

**LONDONDERRY TOWNSHIP
DAUPHIN COUNTY, PENNSYLVANIA**

Ordinance 2023-02

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE TOWNSHIP OF LONDONDERRY, CHAPTER 28, STORMWATER MANAGEMENT BY SUPPLEMENTING THE EXISTING ORDINANCE WITH THE RELEVANT APPENDICES THAT CORRESPOND WITH THE RECENTLY ENACTED STORMWATER ORDINANCE; PROVIDING FOR THE SEVERABILITY OF THE PROVISIONS THEREOF; AND, PROVIDING FOR THE EFFECTIVE DATE THEREOF.

WHEREAS, the Londonderry Township Board of Supervisors recently enacted a Stormwater Management Ordinance of Londonderry Township, Dauphin County, Pennsylvania ("Stormwater Management Ordinance"), pursuant to its statutory authority under the Pennsylvania Municipalities Planning Code ("MPC"), Act 247 of 1968, as amended (53 P.S. § 10101 et seq.); which was codified as Chapter 28 of the Code of Ordinances of Londonderry Township;

WHEREAS, since its adoption, the Board of Supervisors has from time to time amended the Stormwater Management Ordinance; and

WHEREAS, the Board of Supervisors has met the procedural requirements of the MPC and of the Township's ordinances for the adoption of the proposed ordinance; and

WHEREAS, the Board of Supervisors of Londonderry Township, Dauphin County, Pennsylvania amends the Code of Ordinances to supplementing its duly enacted Stormwater Management Ordinance with relevant appendices that correspond with the recently enacted stormwater ordinance;

WHEREAS, the Board of Supervisors, after due consideration of the proposed Ordinance Amendment, at a duly advertised public meeting, has determined that the health, safety, and general welfare of the residents of Londonderry Township will be served by the proposed Ordinance amendment.

NOW THEREFORE, it is hereby ordained by the Board of Supervisors of Londonderry Township, Dauphin County, Pennsylvania, that Chapter 28, Stormwater Management, of the Code of Ordinances of the Township of Londonderry is amended by adding the following appendices, which are incorporated herein by reference. A summary of the appendices is as follows:

SECTION 1. Appendix A contains the template Operation and Maintenance (O&M) Agreement Stormwater Management Best Management Practices (SWM BMPs)

agreement between the Township and landowner for the management of stormwater within the confines of a property that is being developed in the Township.

SECTION 2. Appendix B contains the runoff coefficients and curve numbers applicable to the Ordinance.

SECTION 3. Appendix C contains the Minor Stormwater Management Permit Site Design Worksheet.

SECTION 4. Appendix D contains the Township's Post-Construction Best Management Practices Inspection Report template.

SECTION 5. Appendix E contains the Township's Hydrologic Soil Group Map.

SECTION 6. Appendix F contains the Stormwater Management Permit Application.

SECTION 7. Repealer

All ordinances or parts of ordinances inconsistent herewith or in conflict with any of the specific terms enacted hereby, to the extent of said inconsistencies or conflicts, are hereby specifically repealed.

SECTION 8. Revisions

The Board of Supervisors does hereby reserve the right, from time to time, to adopt modifications of, supplements to, or amendments of its ordinances, including this chapter.

SECTION 9. Severability

In the event any provisions, sections, sentences, clause, or part of this Ordinance Amendment shall be held to be invalid, illegal or unconstitutional by a court of competent jurisdiction, such invalidity, illegality, or unconstitutionality shall not affect or impair the remaining provisions, sections, sentences, clauses, or parts of this Ordinance Amendment, it being the intent of the Board of Supervisors that the remainder of the Ordinance Amendment shall remain in full force and effect.

SECTION 10. Effective Date

This Ordinance Amendment shall take effect and be in force five (5) days after its enactment by the Board of Supervisors of Londonderry Township as provided by law.

DULY ORDAINED and ENACTED this 3rd day of July, 2023, by the Board of Supervisors of Londonderry Township, Dauphin County, Pennsylvania, in lawful session duly assembled.

ATTEST:



Steve Letavich, Secretary

**BOARD OF SUPERVISORS
LONDONDERRY TOWNSHIP**

By:



Chair

APPENDIX A

Appendix A-1 (Individual Owner)

**Township of Londonderry
Operation and Maintenance (O&M) Agreement
Stormwater Management Best Management Practices (SWM BMPs)**

Tax Map Parcel ___-___-___

THIS AGREEMENT, made and entered into this ___ day of _____, 20 __, by and between _____, (hereinafter the "Landowner"), and Londonderry Township, Dauphin County, Pennsylvania, (hereinafter "municipality");

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of Dauphin County, Pennsylvania, Deed Book _____ at Page _____, (hereinafter "Property").

WHEREAS, the Landowner is proceeding to build and develop the Property; and

WHEREAS, the SWM site plan approved by the municipality (hereinafter referred to as the "Plan") for the property identified herein, which is attached hereto as Appendix A and made part hereof, as approved by the municipality, provides for management of stormwater within the confines of the Property through the use of BMPs; and

WHEREAS, the municipality, and the Landowner, his successors and assigns, agree that the health, safety, and welfare of the residents of the municipality and the protection and maintenance of water quality require that on-site SWM BMPs be constructed and maintained on the Property; and

WHEREAS, the municipality requires, through the implementation of the SWM site plan, that stormwater BMPs as required by said Plan and the Municipal Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM site plan.
2. The Landowner shall operate and maintain the BMPs as shown on the Plan in good working order in accordance with the specific maintenance requirements noted on the approved SWM site plan.
3. The Landowner hereby grants permission to the municipality, its authorized agents, and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the municipality shall notify the Landowner prior to entering the property.

