



Stormwater Management Plan Exemption Application

Date: _____

Property & Contact Information

Property Owner: _____ Parcel Identification: _____

Email: _____ Phone: _____

Mailing Address: _____

Property Address: _____

Submission Checklist

Check if Included

Required for all exemptions

- ☐ Satisfy Maximum Impervious Coverage set by the Zoning District Requirements _____
- ☐ Stormwater Management Plan Exemption Application _____
- ☐ Plan View or Sketch Plan _____

Additional documentation required for exemptions between 1,000 sq. ft. to 5,000 sq. ft. total new impervious

- ☐ Completed §290-17 – Water quality requirements & §290-18 – Groundwater recharge requirements page _____
- ☐ Completed §290-19 – Channel protection storage volume page _____
- ☐ Completed proposed stormwater practice detail page/s _____

Attachments

List any additional attachments included as part of this application

Definitions

Impervious Area: A surface that prevents the percolation of water into the ground. For the purposes of this chapter, impervious surface may include, but not be limited to, the following: concrete, asphalt, building coverage, water impoundments, gravel and crushed stone areas, highly compacted soil, etc.

Disturbed Area (Earth Disturbance): Any activity including, but not limited to, construction, mining, timber harvesting and grubbing which alters, disturbs, and exposes the existing land surface.



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Mailing Address: _____

Property Address: _____

Project Description: _____

Total impervious area on the property at the time of the ordinance adoption (July 19, 2005): _____ Sq. Ft.

Total impervious area added/removed since the ordinance adoption (July 19, 2005 - Present): _____ Sq. Ft.

(Estimated values shall include all impervious features: Buildings, Driveways, Patios, Sidewalks etc)

Maximum Allowable Impervious Coverage (%) (From Zoning Requirements): _____ %

Proposed Total Impervious Coverage (%): _____ %

Impervious Features Included in the Project	Removed (-1) or Added (+1)	Length (ft.)	X	Width (ft.)	=	Impervious Area (sq. ft.)
			X		=	
			X		=	
			X		=	
			X		=	
			X		=	
			X		=	

Total Impervious Area to be added since ordinance adoption (square feet): _____

Total Disturbed Area associated with construction of this project (square feet): _____

(Total area where earth disturbance will take place to complete the entire project)

If the total impervious area added since the date of the ordinance adoption is less than 1,000 sq. ft. and total disturbed area is less than 5,000 sq. ft., the project may be considered fully exempt from the Stormwater Management requirements set forth in Chapter 290 of the Code of Ordinances.

If the total impervious area added since the date of the ordinance adoption is between 1,000 sq ft and 5,000 sq. ft., and/or the total disturbed area is between 5,000 sq. ft. and 15,000 sq. ft., the project may be granted an exemption from the Stormwater Management requirements set forth in Chapter 290 of the Code of Ordinances but must still meet provisions contained in §290-17, 290-18 and 290-19.

Certification

The undersigned hereby represents that, to the best of their knowledge and belief, all information listed above and on the provided documentation is true, correct and complete. The undersigned acknowledges the requirements in §290-7 of the Lewisburg Borough Stormwater Management Ordinance, including the following: 1) No person or activity is exempted from compliance with §290-17, -18 and -19 of the Stormwater Management Ordinance upon exceeding the 1,000 sq. ft impervious area threshold since the adoption of the Ordinance (July 19, 2005); 2) The applicant shall comply with the erosion and sediment control requirements of 25 Pa Code, Chapter 102; 3) Exemptions do not relieve an applicant of the responsibility to secure required permits or approvals for activities regulated by any other code, law, regulation, or ordinance. 4) Exemptions do not relieve an applicant from implementing such measures as necessary to meet compliance with any NPDES Permit requirements; and 5) Any exemption based on false, misleading, or erroneous information provided by an applicant is void without the necessity of proceedings for revocation.

Signature: _____ Date: _____

Note: Applicant is responsible for all engineering review fees associated with the review/consulting of this application.

