

STORMWATER MANAGEMENT (SWM)/LAND DISTURBANCE ACTIVITY PERMIT APPLICATION UNDER 3,000 SQUARE FEET

Contact Information			
Name	Address	Phone(s)	E-mail
<input type="checkbox"/> Property Owner			
<input type="checkbox"/> Applicant			
<input type="checkbox"/> Contractor			

Site Address: _____ SWM Permit # _____

Tax Parcel ID _____

Step One (1)

- Have any other exterior improvements been completed on the property since October 20, 2022? If so, please list the projects and permit numbers below.

Step Two (2)

- Provide sketch plan of the property to include property lines, existing improvements, proposed improvements and the square footage of all existing impervious surfaces. You must also show the location and type of erosion and sediment control to be used (sample attached).

Step Three (3)

Calculate Required Storage (cu. ft.)

Enter the information in the blanks below:

1. New Impervious Area: _____ s.f.

2. Impervious Area to be Removed _____ s.f.

3. Calculate the total required sq-ft (#1 + #2) of impervious area which must be captured: _____ s.f.

5. Total required cubic feet of storage (Divide #3 by 6): _____ c.f.

Step Four (4)

Total Regulated Impervious Area is 500 s.f. or less.

oRegulated activity may be fully exempt and a fee-in-lieu of \$100.00 may be paid.

Total Regulated Impervious Area is greater than 500 s.f. but less than 3,000 s.f.

Check appropriate box showing proposed method of SWM Best Management Practice (BMP) & complete information as required. You may request the below information to be completed by the Township. SWM can be addressed by any method or combination thereof that meets the requirements of the PA BMP Manual. See BMP Fact Sheets or Chapter 6 the PA BMP Manual for information on types of stormwater treatment options. The PA BMP manual can be found on the web at: www.elibrary.dep.state.pa.us/dsweb/View/Collection-8305

METHOD 1. Gravel Recharge (Dry Well, Infiltration Trench):

D-1 Detail: Infiltration Detail – Roof Infiltration

D-2 Detail: Infiltration Detail – Paver Surface

D-3 Detail: Infiltration Detail – Concrete Surface

D-4 Detail: Infiltration Detail – Grass Surface

Other: provide details on the size, location, and materials to be used (stone, fabric, etc)

$$\text{Storage Provided} = \frac{\text{Length}}{\text{Length}} \times \frac{\text{Width}}{\text{Width}} \times \frac{\text{Depth}}{\text{Depth}} \times \frac{0.4 \text{ (void ratio)}}{0.4 \text{ (void ratio)}} = \frac{\text{Cubic feet of storage}}{\text{Cubic feet of storage}}$$

METHOD 2. Surface Retention (Vegetated Swale w/ Check Dam, Rain Garden)

Swale w/ Check Dam

$$\text{Storage Provided} = \frac{\text{Length}}{\text{(Length)}} \times \frac{\text{Bottom Width}}{\text{(Bottom Width)}} \times \frac{\text{Avg. Ponding Depth}}{\text{(Avg. Ponding Depth)}}$$

Rain Garden

$$\text{Storage Provided} = \frac{\text{Length}}{\text{(Length)}} \times \frac{\text{Width}}{\text{(Width)}} \times \frac{\text{Avg. Ponding Depth}}{\text{(Avg. Ponding Depth)}}$$

$$\text{Storage Provided (irregular shapes)} = \frac{\text{Surface Area}}{\text{(Surface Area)}} \times \frac{\text{Avg. Ponding Depth}}{\text{(Avg. Ponding Depth)}}$$

METHOD 3. Capture and Reuse (Rain Barrel, Cistern)

Rain Barrel/Cistern

$$\text{Storage Provided in Circular Cistern (c.f.)} = \frac{\text{Diameter (ft)}^2}{\text{[Diameter (ft)]}^2} \times \frac{\text{Depth(ft)}}{\text{[Depth(ft)]}} \times \frac{0.785}{0.785}$$

Note: All "stand alone" rain barrels or similar storage vessels must be provided with a soaker hose or timed water release clock (\$25 at local hardware stores). These recommended devices connect to a standard residential hose bib connection.