4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2, the municipality or its representatives may enter upon the property and take whatever action is deemed necessary to maintain said BMPs. It is expressly understood and agreed that the municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the municipality. The Landowner may be subjected to the Penalties Section of the applicable Ordinance.
5. In the event the municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the municipality for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the municipality.
6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or effect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the municipality from all damages, accidents, casualties, occurrences or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMPs by the Landowner or municipality.
8. The municipality may inspect the BMPs whenever necessary to ensure their continued functioning.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Dauphin County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

WITNESS the following signatures and seals:

For the INDIVIDUAL Landowner:

Witness

Landowner Signature

Print Name: _____

Commonwealth of Pennsylvania, County of _____

On this, the ____ day of _____, 20__, before me, a Notary Public, the undersigned officer, personally appeared _____, known to me, (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/she executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal

My Commission Expires:

_____(SEAL)
NOTARY PUBLIC

WITNESS the following signatures and seals:

For the Municipality:

WITNESS/ATTEST:

Witness

By: _____

Print Name: _____

Title: _____

Commonwealth of Pennsylvania, County of Dauphin

On this, the _____ day of _____, 20__, before me, a Notary Public, the undersigned officer, personally appeared _____, who acknowledged himself to be the _____ of Londonderry Township, and that he as such _____, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of Londonderry Township by himself/herself as _____.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:

_____(SEAL)
NOTARY PUBLIC

Appendix A-2 (LLC Owner)

Township of Londonderry

**Operation and Maintenance (O&M) Agreement
Stormwater Management Best Management Practices (SWM BMPs)**

Tax Map Parcel ___-___-_____

THIS AGREEMENT, made and entered into this ___ day of _____, 20 __, by and between _____, (hereinafter the "Landowner"), and Londonderry Township, Dauphin County, Pennsylvania, (hereinafter "municipality");

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of Dauphin County, Pennsylvania, Deed Book _____ at Page _____, (hereinafter "Property").

WHEREAS, the Landowner is proceeding to build and develop the Property; and

WHEREAS, the SWM site plan approved by the municipality (hereinafter referred to as the "Plan") for the property identified herein, which is attached hereto as Appendix A and made part hereof, as approved by the municipality, provides for management of stormwater within the confines of the Property through the use of BMPs; and

WHEREAS, the municipality, and the Landowner, his successors and assigns, agree that the health, safety, and welfare of the residents of the municipality and the protection and maintenance of water quality require that on-site SWM BMPs be constructed and maintained on the Property; and

WHEREAS, the municipality requires, through the implementation of the SWM site plan, that stormwater BMPs as required by said Plan and the Municipal Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM site plan.
2. The Landowner shall operate and maintain the BMPs as shown on the Plan in good working order in accordance with the specific maintenance requirements noted on the approved SWM site plan.
3. The Landowner hereby grants permission to the municipality, its authorized agents, and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the municipality shall notify the Landowner prior to entering the property.

4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2, the municipality or its representatives may enter upon the property and take whatever action is deemed necessary to maintain said BMPs. It is expressly understood and agreed that the municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the municipality. The Landowner may be subjected to the Penalties Section of the applicable Ordinance.
5. In the event the municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the municipality for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the municipality.
6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or effect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the municipality from all damages, accidents, casualties, occurrences or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMPs by the Landowner or municipality.
8. The municipality may inspect the BMPs whenever necessary to ensure their continued functioning.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Dauphin County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

WITNESS the following signatures and seals:

For member of a Limited Liability Company (LLC) Landowner:

Witness

Signature (LLC Member) Landowner (SEAL)

Print Name: _____

Title: _____

Commonwealth of Pennsylvania, County of _____

On this, the _____ day of _____ A.D., 20____, this record was
acknowledged before me, the undersigned officer, by _____,
Member, of _____
(LLC)

IN WITNESS WHEREOF, I have hereunto set my hand and official seal

My Commission Expires:

NOTARY PUBLIC (SEAL)

WITNESS the following signatures and seals:

For the Municipality:

WITNESS/ATTEST:

Witness

By: _____

Print Name: _____

Title: _____

Commonwealth of Pennsylvania, County of Dauphin

On this, the _____ day of _____, 20__, before me, a Notary Public, the undersigned officer, personally appeared _____, who acknowledged himself to be the _____ of Londonderry Township, and that he as such _____, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of Londonderry Township by himself/herself as _____.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:

_____(SEAL)
NOTARY PUBLIC

Appendix A-3 (Corporation Owner)

Township of Londonderry

**Operation and Maintenance (O&M) Agreement
Stormwater Management Best Management Practices (SWM BMPs)**

Tax Map Parcel ___ - ___ - ___

THIS AGREEMENT, made and entered into this ___ day of _____, 20 __, by and between _____, (hereinafter the "Landowner"), and Londonderry Township, Dauphin County, Pennsylvania, (hereinafter "municipality");

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of Dauphin County, Pennsylvania, Deed Book _____ at Page _____, (hereinafter "Property").

WHEREAS, the Landowner is proceeding to build and develop the Property; and

WHEREAS, the SWM site plan approved by the municipality (hereinafter referred to as the "Plan") for the property identified herein, which is attached hereto as Appendix A and made part hereof, as approved by the municipality, provides for management of stormwater within the confines of the Property through the use of BMPs; and

WHEREAS, the municipality, and the Landowner, his successors and assigns, agree that the health, safety, and welfare of the residents of the municipality and the protection and maintenance of water quality require that on-site SWM BMPs be constructed and maintained on the Property; and

WHEREAS, the municipality requires, through the implementation of the SWM site plan, that stormwater BMPs as required by said Plan and the Municipal Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM site plan.
2. The Landowner shall operate and maintain the BMPs as shown on the Plan in good working order in accordance with the specific maintenance requirements noted on the approved SWM site plan.
3. The Landowner hereby grants permission to the municipality, its authorized agents, and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the municipality shall notify the Landowner prior to entering the property.

