THE BOROUGH OF HANOVER

STORMWATER MANAGEMENT PERMIT APPLICATION

SECTION I

Attention: If you, as a property owner, are planning to construct any type of structure or improvement to your property – patio, driveway, etc. – that will impact the Stormwater runoff leaving your property, then you must comply with the Hanover Borough Stormwater Management Ordinance No. 2212. Completion of this form will allow the staff to guide you through the associated regulations.

Step 1: Complete the project information

Project Information: Property Owner: _____

Property Address: _____

Contact Information:

☐ Daytime Phone Number: _____

☐ Email Address: _____
Check box for the preferred method of communication above

Proposed Development (please provide information regarding size, type, distance from property lines and existing site features, etc.):

_____

_____

_____

Have any other exterior improvements been completed on the property since *December 23, 2014?*
If so please list the projects and permit numbers (Attach if necessary) _____
_____
_____

Step 2: Provide sketch of property with property lines, existing improvements and proposed improvements.

Step 3: Return this form and sketch to the *Building Permit Officer.*

Review of this form will allow the Building Permit Officer to determine what requirements of the Stormwater Management Ordinance apply to your project. The Building Permit Officer will contact you at the phone number or email address indicated above once the internal review has been completed (typically within two days) and the application can then be finalized.

This meeting should occur before completing Section II of the Application.

STORMWATER MANAGEMENT PERMIT APPLICATION SECTION II

Read, sign and date the application below to acknowledge and accept the requirements (including construction requirements and associated administrative items) outlined and reviewed with the Building Permit Officer.

I understand and agree to the following:

1. I will be required to construct all improvements and associated storm water management facilities in accordance with the attached plans and details.
2. Any exemption, permit, or authorization issued or approved based on false, misleading or erroneous information provided by an applicant is void without the necessity of any proceedings for revocation. Any work undertaken or use established pursuant to such permit or other authorization is unlawful. No action may be taken by a board, agency or employee of the Borough purporting to validate such a violation.
3. Upon presentation of proper credentials, the Borough may enter at reasonable times upon any property to inspect the condition of the Stormwater structures and facilities in regard to any aspect regulated by this Ordinance. Such inspections may be conducted at the owner's expense.
4. Proper management of Stormwater runoff associated with this permit is the responsibility of the property owner.

_____ _____ _____

Print Name Signature Date

Borough Use Only:

Existing Impervious Area on Property (prior to this Application): _____ ft^2 (Copy previous permits)

New Impervious Area (Result of this Application): _____ ft^2 (summarized in Step I of Section III)

Total Impervious Area _____ ft^2 Total Impervious Area Added since December 23, 2014 _____ ft^2

Project Fees: $_____ (see fee schedule)

_____ Paid by Applicant

Project Application is:

Exempted from SWM Site Plan (Section 302.A, C, D): ____ (Refer to Step 2 of Section III)

Partially exempted and approved. Required Submittals attached (Section 302.B or Equivalent DIA): ____ (Refer to Step 2 of Section III); Less than 500 ft^2 ____

Project is approved (Required Submittals attached):____
SWM Permit No. _____

_____ _____ _____

Municipal Official Signature Date

STORMWATER MANAGEMENT PERMIT APPLICATION SECTION III

Guidance Document for Borough Staff on Proper Stormwater Management

Act 167 requires all Municipalities to adopt a Stormwater Management Ordinance in accordance with York County Integrated Water Resources Plan. Therefore, all regulated activities within the Borough should comply with the Borough's SWM Ordinance No. 2235 . To accomplish this goal, all regulated activities should be reviewed in accordance with this Guidance Document.

Step 1: Property owner proposes:

New Pavement (Parking area, driveway) _____ SF
New Building (Shed, Garage, Addition) _____ SF

Sidewalk or Patio (Concrete, Brick) _____ SF

Changing the ground surface cover (Clearing a wooded lot, converting a meadow area to yard) _____ SF
Farming Activities (not new buildings or impervious) – If in compliance with Chapter 102, exempted.
Timber Activities – If in compliance with Chapter 102, exempted.

Step 2: After the applicant completes and returns Section 1 of the Application. Complete the following to see what requirements apply to the Regulated Activity:

1. Go to York County's Tax Assessment website located at http://gis.york-county.org/MapData.aspx. Find the property in question. Change the map view to the aerial image and print out a copy. Have the property owner label the Regulated Activity and locational information (distance from existing site features and property lines, flow direction, etc.) on the printout.
2. Determine if the proposed project qualifies as a Disconnected Impervious Area (DIA) in accordance with Appendix B of the Ordinance.
    a. Check all that apply.
        i. For Structures:
            1. Less than 500ft^2 draining to individual downspouts. ___Yes ___No (if No consult municipal engineer)
                _____ SF (Downspout I) _____ SF (Downspout 2)
                a. *Check site map created above.*
            2. Type D Soils __ Yes __No (if Yes consult municipal engineer)
                a. *Check soils map, or check Property Management Program, or check Soil Survey website.*
            3. 75' Pervious flow path provided? ___ Ft (if No an equivalent DIA approach must be taken)
                a. *Check site map created above. The pervious flow path should consist of vegetated areas (grass, meadow, etc.) and be completely contained within the property of the Regulated Activity.*
            4. Flow path < 5% slope? __ Yes __No (if>5% an equivalent DIA approach must be taken)
                a. *Property owner knows slope or field verify.*