For Borough Use Only

Date Received: _____ Project Meets Zoning Impervious Coverage: _____

Additional Proposed Impervious Area (sq. ft.): _____ Total Lot Impervious (sq. ft.): _____

Date Approved: _____ Approved By: _____

Conditions for Approval: _____

§290-17 – WATER QUALITY REQUIREMENTS
&
§290-18 – GROUNDWATER RECHARGE REQUIREMENTS

Total Property area: _____ sq. ft. = **Tp** (Estimate of Entire Property Area)
 Project disturbed area: _____ sq. ft. = **A** (Value take from Page 2)
 Total impervious area added: _____ sq. ft. = **Ia** (Value take from Page 2)

Complete the calculations below to determine total required volumes:

$$WQ_v = A[0.0064 + 0.11(Ia/Tp)] = \text{_____} \text{ ft}^3 \text{ <- Minimum storage required for treatment}$$

$$Re_v = A[0.0017 + 0.03(Ia/Tp)] = \text{_____} \text{ ft}^3 \text{ <- This portion of storage must be infiltrated on site}$$

The WQ_v must be captured and treated using an approved stormwater management practice. The Re_v is considered a part of the total WQ_v that must be provided on site as groundwater recharge (infiltration). The stormwater practice utilized must treat a minimum volume equal to the WQ_v , from which a portion of the treated water, at least equal to the Re_v , must be provided as groundwater recharge.

Below is a table including several stormwater practices that may be utilized to meet the stormwater requirements as part of the exemption application. Applicants are encouraged to utilize the methods listed below to meet the requirements as listed in the ordinance and outlined on this application. Other methods including but not limited to green roof technology and pervious pavement may be utilized to meet the requirements. The applicant must provide documentation and/or details related to the stormwater practice they propose.

Proposed Treated Volume Summary

Stormwater BMP Proposed	Volume Provided, CF (Total $\geq WQ_v$)	Portion of Volume Infiltrated, CF (Total $\geq Re_v$)
Infiltration Bed / Seepage Pit		
Rain Garden		
Rain Barrel or Cistern		
Infiltration Trench		
Tree Plantings		
Total Volume Provided, CF		
	WQ_v	Re_v

Signature: _____ **Date:** _____

The Borough Engineer may be contacted with any questions while completing this application. Please note that the Borough Engineer is not able to complete any portions of this application for the applicant. The Applicant is responsible for all engineering review/consulting fees associated with the review of this application.

§290-19 – CHANNEL PROTECTION STORAGE VOLUME

If any of the below criteria are met, CP_v is not required for this project. Indicate if any of the below conditions are met (*Per §290-19.C.(6) CP_v is not required at sites where the one-year post-development peak discharge (q_i) is less than or equal to 2.0 cfs*):

- The total area of the property is less than 24,200 sq. ft. (0.56 acres)
- The proposed stormwater features receive less than 24,200 sq. ft. of drainage area total
- The proposed stormwater features will not discharge more than 2.0 cfs for the one-year/24-hour post-development peak discharge (attach design calculations)

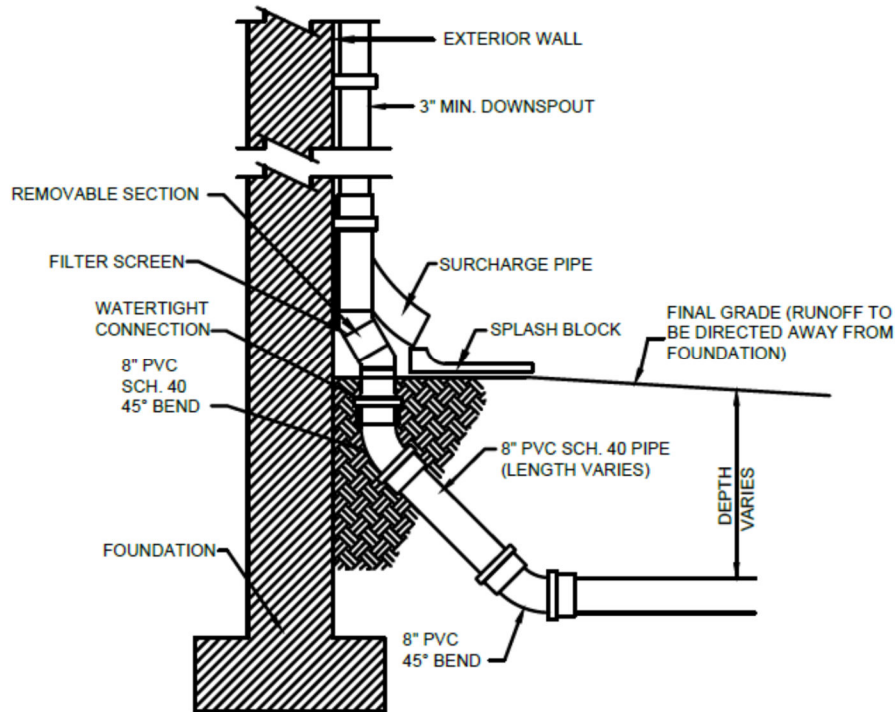
If any of the above conditions cannot be met, calculations must be provided to satisfy the CP_v requirements.