4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2, the municipality or its representatives may enter upon the property and take whatever action is deemed necessary to maintain said BMPs. It is expressly understood and agreed that the municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the municipality. The Landowner may be subjected to the Penalties Section of the applicable Ordinance.
5. In the event the municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the municipality for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the municipality.
6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or effect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the municipality from all damages, accidents, casualties, occurrences or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMPs by the Landowner or municipality.
8. The municipality may inspect the BMPs whenever necessary to ensure their continued functioning.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Dauphin County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

WITNESS the following signatures and seals:

For the CORPORATE Landowner:

Witness

Signature CORPORATE Landowner

Print Name: _____

Title: _____

Commonwealth of Pennsylvania, County of _____

On this, the _____ day of _____ A.D., 20____, before me, the undersigned officer, personally appeared _____, known to me, (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged himself to be the _____ of _____, a corporation, and that he, as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as such officer.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal

My Commission Expires:

NOTARY PUBLIC (SEAL)

WITNESS the following signatures and seals:

For the Municipality:

WITNESS/ATTEST:

Witness

By: _____

Print Name: _____

Title: _____

Commonwealth of Pennsylvania, County of Dauphin

On this, the _____ day of _____, 20__, before me, a Notary Public, the undersigned officer, personally appeared _____, who acknowledged himself to be the _____ of Londonderry Township, and that he as such _____, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of Londonderry Township by himself/herself as _____.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:

_____(SEAL)
NOTARY PUBLIC

APPENDIX B

APPENDIX B

RATIONAL METHOD 'C' VALUES

	Min	Max	Percent Impervious
Construction Sites			
Bare Packed Soil, smooth	0.30	0.60	0
Bare Packed Soil, rough	0.20	0.50	0
Wooded Areas			
Heavy Ground Litter	0.10	0.20	0
Light Ground Litter	0.15	0.30	0
Steep Rocky Slopes	0.20	0.50	0
Reverting Farmland/Meadow			
100% Vegetative Cover	0.10	0.20	0
80% Vegetative Cover	0.15	0.30	0
50% Vegetative Cover	0.25	0.60	0
Rural Homes			
1 home per 10 acres	0.15	0.30	1
Residential			
1-acre lots	0.15	0.40	20
½-acre lots	0.25	0.50	25
¼-acre lots	0.40	0.60	36
Multi-units (attached)	0.60	0.75	65
Industrial Area			
Light to Medium Density	0.50	0.80	
High Density	0.60	0.95	
Streets and Parking Lots			
Asphalt	0.70	0.95	
Concrete	0.80	0.95	
Gravel	0.45	0.60	
Open Space, parks, golf courses	0.15	0.30	
Meadow	0.10	0.20	
Cultivated Land	0.10	0.40	
Pasture	0.15	0.50	

Minimum values to be used for flatter slopes and soils with better drainage characteristics.

Maximum values to be used for steeper slopes and soils with worse drainage characteristics.

TR-55 RUNOFF COEFFICIENTS

Cover Type	Avg. Percent Impervious Area	HYDROLOGIC SOIL CLASSIFICATION			
		A	B	C	D
Open Space (Lawns, parks, golf courses, cemeteries, etc.)					
Poor Condition (grass cover <50%)		68	79	86	89
Fair Condition (grass cover 50 to 75%)		49	69	79	84
Good Condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc.		98	98	98	98
Streets and Roads:					
Paved; curbs and storm sewers (excl. right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Urban Districts					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential Areas by average lot size					
1/8-acre or less (townhouses)	65	77	85	90	92
1/4-acre	38	61	75	83	87
1/3-acre	30	57	72	81	86
1/2-acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Pasture, grassland, or range					
	Poor (<50%)	68	79	86	89
	Fair (50%-75%)	49	69	79	84
	Good (>75%)	39	61	74	80
Meadow		30	58	71	78
Brush (brush-weed-grass mixture with brush as the major component)					
	Poor (<50%)	48	67	77	83
	Fair (50%-75%)	35	56	70	77
	Good (>75%)	30	48	65	73
Woods-grass combination (orchard or tree farm)					
	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods					
	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30	55	70	77

Poor – forest litter, small trees, and brush are destroyed by heavy grazing or regular burning

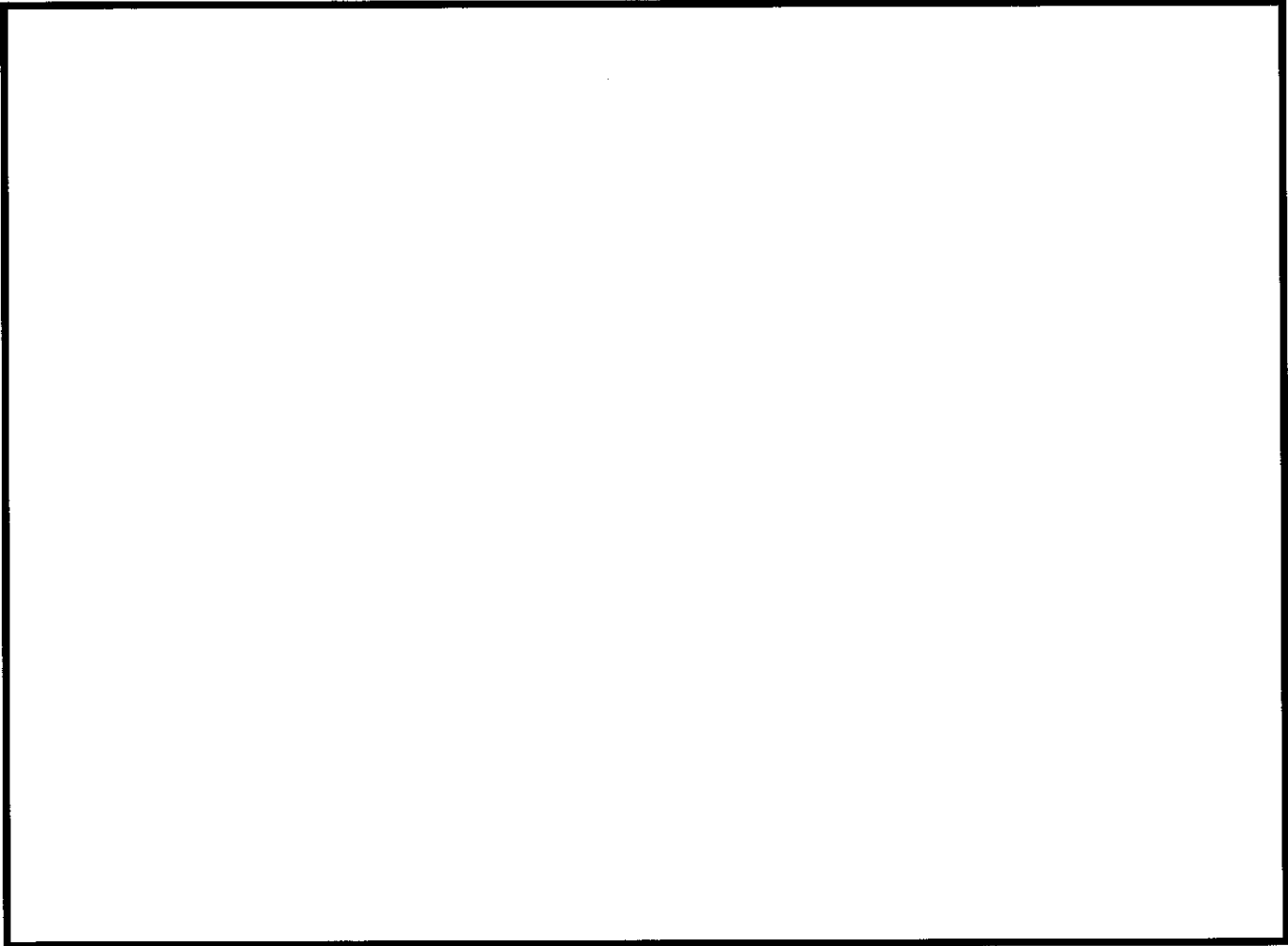
Fair – woods are grazed but not burned, and some forest litter covers the soil