        ii. For Pavement/Patios At-grade Impervious Areas:
            1. Length of impervious area is less than 75' ___Yes ___No (if No consult municipal engineer)
                a. *Check site map created above. The pervious flow path should consist of vegetated areas (grass, meadow. etc.) and be completely contained within the property of the Regulated Activity.*
            2. Pervious flow path is greater than length of impervious ___Yes ___No (if No consult municipal engineer)
                a. *Check site map created above.*
            3. Type D Soils ___Yes ___No (if Yes consult municipal engineer)

a. *Check soils map, or check Property Management Program, or check Soil Survey website.*

4. Impervious and Pervious Flow Path < 5% slope ___Yes ___No (if No consult municipal engineer)
    a. *Property owner knows slope or field verify.*

iii. If project meets all provisions of Sections i. or ii. then the project is a DIA
iv. If none, or only a portion, of the provisions of Section i. and ii. are met, the project is Not a DIA.

b. If less than 500 ft^2:
   i. Exempt from SWM Site Plan and Rate Control
   ii. Project can be constructed without Municipal review and approval.
   iii. Applicant should be aware that Stormwater runoff is their responsibility and if a problem arises in the future, they will be required to remediate it.

c. If **DIA** and:
   i. Greater than 500 ft^2 and less than 1,000 ft^2:
      1. Exempt from SWM Site Plan and Rate Control
      2. Project can be constructed without Municipal review and approval
      3. Applicant should be aware that Stormwater runoff is their responsibility and if a problem arises in the future, they will be required to remediate it.
   ii. Greater than 1,000 ft^2 and less than 5,000 ft^2
      1. Exempt from Peak Rate Control
      2. SWM Site Plan should be submitted. See requirements in d-i below.

d. If **not DIA** and:
   i. Less than 5,000 ft^2
      1. Qualifies as Equivalent DIA Project
         2. Applicant shall submit:
            i. Site Plan (Sample -Attachment A1,A2)
               1. Expand the Site Map to show the proposed storm water facilities.
            ii. Design (Sample. Attachments B1 through B4)
               1. These facilities should be installed to control Stormwater runoff. The location and size of the facility should be indicated on the Simple Site Plan.
            iii. Calculations (See Samples)
               1. Calculations for any variable design must show (at a minimum) that proposed facilities can capture the required 2 inches of runoff (Area X 2/12).
            iv. Easement in accordance with 501.B (If necessary)
               1. *Each municipality should have their solicitor develop an easement. At a minimum, the easement should serve to ensure that the SWM facility* is *kept in place for as long as the regulated activity exists as well as allow for Municipal access for inspection and if required, maintenance and repair.*
            v. O&M Agreement in accordance with 502 (Sample -Attachment F)
            vi. O&M Plan in accordance with 501.C (Sample –Attachment G)
            vii. Inspection Form (Sample -Attachment H)
               1. *This will need to be completed by the property owner on a defined basis and submitted to the Municipality to ensure the proposed facility is working as designed*

O & M Plan for Equivalent DIA Regulated Activities

*For Seepage Beds and Trenches only; all other facilities will need an Inspection Form developed by the property owner.

Construction:

1. Install erosion and sedimentation control facilities.
2. Stormwater Management Facility(ies) shall be installed before impervious areas are completed. If earthwork is involved during the construction of the impervious area, then extreme caution shall be taken so that sediment does not wash into the SWM Facility(ies).
3. Mark the locations of the SWM Facility(ies).
4. Excavate the SWM Facility to the required depth and install bottom layer of stone and drain pipe (leave exposed). Contact municipality for inspection prior to filling. If standing water is encountered, a SWM Site Plan may need to be submitted; contact Municipal Engineer. All excavated materials shall be removed from the site or stabilized.
5. Line excavation with Geotextile.
6. Backfill SWM Facility with required stone. If required: Install piping, clean-outs and associated facilities as detailed.
7. If required: Close geotextile material over stone bedding.
8. If required: Place topsoil over trench.
9. Stabilize and seed all disturbed areas.

Maintenance:

1. The SWM Facility shall be checked regularly to ensure that no standing water exists in the facility 3 days after a rain event.
    a. If water is encountered, the facility may need to be modified. Notification of the Borough is required before any modifications are made.
2. Monitor the SWM facility to ensure that no sediment, grass clippings, leaves, and other similar accumulations occur on top of, and/or within the SWM Facility.