Signature: _____ Date: _____

The Borough Engineer may be contacted with any questions while completing this application. Please note that the Borough Engineer is not able to complete any portions of this application for the applicant. The Applicant is responsible for all engineering review/consulting fees associated with the review of this application.

STORMWATER BEST MANAGEMENT PRACTICE CONSTRUCTION DETAILS

TYPICAL DOWNSPOUT WITH OVERFLOW/SURCHARGE PIPE



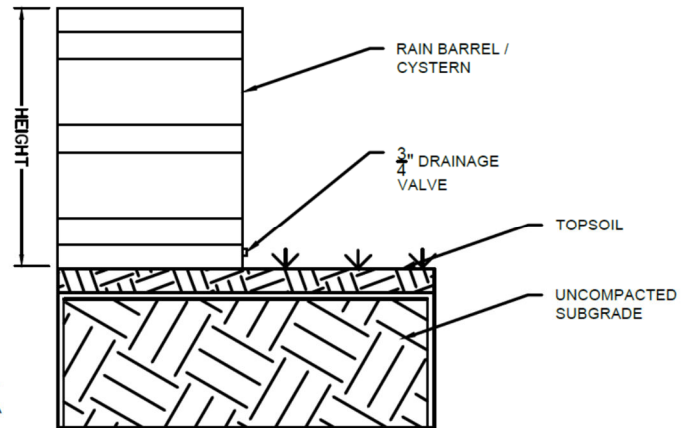
RAIN BARREL / CISTERN

NOTES:

1. AN OVERFLOW OUTLET MUST BE INSTALLED ON THE RAIN BARREL/CYSTERN OR ON THE PIPE ENTERING THE RAIN BARREL.
2. RAIN BARRELS MUST BE SLOWLY DRAINED/EMPTIED BETWEEN STORM EVENTS.
3. A VALVE SHALL BE INSTALLED ON THE BARREL/CYSTERN FOR DRAINAGE PURPOSES.

MAINTENANCE NOTES:

1. THE OWNER IS RESPONSIBLE FOR THE MAINTENANCE OF ALL PCSM BMP'S.
2. WEEKLY INSPECTIONS AS WELL AS INSPECTION AFTER RUNOFF EVENTS OF ALL STORMWATER MANAGEMENT FACILITIES SHALL BE CONDUCTED BY THE OWNER. REPAIRS SHALL BE PERFORMED IN A TIMELY MANNER AND BE BASED ON THE RECOMMENDATION OF A QUALIFIED ENGINEER.
3. THE STORMWATER FACILITIES SHALL BE KEPT FREE FROM ACCUMULATION OF DEBRIS AND SEDIMENT. REMOVED MATERIALS SHALL BE STORED ON SITE IN A MANNER CONSISTENT WITH THE REQUIREMENTS OF PADEP CHAPTER 102.