METHOD 4. Disconnected Impervious Area (DIA) - This method of SWM collects water from the roof or pavement and allows it to dissipate across relatively flat (less than 5% grade) land for an extended length, to be absorbed.

Disconnect Impervious Area

			Length of pervious flow path¹	Roof area treated as disconnected²
New area to be controlled	_____	s.f.		
Slope of overland path from roof ≤ 5%	_____	%	15 ft – 29 ft =	20%
Length of pervious flow path ¹	_____	ft.	30 ft - 44 ft =	40%
Area treated as disconnected ²	_____	%	45 ft - 59 ft =	60%
			60 ft - 74 ft =	80%
			75 ft or more =	100%

Step Five (5)

Add the total volume control provided for methods 1 - 4 used

TOTAL PROVIDED _____ **c.f.**

EROSION AND SEDIMENT CONTROL REQUIREMENTS: All land disturbance activities require erosion and sediment control. The use of silt sock, silt fence or hay bales are placed around the land disturbance area in such a way to prevent sediment from leaving the site. The erosion and sediment control must remain in place as long as there is exposed earth or soil or until the area is covered in seed and straw. All plans must show the location and type of erosion and sediment control proposed for the project.

INSPECTION REQUIREMENTS AND SCHEDULING: A pre-construction meeting is required prior to start of construction or release of any additional permits. Inspections shall be required during installation of materials and structures, upon the completion of all improvements and at other times deemed appropriate by the Township Engineer or Zoning Officer. An outline of the required inspections will be provided with the approved permit. No work shall begin on a subsequent phase until the preceding phase has been inspected and approval has been noted on the permit. The applicant must correct any portion of the work, which does not comply with the approved plan. No work may proceed on any subsequent phase until the required corrections have been made and approved. The provisions stated herein shall not be construed as mandating periodic inspections and the undertaking of periodic inspections shall not be construed as an acceptance of the work during construction or as a final inspection of the construction.

OPERATION & MAINTENANCE (O&M): I understand that I, the property owner, am responsible for the O&M of the SWM facilities. If I fail to adhere to the O&M requirements, the Township may perform the services required and charge the appropriate fees. Nonpayment of fees may result in a lien against the property.

OWNER CERTIFICATION: I hereby make application for a stormwater management permit under all applicable ordinances of Hellam Township and hereby certify under penalty of perjury, the facts set forth herein and in the plans submitted herewith are true and correct. I further agree the premises will not be occupied prior to approval of this application. I hereby indemnify and hold harmless Hellam Township and/or the Township Engineer for any liability arising from the approval of this application or issuance of any permit. I am aware this permit expires one year from date of issuance.