Inspection Reports:

1. Submit the provided Inspection Form to the Borough on the following schedule:
    a. One year from the date of installation.
    b. Every 1 year following the initial inspection, for the first 5 years of operation.
    c. Every 3 years following the first 5 years of operation.
    d. After any 10+ year rain event (i.e. after a rain event that results in over 4 inches of rain in a 24 hour period)
2. Keep a record of all inspections.
3. Should the owner fail to complete these reports in a timely manner, the Borough will inspect the facilities, at the cost of the owner.

I have read and agree to the above Operation and Maintenance Plan. I, as the property owner, am responsible for the proper construction, operation and maintenance, and filing the proper inspection reports for the SWM Facility. If I fail to adhere to any of these tasks, the Township may perform the services required and charge me the appropriate fees. Nonpayment of the fees may result in a lien against my property.

_____	_____	_____
Property Owner Name (Printed)	Signature	Date

Inspection Form

*For Seepage Beds and Trenches only; all other facilities will need an Inspection Form developed by the property owner.

1. Property Owner: _____
2. Property Address: _____
3. SWM Permit No: _____
4. SWM Facility: ___At Grade Seepage Bed/Trench ___Below Grade Seepage Bed/Trench

All facilities:

1. SWM Facility
    a. Is Facility functioning as designed? ___Yes ___No
    b. No standing water exists after 3 days without rain? ___Yes ___No
2. Area surrounding SWM Facility
    a. Are there signs that the facility is not functioning properly?
        i. Channels or erosion occurring on the downstream side of the facility, indicating overflow? ___Yes ___No
        ii. If Yes, have the channels been stabilized? ___Yes ___No

b. Has any damage or increased runoff occurred across the property line? ___Yes ___No

At Grade Seepage Bed/Trench:

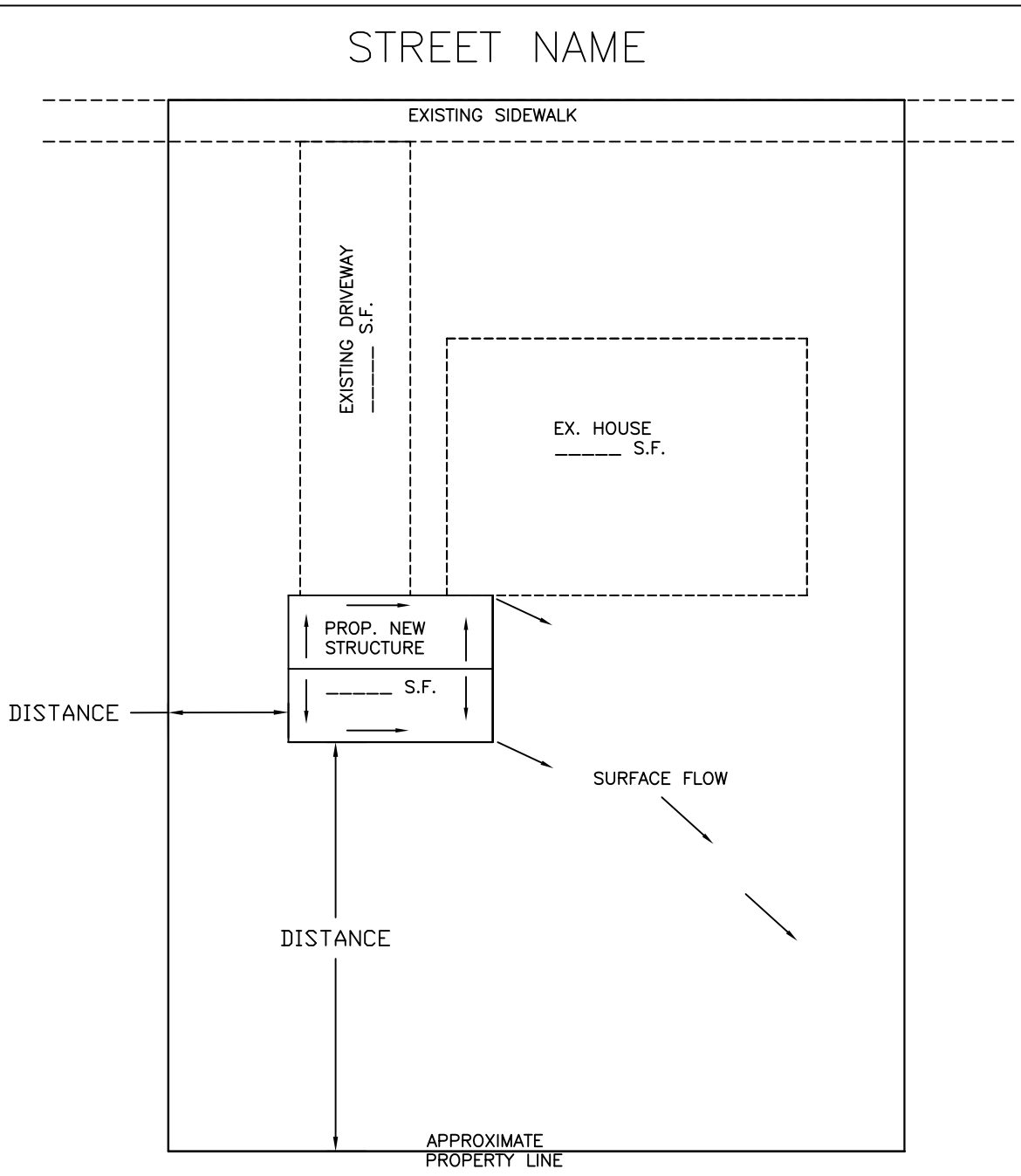
1. SWM Facility
    a. No sediment, leaves, grass clippings, or similar accumulations are present in the facility
        i. If present, have they been removed? ___Yes ___No
2. Area surrounding SWM Facility
    a. Has any of the Seepage Bed/Trench stone washed away? ___Yes ___No
        i. Has the stone been replaced? ___Yes ___No
        ii. If a continuing problem, has larger stone been placed on Bed/Trench for stabilization? ___Yes ___No