Good – Woods are protected from grazing, and litter and brush adequately cover the soil

For additional cover types not listed, see appropriate table in TR-55

APPENDIX C

APPENDIX C
MINOR SWM PERMIT SITE DESIGN WORKSHEET



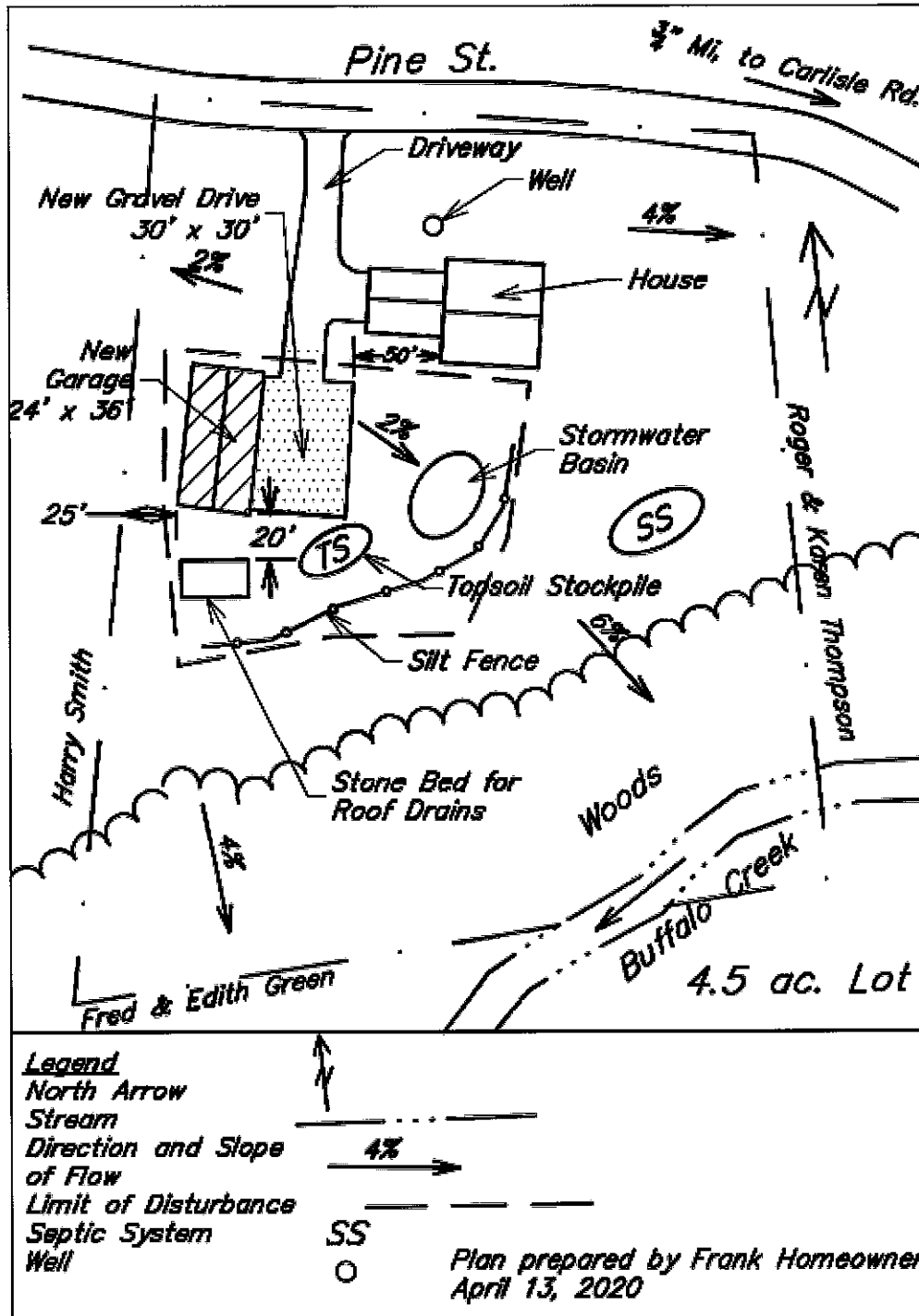
Draw a general site plan including the following: 1. The general layout of the property, including approximate lot lines and existing improvements; 2. All proposed improvements; 3. Flow arrows showing the direction of runoff; 4. The location of the proposed stormwater facilities. An example site plan is available on the following page.