Signature of Owner

Date

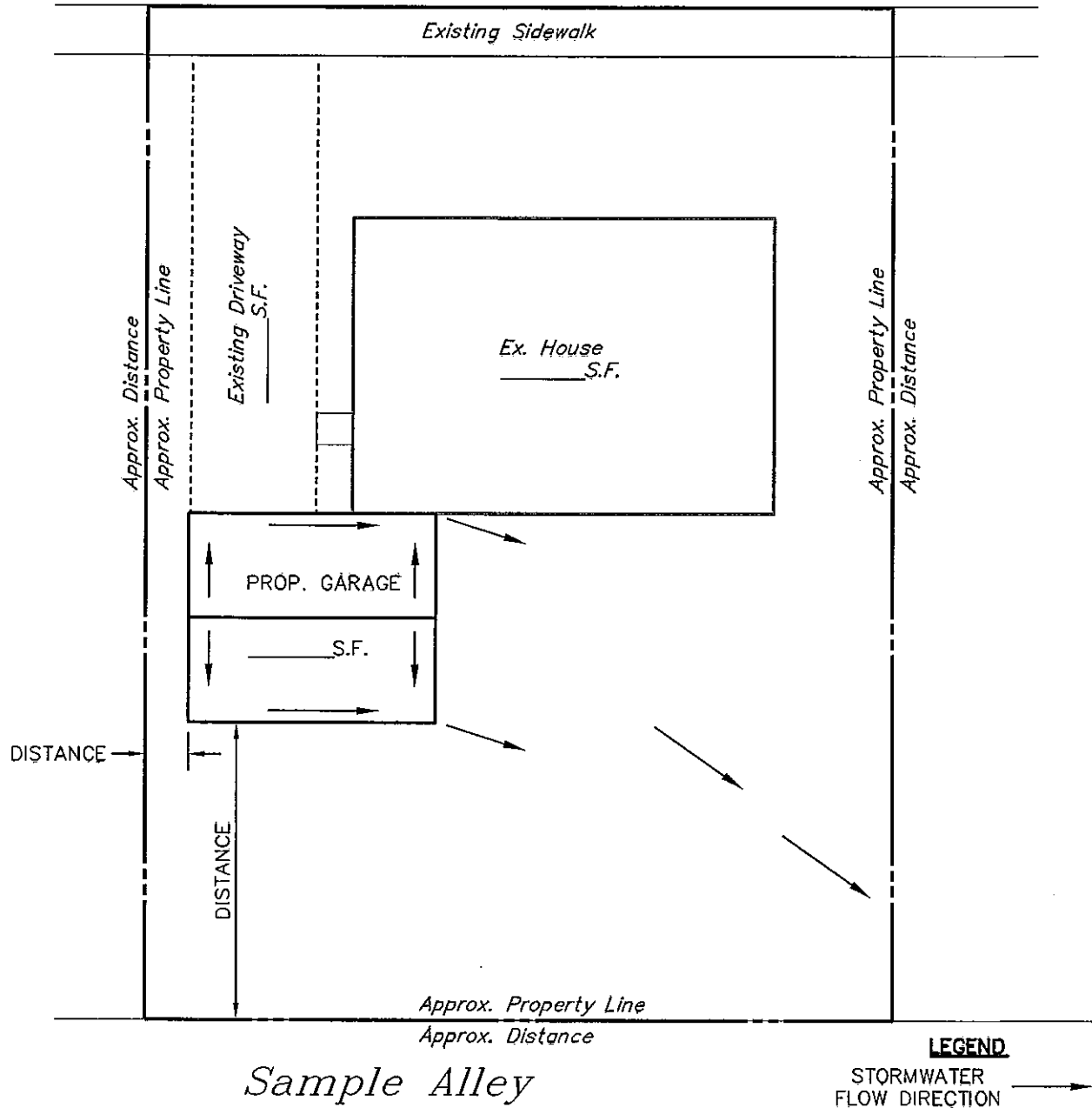
TOWNSHIP APPROVAL

Signature of Zoning Officer or Township Engineer

Date

NOTE:
THIS PLAN CAN
BE HAND DRAWN.

Main Street



LEGEND

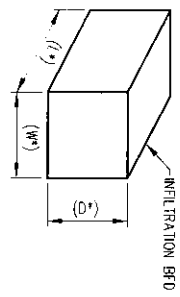
STORMWATER
FLOW DIRECTION →

Sample Alley

SAMPLE SKETCH/ SITE PLAN

INFILTRATION BED SIZE (EXAMPLE)

EXAMPLE: $(A^* = 2,000 \text{ SF NEW IMPERVIOUS SURFACE})$
 $A^* (2,000 \text{ SF}) \times (0.167) = (334 \text{ CF})$ REQUIRED STONE INFILTRATION VOLUME
 $(334 \text{ CF}) \div (0.4) = (835 \text{ CF})$ REQUIRED STONE INFILTRATION VOLUME
 $(L^*) \times (W^*) \times (D^*) \geq (835 \text{ CF})$



