

Fact Sheet

Construction Stormwater Pollution Prevention for Projects that disturb less than 2,000 SF



This Worksheet is for projects that create and/or replace less than 2,000 square feet of hard surfaces or disturb less than 7,000 square feet of pervious surfaces. Projects that meet this threshold are not required to submit a Construction Stormwater Pollution Prevention Plan, but are required to follow the 13 Elements outlined below.



Hard Surfaces = Impervious surfaces, green roofs, and permeable pavement.

Pervious Surface = lawn, landscape, native vegetation, etc.

Element 1 **Preserve Vegetation and Mark Clearing Limits**

- Before you begin construction, mark the limits of the area that is to be disturbed. Make sure to clearly mark trees that are to remain and any sensitive areas (e.g. wetlands, streams) to protect them from being disturbed during construction.

Element 2 **Establish Construction Access**

- Typically, restricting construction traffic to an already paved driveway is acceptable to meet this element. Less commonly, a stone construction entrance and/or a wheel wash may be necessary depending on site conditions. It is important to work with your contractor to make sure you are not tracking sediment and debris offsite during construction.

Element 3 **Control Flow Rates**

- Ensure that dirty water is not leaving the construction area and that you are not increasing the amount of water that would typically leave the project area. (E.g. do not use a garden hose to wash sediment off of a driveway into the nearest storm inlet)

Element 4 **Install Sediment Controls**

- City Standard details for common sediment controls (silt fence and inlet protection) are included in this worksheet. Sometimes, additional controls such as gravel filter berms, vegetated strips, and wattles (straw rolls) are needed. Consult with your contractor to ensure that appropriate controls are being provided.

Element 5 **Stabilize Soils**

- Soils cannot be exposed and unworked for longer than 7 days during the dry season (May 1 - September 30) or 2 days in the wet season (October 1 - April 30). Soils can be stabilized in a number of ways, including temporary or permanent seeding, mulching, net and blankets, plastic coverings, sodding, and topsoiling/composting.

Element 6 **Protect Slopes**

- If you have steep slopes on your site (greater than 15%), you should coordinate with a contractor or engineer to ensure that you are adequately protecting those areas and are not potentially creating issues for yourself or adjacent property owners.

Element 7 **Protect Drain Inlets**

- Ensure that dirty water is not entering any nearby storm inlets. A City standard detail for inlet protection is included in this worksheet.

Element 8 **Stabilize Channels and Outlets**

- Typically, stabilizing channels and outlets is not necessary for small projects. If your property has surface waters such as a stream or wetland, you should consult a professional engineer to ensure that you are properly protecting those areas.

Element 9 **Control Pollutants**

- For small projects, controlling pollutants is primarily related to concrete handling to ensure that tools are washed in formed areas or containers such as Eco-pans. If there will be harmful chemicals that will be used during construction, consult a professional contractor or engineer to prepare a pollution prevention plan.

Element 10 **Control De-Watering**

- Small projects typically do not require dewatering. If you plan to excavate a large pit that may trap stormwater (like excavating a hole for an in-ground pool), consult a professional engineer to prepare a dewatering plan.

Element 11 **Maintain BMPs**

- Ensure that BMPs (e.g. silt fence, inlet protection, etc.) are properly functioning throughout the duration of construction. For example, silt fence should be upright and should not have sediment build up greater than one third of the height of the fence. Similarly, inlet protection (typically a piece of fabric inserted into a catch basin) should be cleaned regularly to avoid sediment build up and clogging of the inlet.
- Temporary Erosion and sediment control BMPs can be removed 30 days after the site is stabilized (no exposed soils) or after they are no longer needed.