By submitting this worksheet, the Applicant agrees:

1. To submit a Minor SWM Permit for Municipal approval with this Site Design Worksheet.
2. To direct all runoff from proposed impervious areas to the proposed stormwater facilities.
3. To construct the stormwater facilities in conformance with the details and calculations within this worksheet.
4. That the proposed regulated activity conforms to the requirements of the Londonderry Township Stormwater Management Ordinance, including but not limited to the provision of a 15 foot setback for stormwater facilities, and an O&M agreement.
5. That stormwater flows onto adjacent properties shall not be created, increased, relocated, significantly concentrated, or otherwise detrimentally altered without written approval from the affected property owner(s).
6. That stormwater management facilities are permanent fixtures and may not be modified, removed, filled, landscaped, have improvements placed within them, or otherwise be altered without written approval of Londonderry Township.
7. To provide Londonderry Township or its representatives access to the property for the purposes of inspecting SWM and ESC facilities.
8. That all construction shall follow the PADEP BMP Manual and E&S Manual, and that an E&S plan will be sent to the Dauphin County Conservation District for review of adequacy if earth disturbance is equal to or greater than 5,000 square feet.
9. That identification of sensitive natural features, such as wetlands or karst features, is the Applicant's responsibility, and that sensitive natural features on the site will not be encroached upon without proper permitting and/or Municipal approval.
10. That Londonderry Township and its representatives bear no design responsibility for the proposed improvements, including proposed SWM facilities. All design responsibility is borne by the Applicant, and the Applicant should consult with a professional if desired.
11. That the designs produced by utilizing this worksheet are likely conservative in nature.
12. To indemnify Londonderry Township and its representatives from any damage that may result from the proposed improvements, including stormwater management facilities.

Signature of Applicant: _____ Date: _____

Example Minor SWM Permit Site Plan



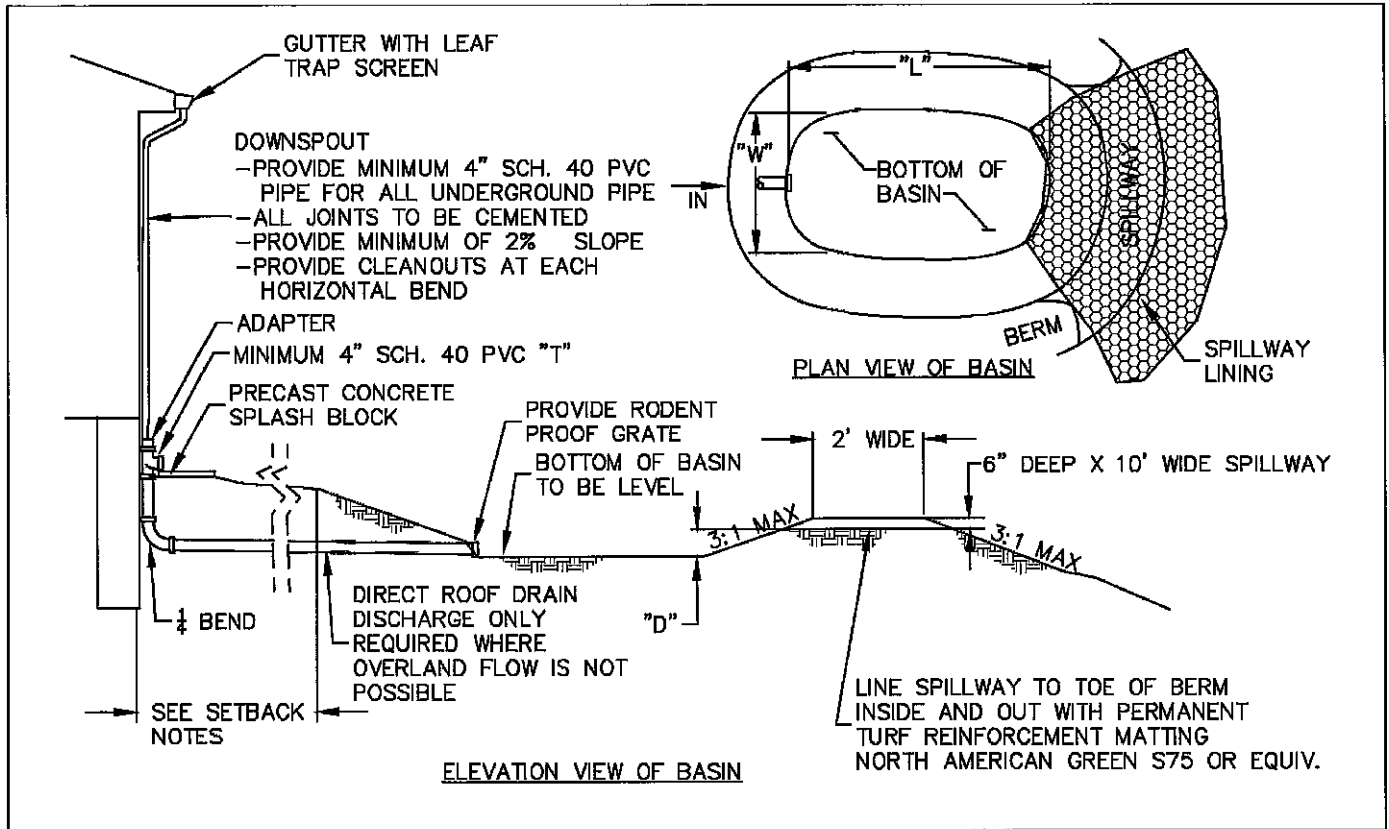
Legend
 North Arrow
 Stream
 Direction and Slope of Flow
 Limit of Disturbance
 Septic System
 Well

SS
 O

Plan prepared by Frank Homeowner
 April 13, 2020

Stormwater Facility Standard Details

Rain Garden



Notes

NOTE 1: Infiltration trenches may only be used for structures; infiltration basins may be used for all surfaces, including structures.