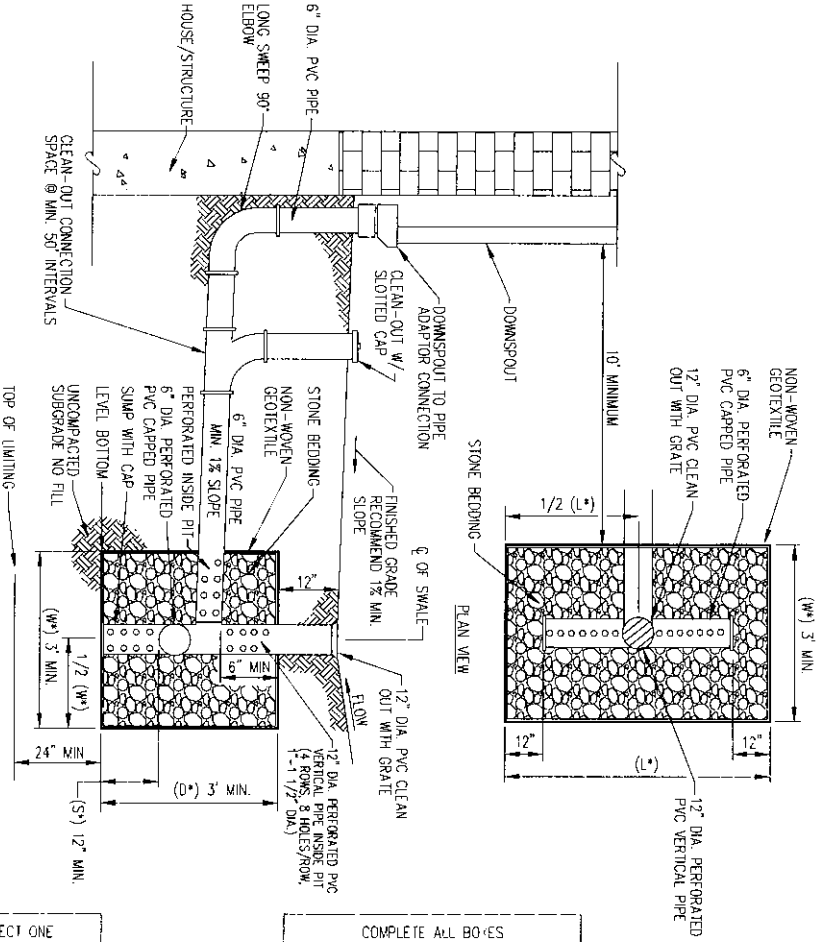
INFILTRATION BED SIZE MUST BE FILLED IN BY APPLICANT

$(A^* = \text{NEW IMPERVIOUS SURFACE})$
 $A^* \text{ SF} \times (0.167) = \text{CF}$
 $\text{CF} \div (0.4) = \text{CF}$
 $(L^*) \times (W^*) \times (D^*) \geq \text{CF}$

INSPECTION BY TOWNSHIP OFFICIAL

DATE:	SYSTEM LAUNCH/ SERVICES:
INSPECTOR:	INSPECTION SCHEDULE:
DATE:	UTILITY CLEARANCE:
INSPECTOR:	ROUGH GRADING, INFIL SURFACE:
DATE:	INSPECTION, CONNECTING DOWNSPOUT PIPES EXPOSED:
INSPECTOR:	FILTER FABRIC INSTALLED:
DATE:	PARTIAL STONE FILL EXPOSED, RENOCH & OULET SPRING:
INSPECTOR:	STONE BACKFILL COMPLETE, PER CONNECTION COMPLETE, BACKFILL:
DATE:	FINAL GRADING, VEGETATION INSTALLED:
INSPECTOR:	INSPECT OPERATION OF SYSTEM DURING POST RAINFALL EVENTS:
DATE:	INSPECTOR:
INSPECTOR:	FINAL SITE RESTORATION WORK, PERMIT CLOSOUT:

- CONSTRUCTION NOTES:
1. CONDUCT ON-SITE PRE CONSTRUCTION MEETING WITH TOWNSHIP
 2. SUBSURFACE INFILTRATION BED DIMENSIONS MUST BE APPROVED BY HELLM TOWNSHIP ENGINEER OR APPROVED TOWNSHIP REPRESENTATIVE PRIOR TO EARTH DISTURBANCE ACTIVITIES
 3. SUBSURFACE INFILTRATION BEDS MUST BE INSPECTED BY HELLM TOWNSHIP AN INSPECTION SCHEDULE MUST BE APPROVED BY HELLM TOWNSHIP PRIOR TO EARTH DISTURBANCE ACTIVITIES.
 4. DURING EARTH DISTURBANCE ACTIVITIES, INFILTRATION AREAS MUST BE PROTECTED FROM COMPACTON, SEDIMENT INTRUSION AND CONSTRUCTION TRAFFIC
 5. NON-WOVEN GEOTEXTILE MUST ENVELOP STONE AND MAINTAIN A 12 INCH OVERLAP AT ALL SEAMS.
 6. GRATES FOR PVC CLEANOUTS SHALL BE ASHITO HD OR H20 LOAD RATED DEPENDING ON THEIR PLACEMENT (H20 FOR VEHICULAR LOADING).
 7. CAPPED CLEANOUTS MUST BE PROVIDED AT 50 FOOT INTERVALS FROM ROOF DOWNSPOUTS TO SUBSURFACE INFILTRATION BEDS, AND MAY BE PROVIDED AT ENDS OF DISTRIBUTION PIPES.