Below Grade Seepage Bed/Trench:

1. SWM Facility
    a. Overflow piping on downspouts have been inspected and, if necessary, cleaned? ___Yes ___No
    b. Cleanouts have been inspected and, if necessary, cleaned? ___Yes ___No

_____ _____ _____

Property Owner Name (Printed) Signature Date

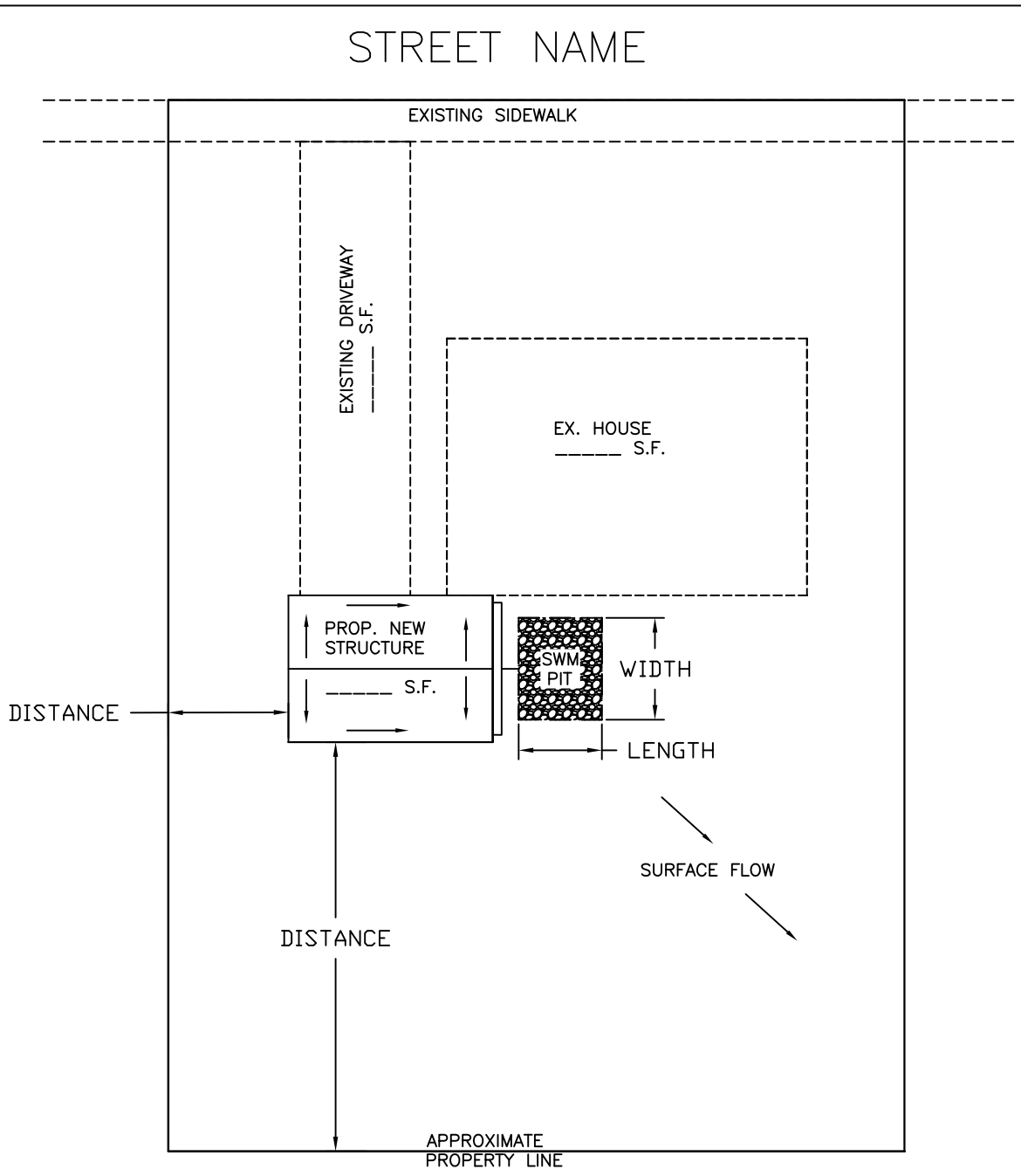


NOTES
1. PROVIDE SQUARE FOOTAGE OF LOT AND OF ALL EXISTING/PROPOSED IMPERVIOUS AREAS
2. PROVIDED DISTANCE OVER LAWN FROM NEW IMPERVIOUS AREAS TO EXISTING, AS SHOWN