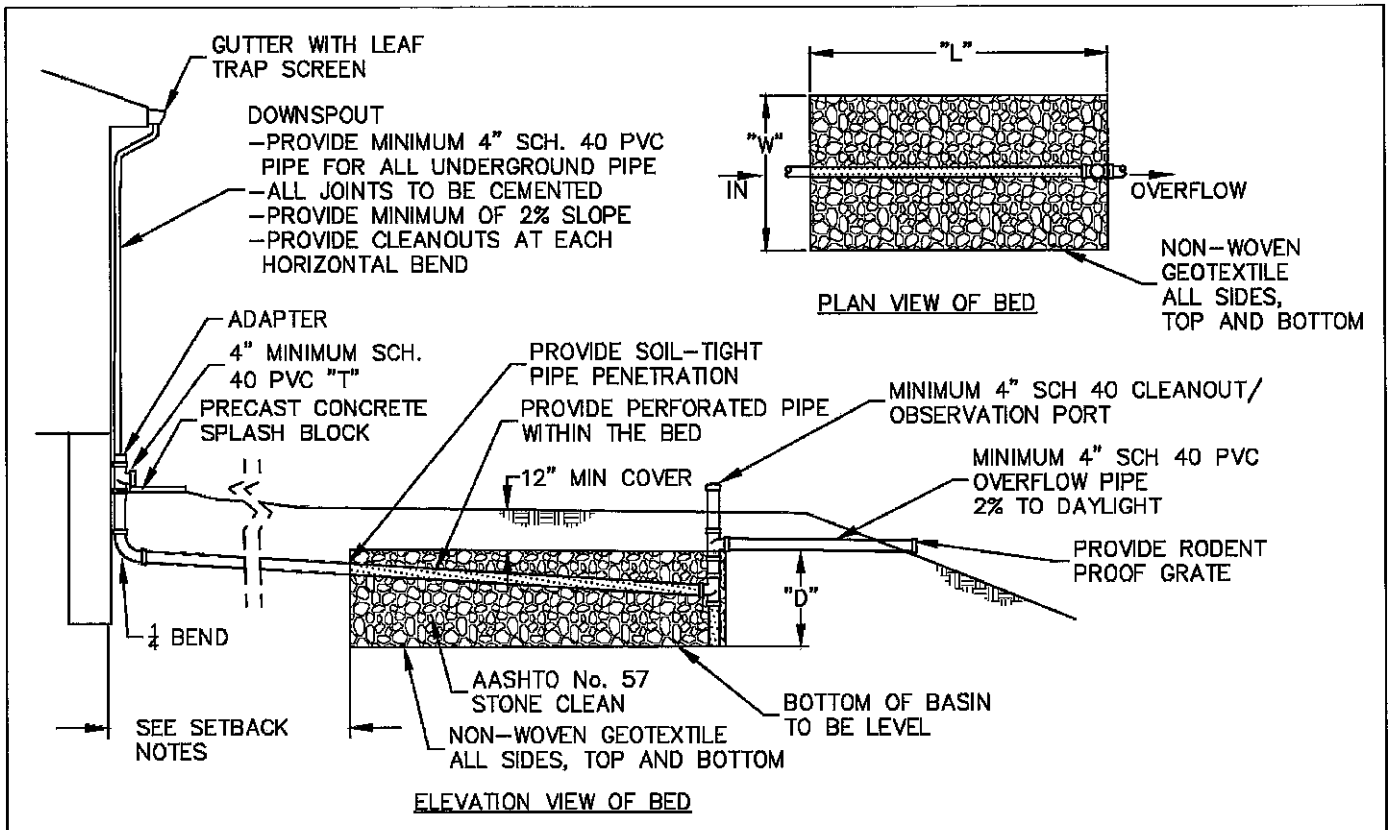
NOTE 2: Infiltration basins deeper than 3 feet may be required to be fenced upon guidance from the Township.

NOTE 3: No stormwater facility may be deeper than 6 feet.

NOTE 4: Any infiltration facilities located within HSG D, Applicant shall provide infiltration testing results that show adequate infiltration rates. See Appendix E for HSG map.

Stormwater Facility Standard Details

Infiltration Trench



NOTE 1: Infiltration trenches may only be used for structures; infiltration basins may be used for all surfaces, including structures.

NOTE 2: Infiltration basins deeper than 3 feet may be required to be fenced upon guidance from the Township.

NOTE 3: No stormwater facility may be deeper than 6 feet.

NOTE 4: Any infiltration facilities located within HSG D, Applicant shall provide infiltration testing results that show adequate infiltration rates (minimum 0.5 inches per hour). See Appendix E for HSG map.

Disconnected Impervious Area (DIA)

When rooftop or pavement runoff is directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, the contributing rooftop or pavement area may qualify as a Disconnected Impervious Area (DIA). A rooftop or pavement area is considered to be a DIA if it meets the requirements listed below:

- The soil in proximity of the discharge area, is not designated as hydrologic soil group "D" or equivalent (see Appendix E – Hydrologic Soil Group Map).
- The overland flow path (pervious area serving as BMP) from discharge area has a positive slope of 10% or less.
- The length of overland flow path (pervious area serving as BMP) is greater than or equal to the contributing rooftop or pavement length.
- The length of overland flow path (pervious area serving as BMP) is greater than 25 feet.

If the discharge is concentrated at one or more discrete points, no more than 1,000 square feet of impervious area may discharge to any one point. In addition, a gravel strip or other spreading device is required for concentrated discharges. For non-concentrated discharges along the edge of pavement, this requirement is waived; however, there must be a provision for the establishment of vegetation along the pavement edge and temporary stabilization of the area until vegetation becomes stabilized.

If rainspouts are discharged underground to provide infiltration, the portion of the impervious area draining to those rainspouts is waived from the DIA discharge requirements. Rainspouts discharged underground which are directly connected to a storm sewer system are not waived from the DIA requirements.

See Attached Disconnected Impervious Area worksheet.

Disconnected Impervious Area (DIA) Worksheet

Applicant Address:	Brief Description of Project:				
Nearest Waterbody:	No more than 1,000 sq. ft can discharge to one point on the surface. Number of discharge points required:				
Total Proposed Impervious Area(A):	Discharge Point 1	Discharge Point 2	Discharge Point 3	Discharge Point 4	Discharge Point 5
Total Earth Disturbance:	Area:	Area:	Area:	Area:	Area:
Are rainspouts discharged underground? (Y/N)	Impervious Path Length:	Impervious Path Length:	Impervious Path Length:	Impervious Path Length:	Impervious Path Length:
If yes, contributing impervious area (B):	Pervious Path Length:	Pervious Path Length:	Pervious Path Length:	Pervious Path Length:	Pervious Path Length:
Total Impervious Area Discharged on Surface (A) – (B)	Pervious Path Slope <10%? (Y/N)	Pervious Path Slope <10%? (Y/N)	Pervious Path Slope <10%? (Y/N)	Pervious Path Slope <10%? (Y/N)	Pervious Path Slope <10%? (Y/N)
HSG Soil Group from Appendix E – Hydrologic Soils Group Map (Cannot be “D” Soils):					
Project Sketch: Only show discharge points, slopes, and pervious flow path lengths:					