SUBSURFACE INFILTRATION BED CONNECTION OF ROOF LEADER

NO SCALE

- OPERATION AND MAINTENANCE:
1. AT LEAST FOUR TIMES EACH YEAR, INSPECT EXPOSED INFILTRATION STONE BEDDING, CLEANOUTS, RAIN CUTTERS, ROOF LEADERS AND AREAS DRAINING TO BEDS.
 2. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS.
 3. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE OR EXPOSED INFILTRATION BEDS, CONNECTING MEADOW OR GRASS AREAS OR ON YARD AREAS THAT DRAIN TO BEDS.

INFORMATION MUST BE FILLED IN BY APPLICANT	
INFILTRATION BED INFORMATION	
INFILTRATION BED	#1 #2 #3
A* (SF)	
L* (FT)	
W* (FT)	
D* (FT)	
S* (IN)	
COMPLETE ALL BOXES	
STONE BEDDING	INFILTRATION BED
#1 #2 #3	
ASHITO (No. 1)	
AASHTO (No. 3)	
PA (No. 4 BALLAST)	
NON-WOVEN GEOTEXTILE MATERIAL	
INFILTRATION BED	#1 #2 #3
US 120 NW	
US 115 NW	
APPROVED EQUAL	

DATE: _____

FOR RESIDENTIAL BUILDING PLANS

DWG. NO. **D-1**

PROJECT TITLE: _____

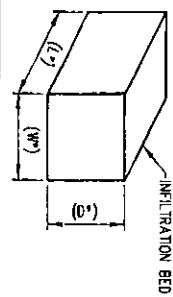
OWNER: _____

ADDRESS: _____

DWG. TITLE: **INFILTRATION DETAIL ROOF LEADER**

INFILTRATION BED SIZE (EXAMPLE)

EXAMPLE: $A^* = 2,000 \text{ SF}$ NEW IMPERVIOUS SURFACE)
 $A^* (2,000 \text{ SF}) \times (0.167) = (334 \text{ CF})$
 $(334 \text{ CF}) \rightarrow (0.4) = (835 \text{ CF})$ REQUIRED STONE INFILTRATION VOLUME
 $(L^*) \times (W^*) \times (D^*) \geq (835 \text{ CF})$