4. SHOW DIRECTION OF GRADING/SURFACE FLOW ON LOT
3. THIS PLAN MAY BE HAND DRAWN OR PRINTED

THE BOROUGH OF HANOVER

ATTACHMENT A1
EXAMPLE SITE PLAN SKETCH

DATE	DRAWN BY	DWG NO.
3/26/2015	ZRS	N/A
SCALE	CHECKED BY	SHEET
NOT TO SCALE		1 OF 2

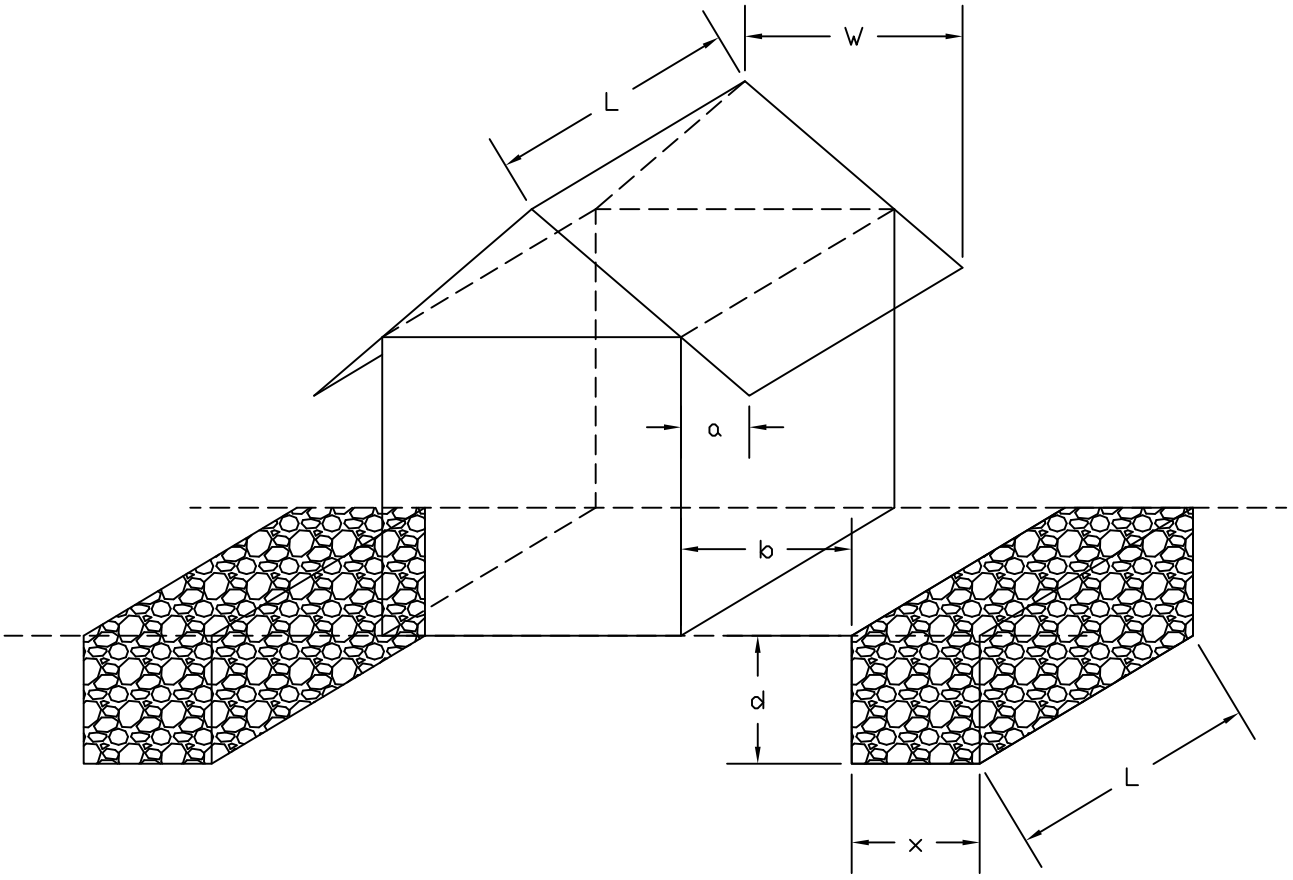


NOTES
1. PROVIDE SQUARE FOOTAGE OF LOT AND OF ALL EXISTING/PROPOSED IMPERVIOUS AREAS
2. PROVIDED DISTANCE OVER LAWN FROM NEW IMPERVIOUS AREAS TO EXISTING, AS SHOWN
4. SHOW DIRECTION OF GRADING/SURFACE FLOW ON LOT
3. THIS PLAN MAY BE HAND DRAWN OR PRINTED