Stormwater Facility Calculations

(The following worksheets is only applicable to Minor SWM Permits)

How to calculate the size of your stormwater facility

1. Determine the area of your property available for the installation of stormwater facilities in terms of length and width (in feet). If large areas of your property are available, determine how much you would like to dedicate to the installation of stormwater facilities in terms of length and width.
2. Enter the length and width chosen into #1: (Facility Area) in the table below, and multiply them together. This will tell you the area (in square feet) that your stormwater facility will take up.
3. Determine the area of impervious surfaces you are proposing to construct that will discharge into the stormwater facility. For example, a 30 foot x 40 foot garage would be 1200 square feet. For surfaces that are not simple geometric shapes, you may need to get the area of impervious surfaces from your contractor.
4. Enter the area of impervious surfaces into #2: (Runoff Volume) in the table below, and multiply this by 0.2. This will tell you the volume of stormwater runoff the impervious surfaces are generating (in cubic feet).
5. Enter the runoff volume (#2 below) and the stormwater facility area (#1 below) into #3: (Facility Depth) in the table below. Divide #2 by #1. This will tell you how deep (in feet) your stormwater facility will need to be if it is an infiltration basin. **If you are proposing to construct an infiltration basin, skip step 6 and proceed to step 7.**
6. **If you are proposing to construct an infiltration trench**, enter the facility depth (#3 below) into #4: (Depth w/ Stone) in the table below, and divide by 0.4. This will tell you how deep (in feet) your stormwater facility will need to be since it is using stone. Stone takes up approximately 60% of the volume within an infiltration trench, so only 40% of the volume of the infiltration trench is available to actually store stormwater. Dividing by 0.4 compensates for this loss of runoff storage.
7. If your stormwater facility depth is greater than 6 feet, you will need to expand the area for the stormwater facility determined in #1 above, and repeat the above process until the depth is equal to or lesser than 6 feet.

Facility Name or #	1: Facility Area	_____ (L) x _____ (W)	SF
	2: Runoff Volume	_____ (Imp. Area to Facility) x 0.2	CF
	3: Facility Depth	_____ (#2) / _____ (#1)	F
	4: Depth w/ Stone	(TRENCHES ONLY) _____ (#3) / 0.4	F

NOTE: Extra tables provided below for repeat calculations or for extra facilities.

Facility Name or #	1: Facility Area	_____ (L) x _____ (W)	SF
	2: Runoff Volume	_____ (Imp. Area to Facility) x 0.2	CF
	3: Facility Depth	_____ (#2) / _____ (#1)	F
	4: Depth w/ Stone	(TRENCHES ONLY) _____ (#3) / 0.4	F

Facility Name or #	1: Facility Area	_____ (L) x _____ (W)	SF
	2: Runoff Volume	_____ (Imp. Area to Facility) x 0.2	CF
	3: Facility Depth	_____ (#2) / _____ (#1)	F
	4: Depth w/ Stone	(TRENCHES ONLY) _____ (#3) / 0.4	F

Facility Name or #	1: Facility Area	_____ (L) x _____ (W)	SF
	2: Runoff Volume	_____ (Imp. Area to Facility) x 0.2	CF
	3: Facility Depth	_____ (#2) / _____ (#1)	F
	4: Depth w/ Stone	(TRENCHES ONLY) _____ (#3) / 0.4	F

APPENDIX D



Appendix D
LONDONDERRY TOWNSHIP
POST CONSTRUCTION BMP INSPECTION REPORT

Date: _____

Owner Information

1. Name: _____ 2. Account Number: _____
 3. Email: _____ 4. Phone: _____
 5. Address: _____

Inspector Information (If Different from Owner)

1. Name: _____ 2. Phone: _____
 3. Email: _____
 4. Address: _____

BMP Information

1. Address _____
 2. Property Type (Circle One): Residential Commercial Industrial Institutional Other
 If Other, Please Describe: _____
 3. Installation Date: _____
 4. Type of BMP, If More Than One BMP Please Provide Information on All BMPs

 5. Is Maintenance Needed at This Time (Circle One)? Yes No
 6. Comments/Notes: _____

 7. Attach Maintenance Documentation and Photographs of BMP (Required)

FOLLOW-UP AND ENFORCEMENT ACTIONS (FOR INTERNAL USE ONLY)