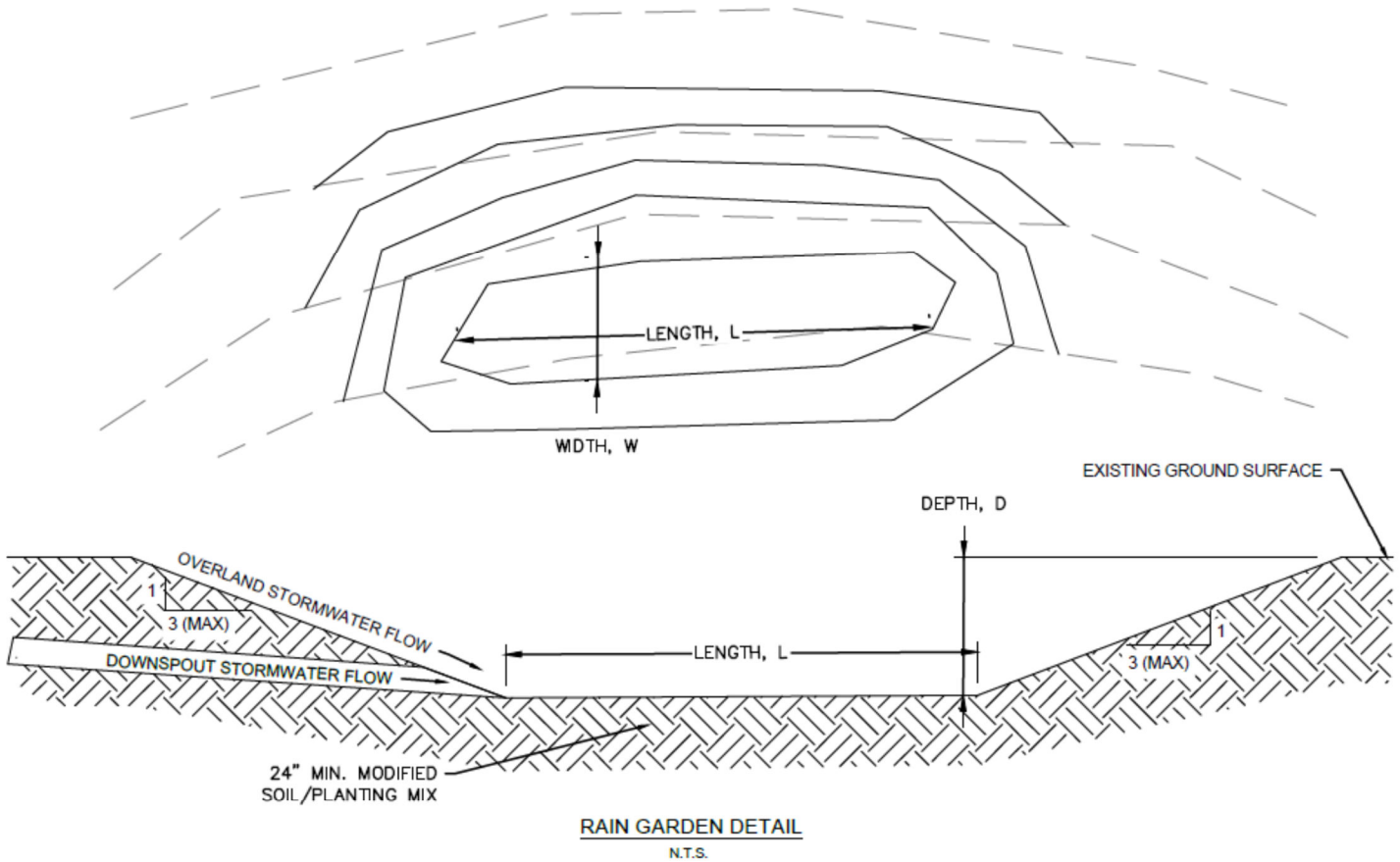


RAIN BARREL / CISTERN VOLUME CALCULATION

BARREL / CISTERN NAME	Diameter (ft)	Height (ft)	Number of Barrels	Volume (CF)
Total Volume (CF)				

$$\text{Volume} = 3.14 \times \text{Diameter}^2 / 4 \times \text{Height} \times \text{Number of Barrels}$$

RAIN GARDEN



NOTES:

1. CONSTRUCT ONLY AFTER UPSTREAM AREAS HAVE BEEN STABILIZED OR DIVERT RUNOFF DURING CONSTRUCTION.
2. EXCAVATE TO PROPOSED DEPTH, D. DO NOT COMPACT IN-SITU SOILS.
3. BACKFILL WITH AMENDED SOIL. LIGHT HAND TAMPING IS ACCEPTABLE. OVERFILL AS REQUIRED TO ACCOUNT FOR SETTLEMENT.
4. AMENDED SOIL MIX SHALL CONSIST OF 20-30% ORGANIC MATTER (COMPOST) AND 70-80% SOIL BASE (TOPSOIL). SOIL SHALL HAVE A CLAY CONTENT OF LESS THAN 10% AND BE FREE OF TOXIC SUBSTANCES.
5. UPON COMPLETION, SEED AND MULCH USING A 50/50 ERNST SEED MIX OF:
 1. ERNST-122 (FACW WETLAND MEADOW MIX) AT $\frac{1}{2}$ POUND PER 1,000 SQ.FT.
 2. ERNST-131 (OBL WETLAND MIX) AT $\frac{1}{2}$ POUND PER 1,000 SQ.FT.