THE BOROUGH OF HANOVER

ATTACHMENT A2
EXAMPLE SITE PLAN SKETCH

DATE	DRAWN BY	DWG NO.
3/26/2015	ZRS	N/A
SCALE	CHECKED BY	SHEET
NOT TO SCALE		2 OF 2



KEY

L = LENGTH OF STRUCTURE ROOF = LENGTH OF SEEPAGE TRENCH (FT)
W = HORIZONTAL WIDTH OF ONE SIDE OF ROOF (FT)
a = EAVE OVERHANG (FT)
b = DISTANCE FROM STRUCTURE WALL TO SEEPAGE TRENCH (FT)
= a + 1 FT (PLACE SEEPAGE TRENCH ONE FOOT PAST EAVES)
x = WIDTH OF SEEPAGE TRENCH (FT) = APPROXIMATELY 2 TO 3 FT
d = DEPTH OF SEEPAGE TRENCH (FT)

REQUIRED RUNOFF CAPTURE VOLUME OF TRENCH = L*W*2/12 = L*x*d*0.4 = X=0.28W (D=1.5')

RATIO: 3.6 TO 1
(IMPERVIOUS TO INFILTRATION)

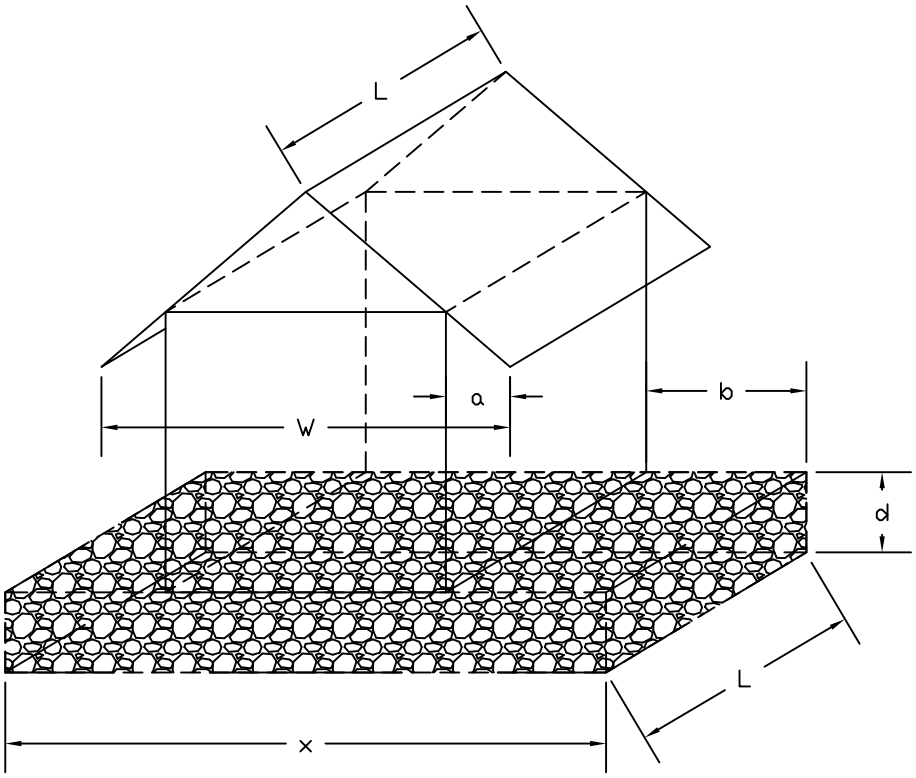
NOTES

1. TRENCH MUST BE PROVIDED ON EACH SIDE OF STRUCTURE.
2. TRENCH TO BE WRAPPED IN CLASS 1 GEOTEXTILE.
3. TRENCH TO BE FILLED WITH CLEAN STONE (AASHTO #2 TYP.).
4. TRENCH TO BE CONSTRUCTED AT 0% SLOPE ON UNDISTURBED SOIL.
5. TRENCH TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION.