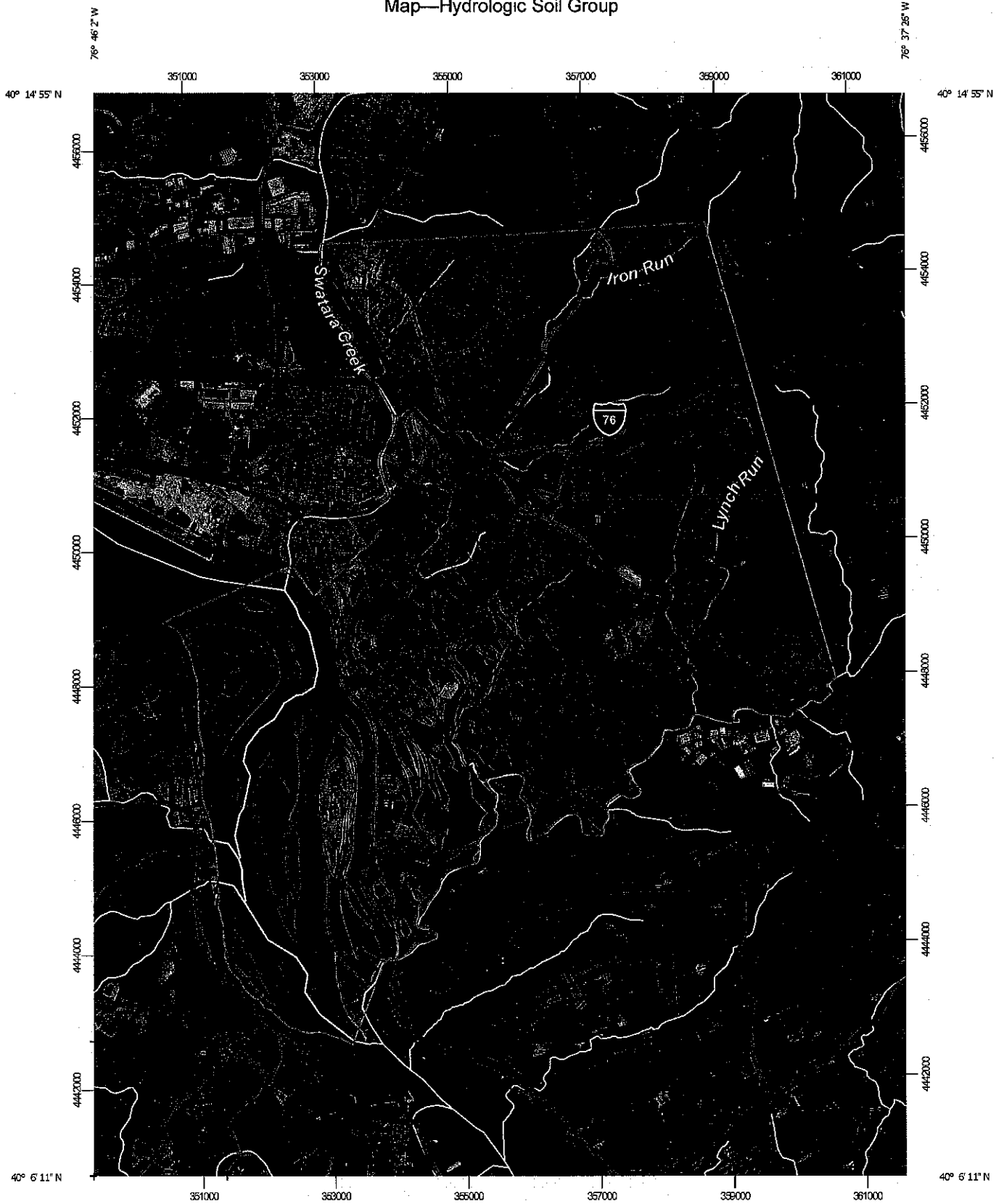
1. Describe corrective actions needed: _____

 2. Describe Enforcement Action: _____
 3. Follow-up required? Yes No
 Comments: _____
 4. Return inspection needed? Yes No
 Comments: _____
 5. Required Compliance Date: _____ 6. Date Corrected: _____

Representative: _____

APPENDIX E

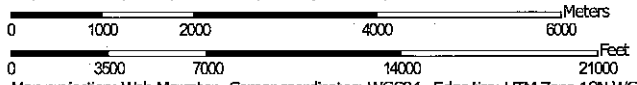
Appendix E
Custom Soil Resource Report
Map—Hydrologic Soil Group



76° 46' 2" W



Map Scale: 1:78,700 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84








































76° 46' 2" W

76° 37' 26" W

40° 6' 11" N

40° 14' 55" N

MAP LEGEND

 Area of Interest (AOI)	 C
 Soils	 C/D
 Soil Rating Polygons	 D
 A	 Not rated or not available
 A/D	 Water Features
 B	 Streams and Canals
 B/D	 Transportation
 C	 Rails
 C/D	 Interstate Highways
 D	 US Routes
 Not rated or not available	 Major Roads
 Soil Rating Lines	 Local Roads
 A	 Background
 A/D	 Aerial Photography
 B	
 B/D	
 C	
 C/D	
 D	
 Not rated or not available	
 Soil Rating Points	
 A	
 A/D	
 B	
 B/D	

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dauphin County, Pennsylvania
 Survey Area Data: Version 19, Sep 6, 2022

Soil Survey Area: Lancaster County, Pennsylvania
 Survey Area Data: Version 21, Sep 6, 2022

Soil Survey Area: York County, Pennsylvania
 Survey Area Data: Version 17, Sep 7, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 6, 2020—Nov 7, 2020

APPENDIX F

APPENDIX F
STORMWATER MANAGEMENT PERMIT APPLICATION

The Pennsylvania Department of Environmental Protection (PADEP) requires all municipalities enact a Stormwater Management Ordinance (SWMO) meeting PADEP's requirements. Londonderry Township's full SWMO can be reviewed on the Township's website (www.londonderrypa.org), under Zoning, Codes & Resolutions.

This guidance is intended to assist you in determining what level of stormwater management will be required for your project in accordance with the Township's SWMO. If there are any conflicts between this Guidance and the SWMO, the provisions of the SWMO will govern.

Applicant:

Name:

Project Address:

Tax Map Reference:

Mailing Address:

Phone #:

Email Address:

**Assisting Professional (Professional Engineer, Landscaper, Builder, Pool Company, etc.)
(If Applicable)**

Name:

Mailing Address:

Phone #:

Email Address:

Description of Project:

Estimated Total Project Cost:

Is a Stormwater Management Permit required?

Proposed Impervious Area on Your Project:

- | | |
|--|---------------|
| 1. Previous impervious surface installed since 12/19/2010 | _____ sq. ft. |
| 2. Proposed new pavement (parking, driveway, etc.) | _____ sq. ft. |
| 3. Proposed Building (new building, addition, garage, shed, etc.) | _____ sq. ft. |
| 4. <u>Proposed sidewalk or patio (gravel, concrete, brick, pavers, etc.)</u> | _____ sq. ft. |
| 5. TOTAL ADDED IMPERVIOUS AREA (1+2+3+4-5) | _____ sq. ft. |

Impervious Square Footage Stormwater Permit Tiers:

- If the Total Added Impervious is between 0-999 sq. ft, a Stormwater Permit is not required.
- If the Total Added Impervious is between 1,000-4,999 sq. ft., a Minor Stormwater Permit is required.
- If the Total Added Impervious is 5,000 sq. ft. or greater, a Major Stormwater Permit is required.

***Refer to Londonderry Townships SWMO for additional disturbances that would require a Stormwater Permit.**

As applicable, provide latitude and longitude of proposed Stormwater Management Facilities:

-
-
-
-

Stormwater Management Permit Options:

- Exemption – Refer to Section 28-302 of the SWMO
- Minor SWM Permit – Refer to Section 28-401 of the SWMO
- Major SWM Permit – Refer to Section 28-402 of the SWMO