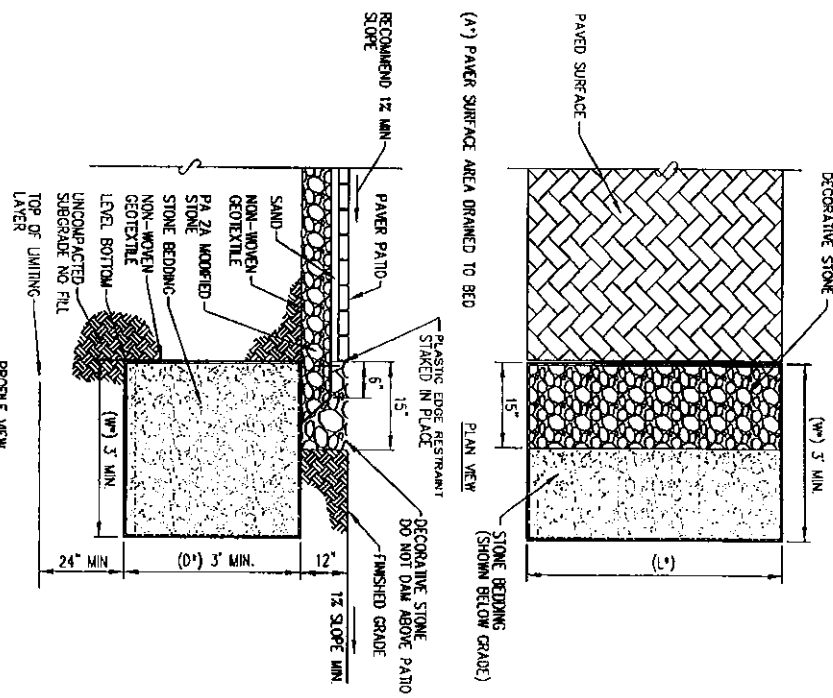
INFILTRATION BED SIZE MUST BE FILLED IN BY APPLICANT

$A^* = \text{NEW IMPERVIOUS SURFACE}$
 $A^* \text{ SF} \times (.167) = \text{CF}$
 $\text{CF} \rightarrow (.4) = \text{CF}$
 $(L^*) \times (W^*) \times (D^*) \geq \text{CF}$

INSPECTION BY TOWNSHIP OFFICIAL

DATE:	SYSTEM LAYOUT: STAIRS:
CONSTRUCTION MEETING:	INSPECTION SCHEDULE:
INSPECTOR:	UTILITY CLEARANCE:
1	ROUGH GRADING: INFL SURFACE
2	INSPECTION: CONNECTING DOWNPOUT PIPES EXPOSED
3	INSPECTION: FILTER FABRIC INSTALLED: PATIAL STONE FILL EXPOSED: TRENCH & OUTLET PIPING:
4	INSPECTION: STONE BACKFILL COMPLETE: PER CONNECTION COMPLETE: BACKFILLED: FINAL GRADING: VEGETATION INSTALLED:
FINAL	INSPECT OPERATION OF SYSTEM DURING POST RAINFALL EVENTS
INSPECTOR:	SITE RESTORATION WORK: PERMIT CLOSOUT

SUBSURFACE INFILTRATION BED CONNECTION OF PAVER SURFACE



- CONSTRUCTION NOTES:**
1. CONDUCT ON-SITE PRE CONSTRUCTION MEETING WITH TOWNSHIP
 2. SUBSURFACE INFILTRATION BED DIMENSIONS MUST BE APPROVED BY HELLMAN TOWNSHIP ENGINEER OR APPROVED TOWNSHIP REPRESENTATIVE PRIOR TO EARTH DISTURBANCE ACTIVITIES.
 3. SUBSURFACE INFILTRATION BEDS MUST BE INSPECTED BY HELLMAN TOWNSHIP AN INSPECTION SCHEDULE MUST BE APPROVED BY HELLMAN TOWNSHIP PRIOR TO EARTH DISTURBANCE ACTIVITIES.
 4. DURING EARTH DISTURBANCE ACTIVITIES, INFILTRATION AREAS MUST BE PROTECTED FROM COMPACTION, SEDIMENT INTRUSION AND CONSTRUCTION TRAFFIC.
 5. NON-WOVEN GEOTEXTILE MUST ENVELOPE STONE AND MAINTAIN A 12 INCH OVERLAP AT ALL SEAMS
 6. GRATES FOR PVC CLEANOUTS SHALL BE ASHITO H10 OR H20 LOAD RATED DEPENDING ON THEIR PLACEMENT (H20 FOR VEHICULAR LOADING).
 7. CARPED CLEANOUTS MUST BE PROVIDED AT 50 FOOT INTERVALS FROM ROOF DOWNSPOUTS TO SUBSURFACE INFILTRATION BEDS AND MAY BE PROVIDED AT ENDS OF DISTRIBUTION PIPES.

- OPERATION AND MAINTENANCE:**
1. AT LEAST FOUR TIMES EACH YEAR, INSPECT EXPOSED INFILTRATION STONE BEDDING, CLEANOUTS, RAIN CUTTERS, ROOF LEADERS AND AREAS DRAINING TO BEDS.
 2. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR WORKING OR BAP REPAIRS.
 3. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE OR EXPOSED INFILTRATION BEDS, CONNECTING MEADOW OR GRASS AREAS OR ON YARD AREAS THAT DRAIN TO BEDS.