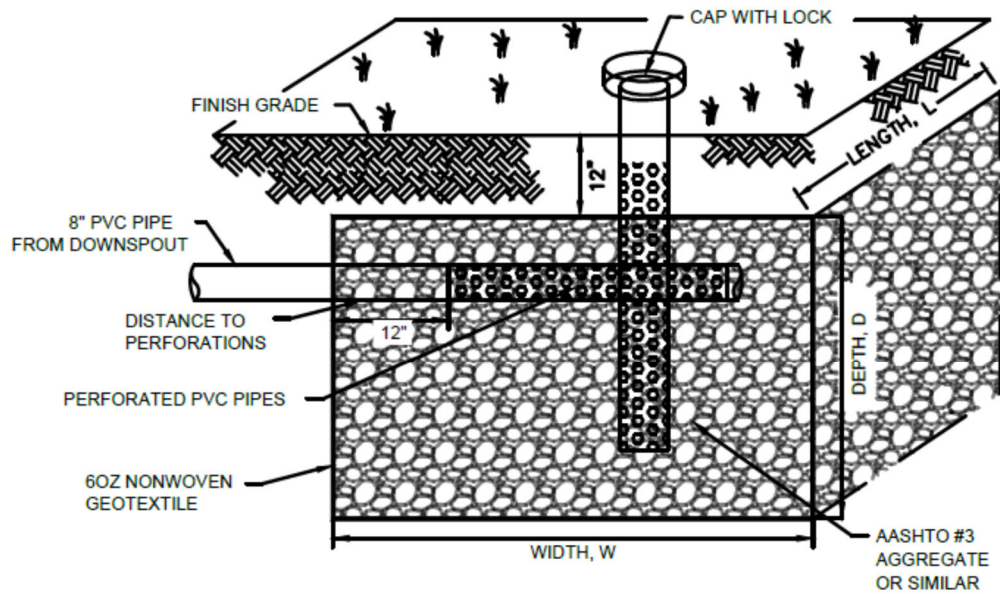
RAIN GARDEN VOLUME CALCULATION

Rain Garden Storage	Length (ft)	Width (ft)	Depth, D (ft)	Side Slope, S (ft/ft)	Storage Volume (CF)
Surface Ponding					
	Length (ft)	Width (ft)	Infiltration Rate (ft/hr)	Infiltration Time (hrs)	Infiltration Volume (CF)
Infiltration Volume			0.083	24	
Total Rain Garden Volume (CF) (Storage + Infiltration)					

$$\text{Surface Ponding} = \text{Length} \times \text{Width} \times \text{Depth} + (S \times D^2 \times (\text{Length} + \text{Width})),$$

$$\text{Infiltration Volume} = \text{Length} \times \text{Width} \times \text{Rate} \times \text{Time}$$

INFILTRATION BED / SEEPAGE PIT



NOTES:

1. 10 FT MINIMUM DISTANCE OF SEPARATION BETWEEN SEEPAGE PIT AND BUILDING FOUNDATION
2. MINIMUM PERFORATIONS - 4 ROWS OF 3/4 " HOLES, 8 HOLES PER ROW