Element 12 **Manage the Project**

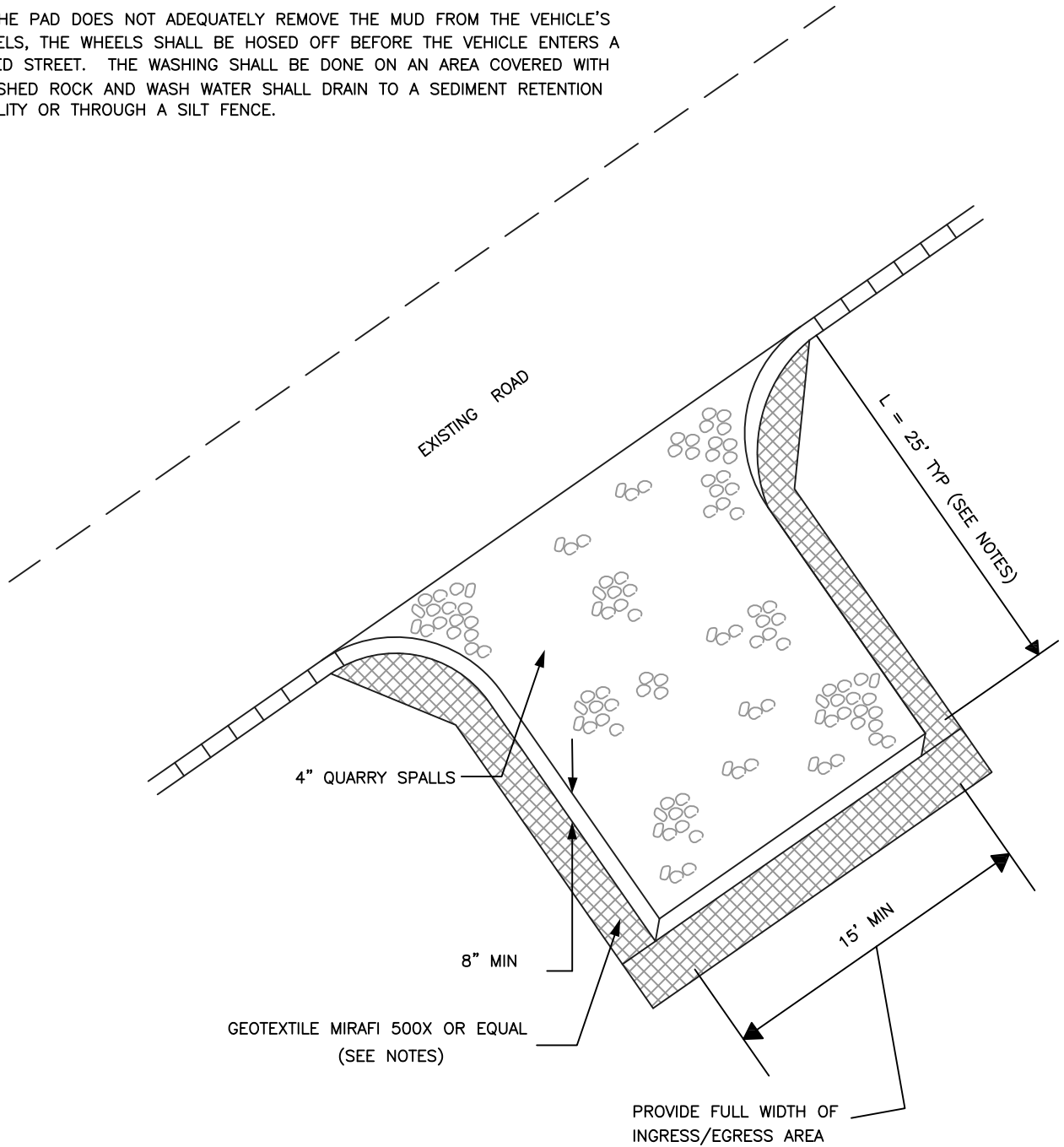
- Think about what time of year construction is anticipated to occur and if any adjustments are needed to accommodate weather patterns. Clearing, grading, and soil disturbing should be avoided or limited from October 1st through April 30th if possible.

Element 13 **Protect Low Impact Development (LID) Best Management Practices (BMPs)**

- If there is already an LID practice installed where construction activities will occur (e.g. rain garden, permeable pavement, infiltration trench, etc.), it is important to protect them from being damaged or inundated with sediment during construction.