INFORMATION MUST BE FILLED IN BY APPLICANT

INFILTRATION BED INFORMATION

INFILTRATION BED	COMPLETE ALL BOXES		
	#1	#2	#3
A* (S*)			
L* (F*)			
W* (F*)			
D* (F*)			
S* (IN)			

STONE BEDDING

INFILTRATION BED	SELECT ONE		
	#1	#2	#3
ASHITO (No. 1)			
ASHITO (No. 3)			
PA (No. 4 BALLAST)			

NON-WOVEN GEOTEXTILE MATERIAL

INFILTRATION BED	SELECT ONE		
	#1	#2	#3
US 120 NW			
US 115 NW			
APPROVED EQUAL			

FOR RESIDENTIAL BUILDING PLANS

DWG. NO.

D-2

DATE:

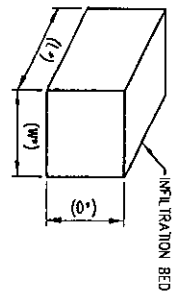
PROJECT TITLE

OWNER:
ADDRESS:

DWG. TITLE
INFILTRATION DETAIL
PAVER SURFACE

INFILTRATION BED SIZE (EXAMPLE)

EXAMPLE: $A^* = 2,000 \text{ SF NEW IMPERVIOUS SURFACE}$
 $A^* (2,000 \text{ SF}) \times (0.167) = (334 \text{ CF})$ REQUIRED STONE
 $(334 \text{ CF}) \div (0.4) = (835 \text{ CF})$ INFILTRATION VOLUME
 $(L^*) \times (W^*) \times (0^*) \geq (835 \text{ CF})$



INFILTRATION BED SIZE MUST BE FILLED IN BY APPLICANT

$A^* = \text{NEW IMPERVIOUS SURFACE}$
 $A^* \text{ SF} \times (0.167) = \text{CF}$
 $\text{CF} \div (0.4) = \text{CF}$
 $(L^*) \times (W^*) \times (0^*) \geq \text{CF}$

