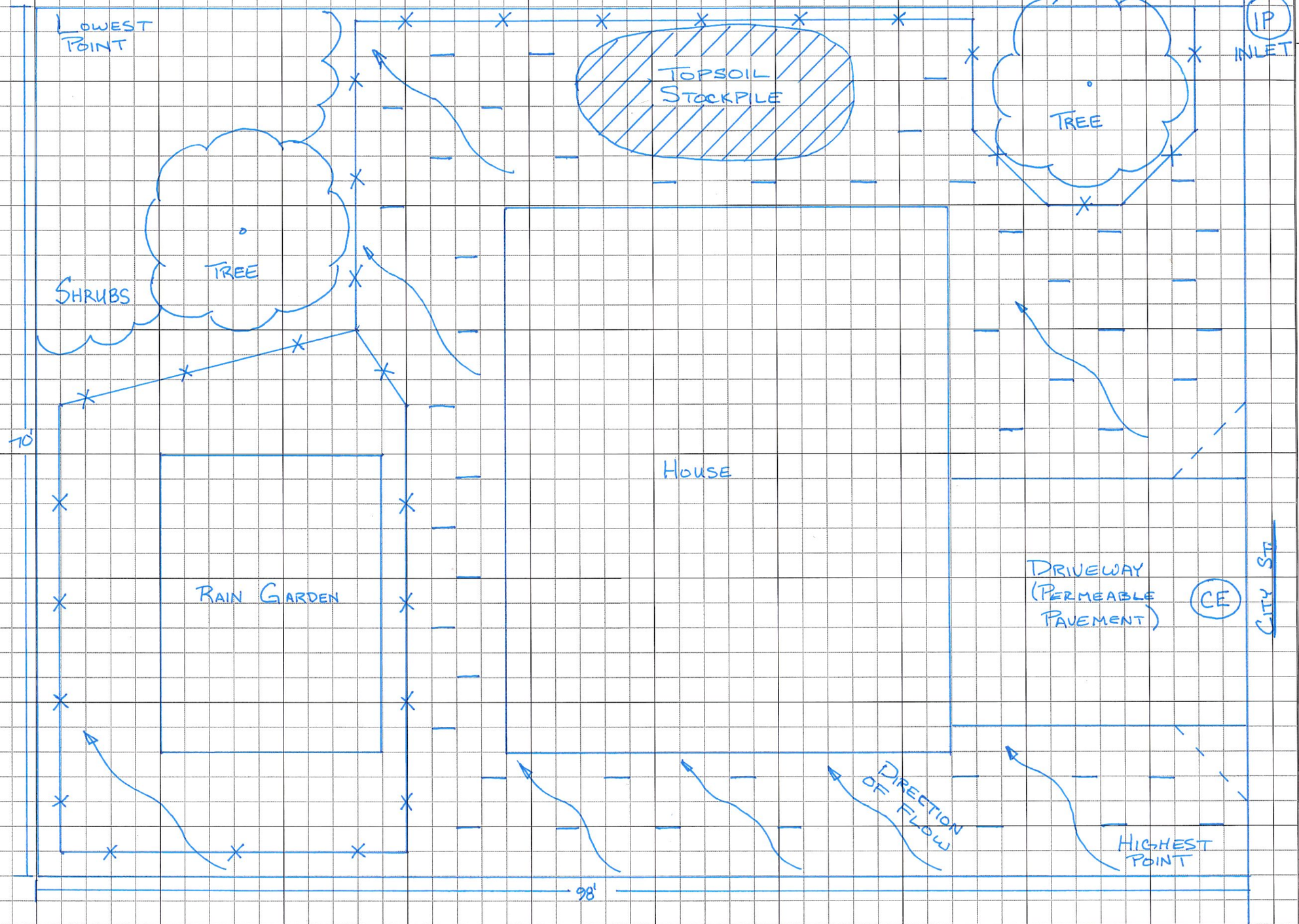
CHECK SCALE USED:
- ☐ ONE SQUARE = TWO FEET
- ☐ ONE SQUARE = FIVE FEET
- ☐ ONE SQUARE = TEN FEET

EXAMPLE COMPLETED EROSION CONTROL SITE PLAN

TEMPLATE VERSION: 2017-09-20

SHEET # 1

EROSION CONTROL SITE PLAN



USE THIS SHEET TO DRAW THE LOCATION OF THE PROPOSED BMPS. SHEET 2 CONTAINS DETAILS FOR SELECT BMPS.

LEGEND:

SYMBOLS FOR BMPS ON SHEET 2.

C233 HIGH VISIBILITY SILT FENCE	×—×
C235 / WSDOT 1-30.30-01 WATTLES	⊗—⊗
C105 / WSDOT 1-80.10-02 STABILIZED CONSTRUCTION ENTRANCE	CE
C220 / WSDOT 1-40.20-00 STORM DRAIN INLET PROTECTION	IP

SYMBOLS FOR SELECT ADDITIONAL BMPS FROM THE SWMMWW:

BMP T5.13 POST-CONSTRUCTION SOIL QUALITY AND DEPTH	
C121 MULCHING	
C123 PLASTIC COVERING	
C207 / WSDOT 1-50.20-01 CHECK DAMS	CD
C209 OUTLET PROTECTION	OP

INDICATE NORTH:

CHECK SCALE USED:
- ☑ ONE SQUARE = TWO FEET
- ☐ ONE SQUARE = FIVE FEET
- ☐ ONE SQUARE = TEN FEET

APPLICANT PLAN SET

OWNER/CONTRACTOR: JOHN DOE

ADDRESS: 1025 NE CITY ST.