NOTES:

1. ENTRANCE LENGTH AND WIDTH MAY VARY DEPENDING ON THE SITE.
2. CONTRACTOR SHALL PROVIDE SUFFICIENT ENTRANCE AREA FOR A MINIMUM OF TWO VEHICLES.
3. GEOTEXTILE MIRAFI 500 X OR APPROVED EQUAL SHALL BE PLACED UNDER THE ENTIRETY OF THE TEMPORARY ENTRANCE.
4. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
5. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE'S WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH A SILT FENCE.

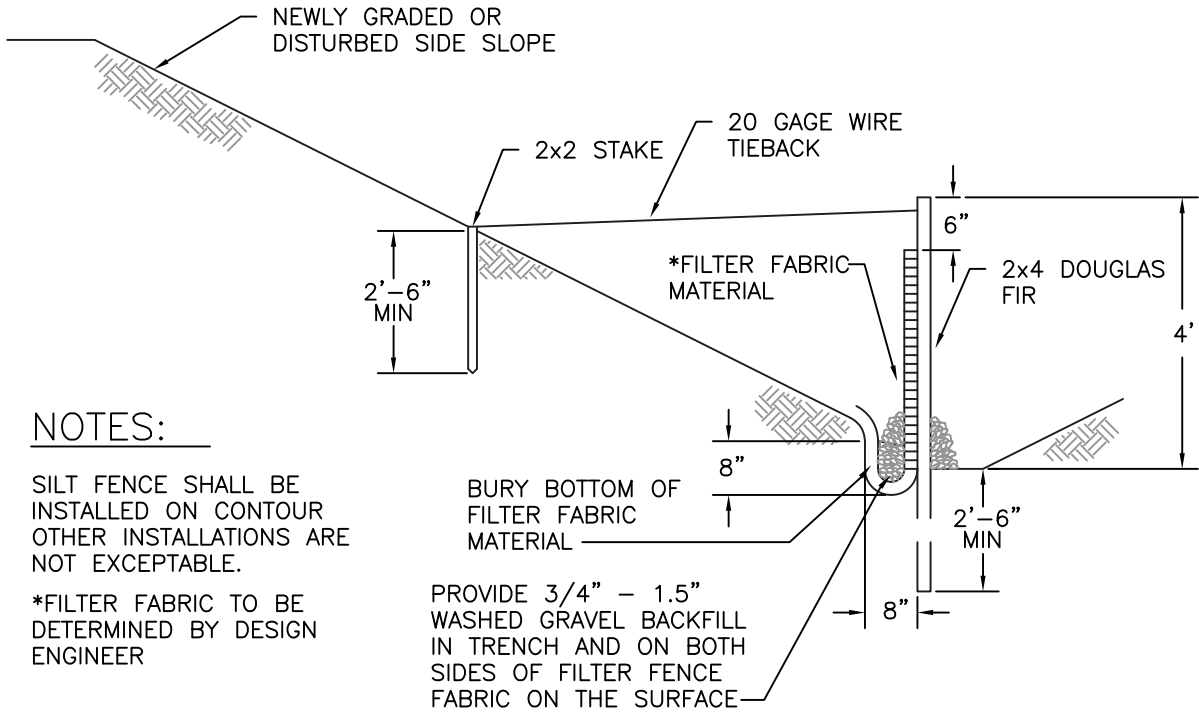


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TEMPORARY CONSTRUCTION ENTRANCE (RESIDENTIAL ONLY)

<small>DRAWN BY</small> JIM ERWIN-SVOBODA	<small>CHECKED BY</small> LINDA LIAN	<small>APPROVED BY</small> COLLEEN HARRIS	<small>REVISED BY</small> XXXX	<small>CITY STANDARD</small>
<small>FILE NAME</small> F:\DWG\COMMON\STDS\CITY\2009\05_GRD\05.01\05.01.02	<small>DATE APPROVED</small> 07/01/2009	<small>DATE REVISED</small> XX/XX/XX	<small>SCALE</small> 1:10	05.01.02