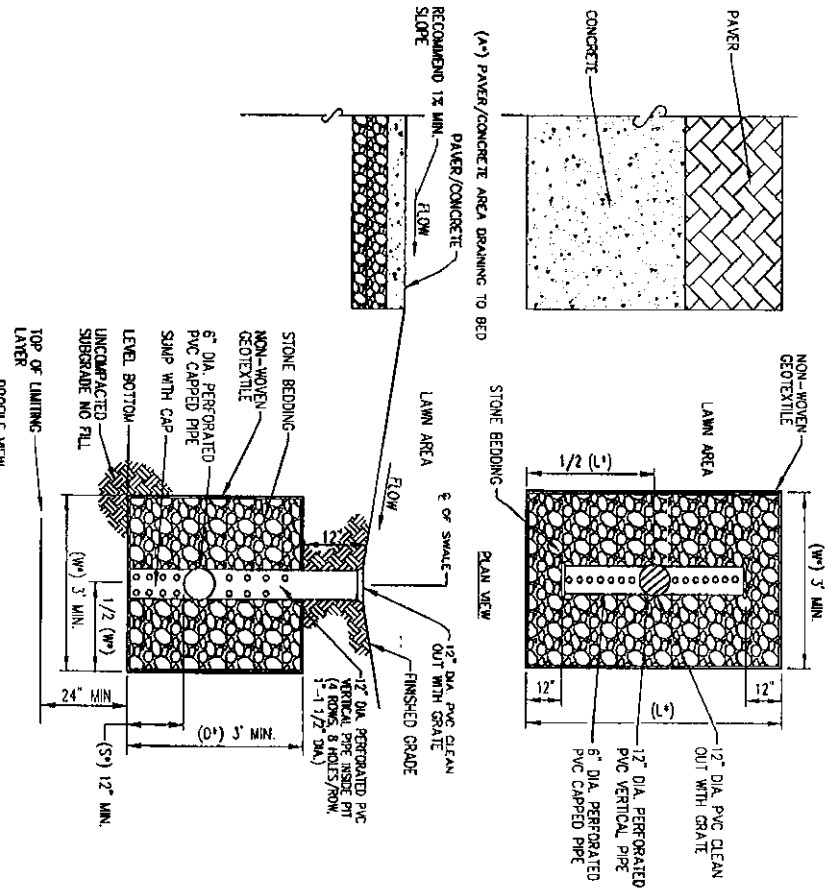
INSPECTION BY TOWNSHIP OFFICIAL

PRE CONSTRUCTION MEETING	DATE:	SYSTEM LAYOUT SETBACKS:
INSPECTION:	DATE:	INSPECTION SCHEDULE:
1	INSPECTION:	ROUGH GRADING: INFIL SURFACE UTILITY CLEARANCE
2	INSPECTION:	INSPECTION: CONNECTING DOWNSPOUT PIPES EXPOSED
3	INSPECTION:	INSPECTION: FILTER FABRIC INSTALLED: PARTIAL STONE FILL EXPOSURE: TRENCH & OUTLET PIPING
4	INSPECTION:	STONE FACILITY: CONCRETE: PER CONNECTION COMPLETE: BACKFILL: INSPECT OPERATION OF SYSTEM DURING POST RAINFALL EVENTS
FINAL	DATE:	SITE RESTORATION WORK: PERMIT CLOSOUT

- CONSTRUCTION NOTES:**
1. CONDUCT ON-SITE PRE CONSTRUCTION MEETING WITH TOWNSHIP
 2. SUBSURFACE INFILTRATION BED DIMENSIONS MUST BE APPROVED BY HELLMAN TOWNSHIP ENGINEER OR APPROVED TOWNSHIP REPRESENTATIVE PRIOR TO EARTH DISTURBANCE ACTIVITIES.
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 4. PROTECT EARTH DISTURBANCE ACTIVITIES: INFILTRATION AREAS MUST BE PROTECTED FROM COMPACTON, SEWAGE INTRUSION AND CONSTRUCTION TRAFFIC.
 5. NON-WOVEN GEOTEXTILE MUST ENVELOPE STONE AND MAINTAIN A 12 INCH OVERLAP AT ALL SEAMS.
 6. GRATES FOR PVC CLEANOUTS SHALL BE AASHTO M10 OR H20 LOAD RATED DEPENDING ON THEIR PLACEMENT (H20 FOR VEHICULAR LOADING).
 7. CARPET CLEANOUTS MUST BE PROVIDED AT 50 FOOT INTERVALS FROM ROOF DOWNSPOUTS TO SUBSURFACE INFILTRATION BEDS AND MAY BE PROVIDED AT ENDS OF DISTRIBUTION PIPES.

SUBSURFACE INFILTRATION BED IN LAWN FROM PAVER OR CONCRETE SURFACE

NO SCALE



- OPERATION AND MAINTENANCE:**
1. AT LEAST FOUR TIMES EACH YEAR, INSPECT EXPOSED INFILTRATION STONE BEDDING, CLEANOUTS, RAIN CUTTERS, ROOF LEADERS AND AREAS DRAINING TO BEDS.
 2. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR WORKING OR BUMP REPAIRS.
 3. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE OR EXPOSED INFILTRATION BEDS, CONNECTING MEADOW OR GRASS AREAS OR ON YARD AREAS THAT DRAIN TO BEDS.

INFORMATION MUST BE FILLED IN BY APPLICANT

INFILTRATION BED INFORMATION	
INFLTRATION BED	INFLTRATION BED
#1	#2
#3	

COMPLETE ALL BOXES

A*	(SF)		
L*	(FT)		
W*	(FT)		
D*	(FT)		
S*	(IN)		

STONE BEDDING

INFILTRATION BED		
#1	#2	#3

NON-WOVEN GEOTEXTILE MATERIAL

SELECT ONE	
US 120 NW	#1
US 115 NW	#2
APPROVED EQUAL	#3

INFILTRATION BED

SELECT ONE	
AASHTO (No. 1)	#1
AASHTO (No. 3)	#2
PA (No. 4 BALLAST)	#3

DATE:	FOR RESIDENTIAL BUILDING PLANS	DWG. NO.
PROJECT TITLE		D-4
OWNER:	DWG. TITLE	
ADDRESS:	INFILTRATION DETAIL IN LAWN	