THE BOROUGH OF HANOVER

ATTACHMENT B1
STORMWATER MANAGEMENT EXAMPLE:
STRUCTURES WITHOUT GUTTERS A

DATE	DRAWN BY	DWG NO.
11/29/11	ZRS	N/A
SCALE	CHECKED BY	SHEET
NOT TO SCALE		1 OF 4



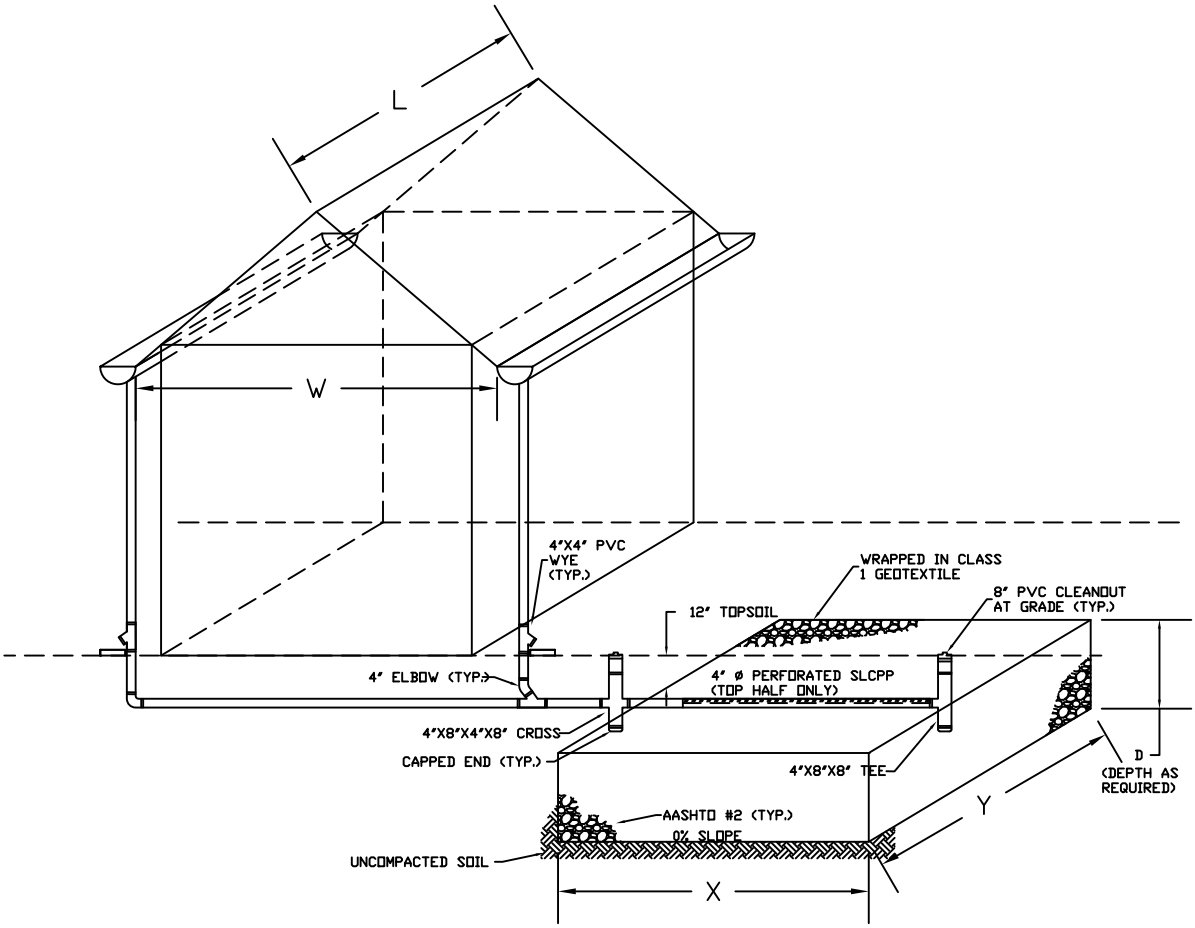
KEY
L = LENGTH OF STRUCTURE ROOF = LENGTH OF SEEPAGE BED (FT)
W = HORIZONTAL WIDTH OF ENTIRE ROOF (FT)
a = EAVE OVERHANG (FT)
b = DISTANCE FROM STRUCTURE WALL TO SEEPAGE BED (FT)
= a + 1 FT (PLACE SEEPAGE BED ONE FOOT PAST EAVES)
x = WIDTH OF SEEPAGE BED (FT)
x = W + 2 FT
d = DEPTH OF SEEPAGE BED (FT)
d = 6" TO 8" (AVERAGE)

NOTES
1. BED TO BE WRAPPED IN CLASS 1 GEOTEXTILE.
2. BED TO BE FILLED WITH CLEAN STONE (AASHTO #2 TYP.)
3. BED TO BE CONSTRUCTED AT 0% SLOPE ON UNDISTURBED SOIL.
4. BED TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION.