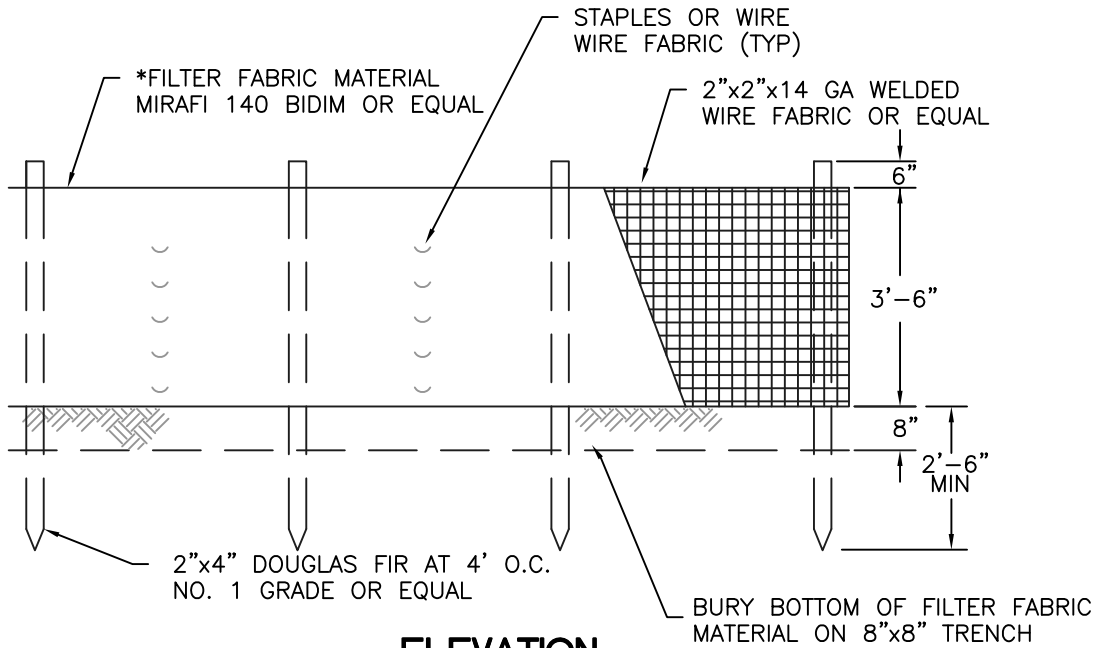
NOTES:

SILT FENCE SHALL BE INSTALLED ON CONTOUR OTHER INSTALLATIONS ARE NOT EXCEPTABLE.

*FILTER FABRIC TO BE DETERMINED BY DESIGN ENGINEER

PROVIDE 3/4" - 1.5" WASHED GRAVEL BACKFILL IN TRENCH AND ON BOTH SIDES OF FILTER FENCE FABRIC ON THE SURFACE

TYPICAL CROSS SECTION



ELEVATION



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SILTATION FENCE

<small>DRAWN BY</small> LINDA LANSING	<small>CHECKED BY</small> LINDA LIAN	<small>APPROVED BY</small> COLLEEN HARRIS	<small>REVISED BY</small> XXXX	<small>CITY STANDARD</small> 02.03.02
<small>FILE NAME</small> F:\DWG\COMMON\STDS\CITY\2009\02_SD\02.03.02	<small>DATE APPROVED</small> 09/01/1992	<small>DATE REVISED</small> 06/01/2003	<small>SCALE</small> NTS	

1. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD AND OBSERVED DURING CONSTRUCTION.
2. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITEE.
3. THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.
4. APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR RETENTION FACILITIES.
5. ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSIVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE CITY.
6. IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.
7. NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.