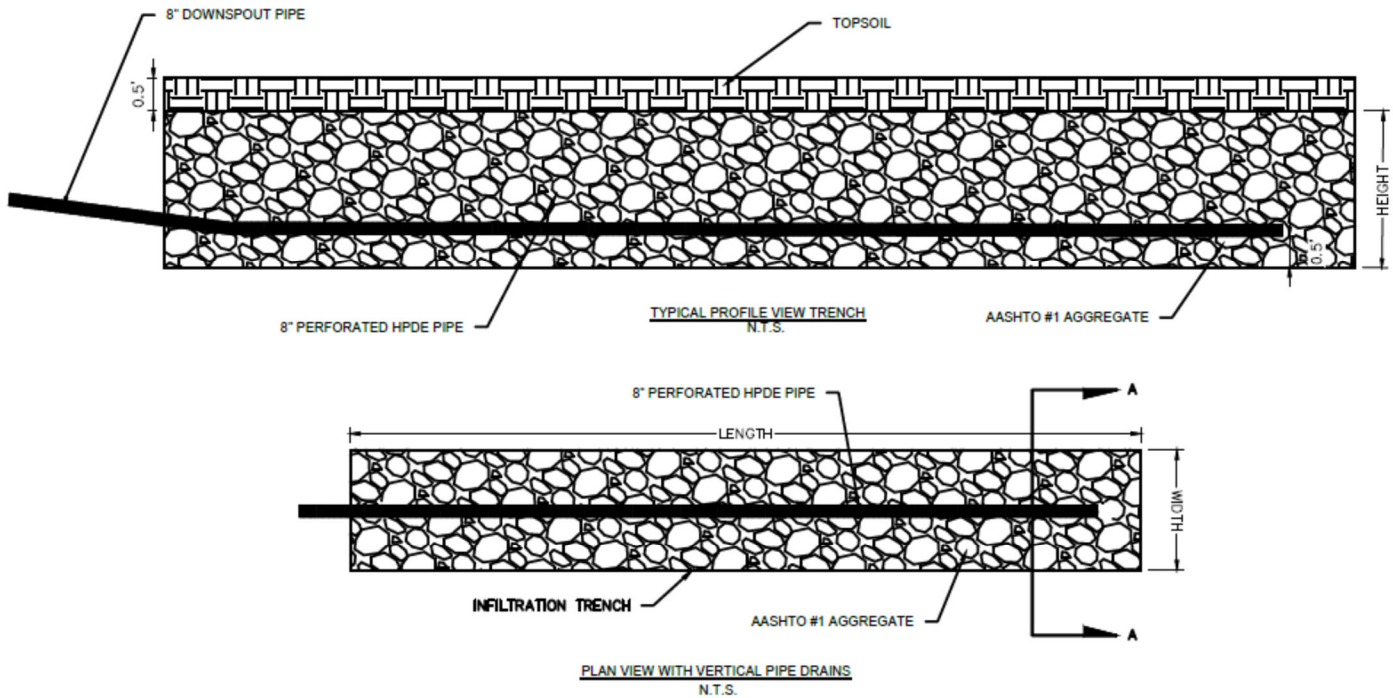
INFILTRATION BED / SEEPAGE PIT VOLUME CALCULATION

	Length (ft)	Width (ft)	Depth (ft)	Void Ratio	Stone Volume (CF)
Stone Storage				0.40	
	Length (ft)	Width (ft)	Infiltration Rate (ft/hr)	Infiltration Time (hrs)	Infiltration Volume (CF)
Infiltration Volume			0.083	24	
Total Infiltration Bed / Seepage Pit Volume (CF) (Stone + Infiltration)					

Stone Storage Volume = Length × Width × Depth × Void Ratio,

Infiltration Volume = Length × Width × Rate × Time

INFILTRATION TRENCH

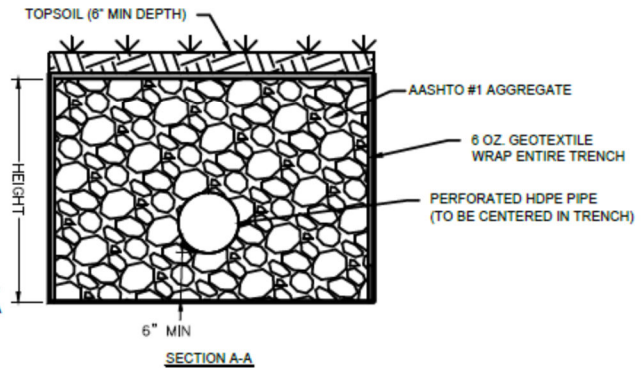


NOTE:

- WHERE LAYERS OF FILL THAT VARY IN GRADATION ARE ADJACENT TO EACH OTHER, CLASS 1 GEOTEXTILE FABRIC SHALL BE USED TO PREVENT MIGRATION OF FINES. (i.e. WHERE A FINER GRAINED SELECT FILL IS PLACED ON TOP OF, OR BELOW, AN OPEN-GRADED STONE FILL.)

MAINTENANCE NOTES:

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- THE STORMWATER FACILITIES SHALL BE KEPT FREE FROM ACCUMULATION OF DEBRIS AND SEDIMENT. REMOVED MATERIALS SHALL BE STORED ON SITE IN A MANNER CONSISTENT WITH THE REQUIREMENTS OF PADEP CHAPTER 102.