THE BOROUGH OF HANOVER

ATTACHMENT B2
STORMWATER MANAGEMENT EXAMPLE:
STRUCTURES WITHOUT GUTTERS B

DATE	DRAWN BY	DWG NO.
11/29/11	ZRS	N/A
SCALE	CHECKED BY	SHEET
NOT TO SCALE		2 OF 4



KEY
L = LENGTH OF STRUCTURE ROOF (FT)
W = HORIZONTAL WIDTH OF ENTIRE ROOF (FT)
X = WIDTH OF INFILTRATION BED (FT)
Y = LENGTH OF INFILTRATION BED (FT)

REQUIRED VOLUME OF RUNOFF CAPTURE = L*W*2/12 = X*Y*D*0.4 (ASSUME: X=W, D=2FT)
REQUIRED VOLUME OF BED = X*Y*D

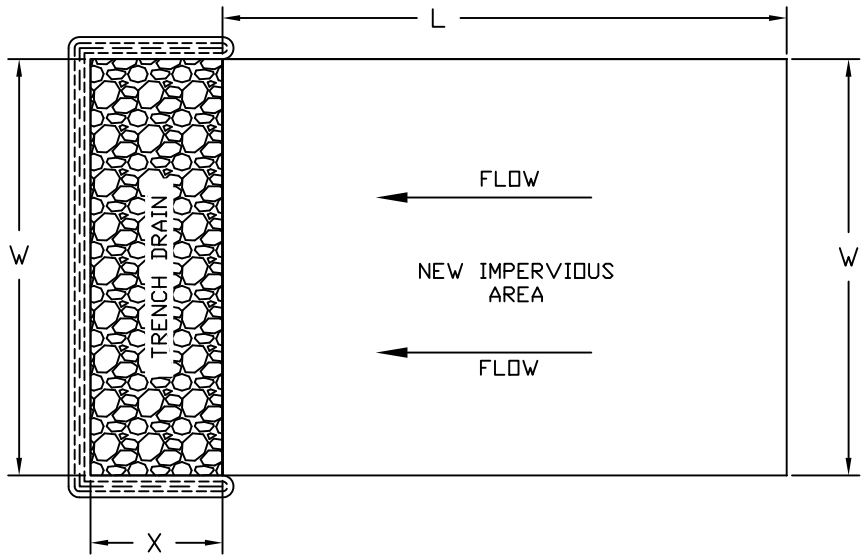
Y=0.21*L
RATIO: 4.76 TO 1
(IMPERVIOUS TO INFILTRATION)

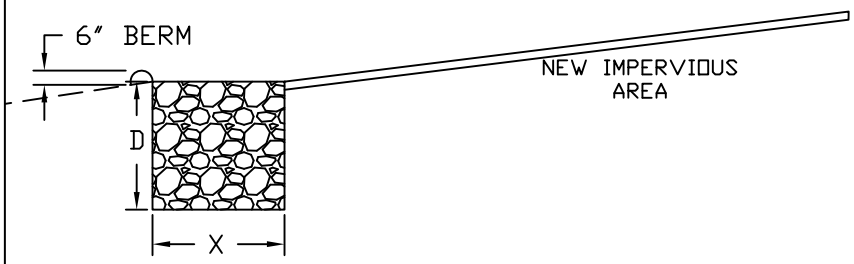
NOTES
1. PIPING AND CLEANOUTS TO BE CENTERED WITHIN INFILTRATION BED.
2. BOTTOM AND SIDES OF BED TO BE WRAPPED IN CLASS 1 GEOTEXTILE.
3. BED TO BE FILLED WITH CLEAN STONE (AASHTO #2 TYP.)
4. BED TO BE CONSTRUCTED AT 0% SLOPE ON UNDISTURBED SOIL.
5. BED TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION.

THE BOROUGH OF HANOVER

ATTACHMENT B3
STORMWATER MANAGEMENT EXAMPLE:
STRUCTURES WITH GUTTERS

DATE	DRAWN BY	DWG NO.
11/29/11	ZRS	N/A
SCALE	CHECKED BY	SHEET
NOT TO SCALE		3 OF 4





KEY
L = LENGTH OF NEW IMPERVIOUS SURFACE (FT)
W = WIDTH OF NEW IMPERVIOUS SURFACE (FT)
W = LENGTH OF SEEPAGE TRENCH/BED (FT)
X = WIDTH OF SEEPAGE TRENCH/BED (FT)

REQUIRED VOLUME OF RUNOFF CAPTURE = L*W*2/12 = X*W*D*0.4
FOR BASIC DESIGN ASSUME: X=.21*L, D=2FT WITH PIPE IN TRENCH;
X=.28*L, D=1.5FT WITHOUT PIPE

REQUIRED VOLUME OF TRENCH/BED = X*W*D

NOTES
1. PIPING AND CLEANOUTS TO BE CENTERED WITHIN INFILTRATION BED.
2. BOTTOM AND SIDES OF BED TO BE WRAPPED IN CLASS 1 GEOTEXTILE.
3. BED TO BE FILLED WITH CLEAN STONE (AASHTO #2 TYP.)
4. BED TO BE CONSTRUCTED AT 0% SLOPE ON UNDISTURBED SOIL.
5. BED TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION.

THE BOROUGH OF HANOVER

ATTACHMENT B4
STORMWATER MANAGEMENT EXAMPLE:
AT-GRADE IMPERVIOUS

DATE	DRAWN BY	DWG NO.
3/26/2015	ZRS	N/A
SCALE	CHECKED BY	SHEET
NOT TO SCALE		4 OF 4