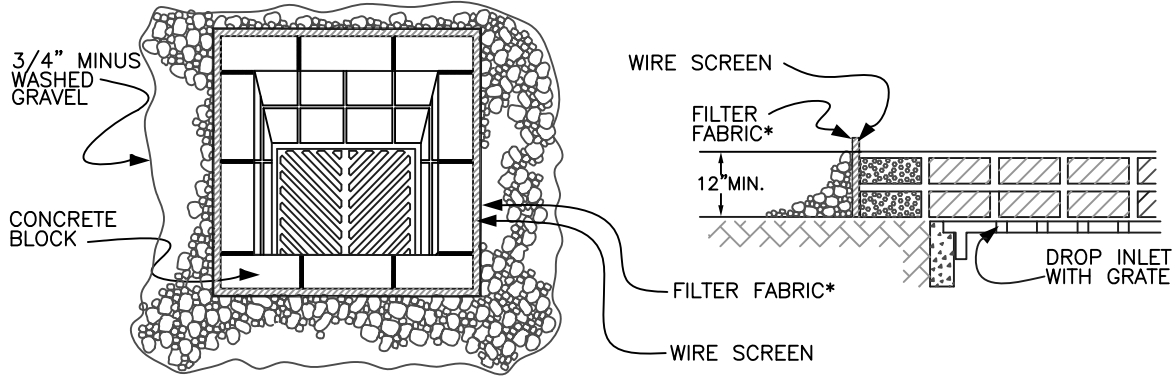
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GRADING, EROSION, AND SEDIMENTATION CONTROL NOTES

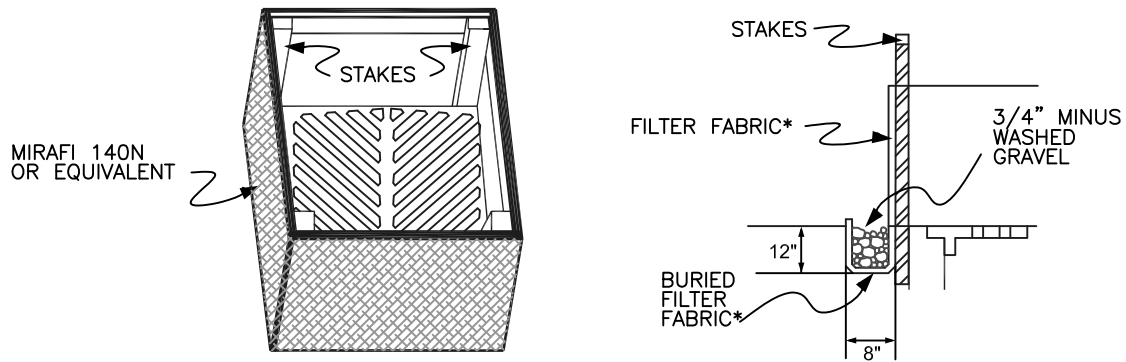
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<i>FILE NAME</i> F:\DWG\COMMON\STDS\CITY\2009\05_GRD\05.01\05.02.01	<i>DATE APPROVED</i> 07/01/2009	<i>DATE REVISED</i> 11/18/2014	<i>SCALE</i> 1:1	05.02.01