INFILTRATION TRENCH VOLUME CALCULATION

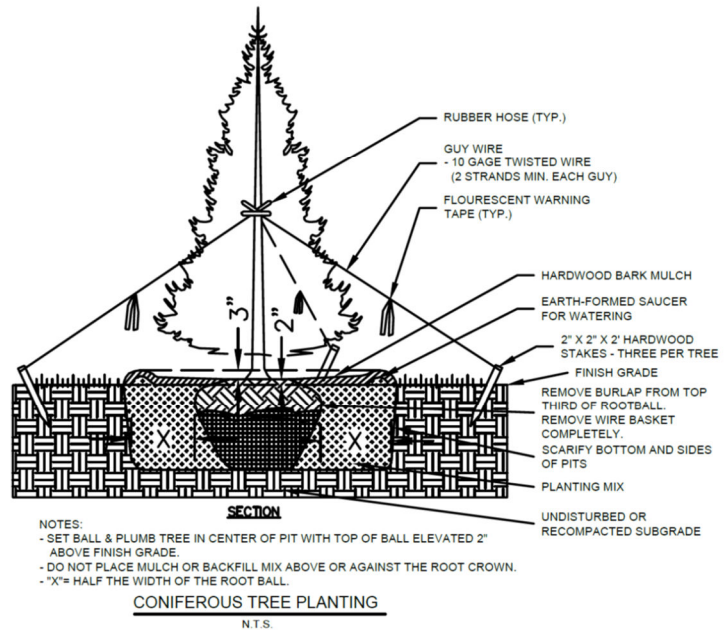
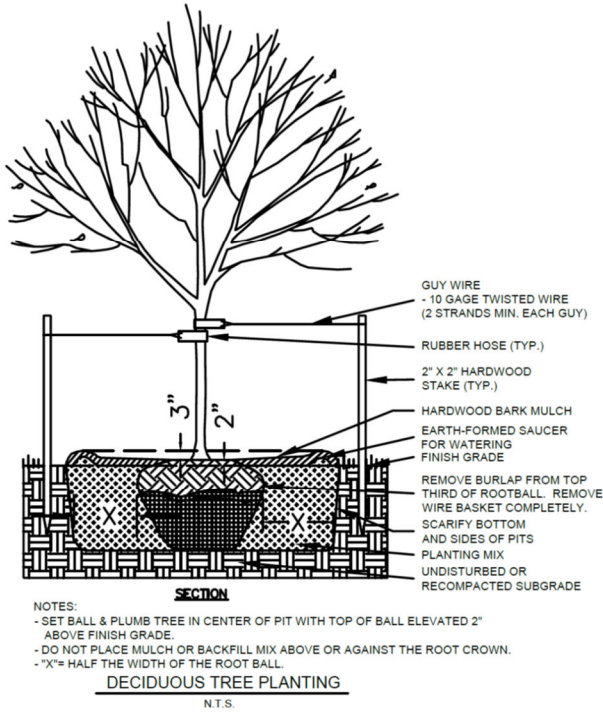
	Length (ft)	Width (ft)	Depth (ft)	Void Ratio	Stone Volume (CF)
Stone Storage				0.40	
	Pipe Length (ft)	Pipe Diameter (in)	Stone Displacement Factor		Stone Volume (CF)
Pipe Storage			0.6		
	Length (ft)	Width (ft)	Infiltration Rate (ft/hr)	Infiltration Time (hrs)	Infiltration Volume (CF)
Infiltration Volume			0.083	24	
Total Infiltration Trench Volume (CF) (Stone + Pipe + Infiltration)					

Stone Storage Volume = Length × Width × Depth × Void Ratio,

Pipe Storage Volume = Pipe Length × Pipe Diameter × 1ft/12in × Stone Displacement Factor,

Infiltration Volume = Length × Width × Rate × Time

TREE PLANTINGS



Total # of Trees Planted

Type of Tree	Total Number of Trees Planted	Volume Credit (CF)	Total Credit (CF)
Deciduous		6	
Evergreen		10	
Total Volume			

Notes:

Credit Values: Newly planted native deciduous trees yield 6 cubic feet of volume reduction each, while native evergreen trees yield 10 cubic feet each.

Tree Requirements: Trees must be native, with at least a 2-inch caliper and 6 feet in height. All tree species must be "large" species and shall not be small or medium sized. Deciduous and evergreen trees shall have a minimum mature height of 35 feet.

Location Constraints: Trees should generally be planted within 100 feet of impervious areas and, for maximum benefit, planted in a way that allows runoff to flow into the tree canopy area.

What Doesn't Count: Live stakes are not eligible for this specific credit, and trees planted as part of a riparian forest buffer are usually excluded.