BLOCK AND GRAVEL FILTER



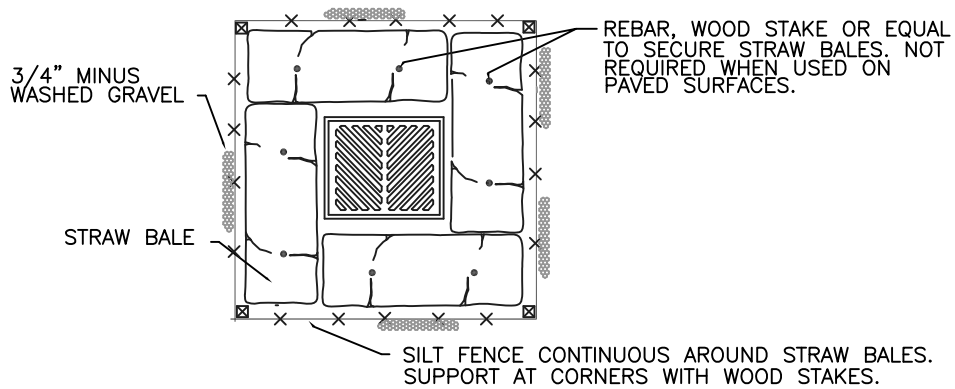
* MIRAFI 140-N OR EQUIVALENT

FILTER FABRIC FENCE



* MIRAFI 140-N OR EQUIVALENT

STRAW BALE BARRIER



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STORM DRAIN BARRIERS

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LINDA LANSING

CHECKED BY
LINDA LIAN

APPROVED BY
COLLEEN HARRIS

REVISED BY
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CONDITIONS WHERE PRACTICE APPLIES

1. BLOCK AND GRAVEL FILTER – APPLICABLE FOR AREAS GREATER THAN 5% SLOPE.
2. FILTER FABRIC FENCE – APPLICABLE WHERE THE INLET DRAINS A RELATIVELY SMALL (ONE ACRE OR LESS) AND FLAT AREA (LESS THAN 5% SLOPE).
3. STRAW BALE BARRIER – APPLICABLE WHERE INLET DRAINS A RELATIVELY FLAT DISTURBED AREA (LESS THAN 5% SLOPE) IN WHICH SHEET FLOW (NOT EXCEEDING 0.5 FT/SEC.) OCCURES. BARRIERS OF THIS TYPE SHOULD NOT BE PLACED AROUND INLETS RECEIVING CONCENTRATED FLOWS SUCH AS THOSE ALONG MAJOR STREETS AND HIGHWAYS.

1. BLOCK AND GRAVEL FILTER – INSTALLATION PROCEDURE

- A: PLACE WIRE MESH OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF ONE FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. USE WIRE SCREEN WITH 1/2-INCH OPENINGS. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, OVERLAP THE STRIPS. PLACE FILTER FABRIC* OVER WIRE MESH.
- B: PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, SO THAT THE OPEN ENDS FACE OUTWARD, NOT UPWARD. THE ENDS OF ADJACENT BLOCKS SHOULD ABUT. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF BLOCKS THAT ARE 4-INCH, 8-INCH AND 12-INCH WIDE. THE ROW OF BLOCKS SHOULD BE AT LEAST 12-INCHES BUT NO GREATER THAN 24-INCHES HIGH.
- C: PLACE WIRE SCREEN OVER THE OVERSIDE VERTICAL FACE (OPEN END) OF THE CONCRETE BLOCKS TO PREVENT STONES FROM BEING WASHED THROUGH THE BLOCKS. USE WIRE SCREEN WITH 1/2-INCH OPENINGS.
- D: PILE STONES AGAINST THE WIRE MESH TO THE TOP OF THE BLOCKS. USE 3/4" MINUS WASHED GRAVEL.

2. FILTER FABRIC FENCE – INSTALLATION PROCEDURE

- A: PLACE 2-INCH BY 2-INCH WOODEN STAKES AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND DRIVE THEM AT LEAST 8-INCHES INTO THE GROUND. THE STAKES MUST BE AT LEAST 3 FEET LONG.
- B: EXCAVATE A TRENCH APPROXIMATELY 8-INCHES WIDE AND 12-INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE STAKES.
- C: STAPLE THE FILTER FABRIC* TO THE WOODEN STAKES SO THAT 32-INCHES OF THE FABRIC EXTENDS AND CAN BE FORMED INTO THE TRENCH, AND USE HEAVY-DUTY WIRE STAPLES AT LEAST 1/2-INCHES LONG.
- D: BACKFILL THE TRENCH WITH 3/4-INCH MINUS WASHED GRAVEL ALL THE WAY AROUND.

3. STRAW BALE BARRIER – INSTALLATION PROCEDURE

- A: EXCAVATE A 4-INCH DEEP TRENCH AROUND THE INLET. MAKE THE TRENCH AS WIDE AS A STRAW BALE.
- B: ORIENT STRAW BALES WITH THE BINDINGS AROUND THE SIDES OF THE BALES RATHER THAN OVER AND UNDER THE BALES.
- C: PLACE BALES LENGTHWISE AROUND THE INLET AND PRESS THE ENDS OF ADJACENT BALES SECURELY IN PLACE.
- D: DRIVE TWO 2-INCH BY 2-INCH STAKES THROUGH EACH BALE TO ANCHOR THE BALE SECURELY IN PLACE.
- E: BACKFILL THE EXCAVATED SOIL AND COMPACT IT AGAINST THE BALE.
- F: WEDGE LOOSE STRAW BETWEEN BALES TO PREVENT WATER FROM FLOWING BETWEEN BALES.

* MIRAFI 140-N OR EQUIVALENT



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STORM DRAIN BARRIERS NOTES

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