

LOCATION MAP  
SCALE: 1"=2000'

WATER GAP ACQUISITIONS PARTNERS, LLC  
PARCEL No. 16/9/1/26  
PIN: 16732000755147  
D.B.V. 2418, PG. 6739

WATER GAP ACQUISITIONS PARTNERS, LLC  
PARCEL No. 4/3/2/17  
PIN: 04731012855395  
D.B.V. 2418, PG. 6739

UNITED STATES OF AMERICA  
PARCEL No. 16/9/1/27  
PIN: 16731000501344  
D.B.V. 352, PG. 210

WATER GAP ACQUISITIONS PARTNERS, LLC  
EXCEPTION NO. 11  
D.B.V. 2418, PG. 6739

PLAN INDEX			
PLAN DESIGNATION	PLAN TITLE	PLAN NO.	LAST REV.
ZP-1	ZONING SITE PLAN	1 of 6	8/30/2023
DP-1	DRAINAGE PLAN	2 of 6	8/30/2023
ES-1	EROSION & SEDIMENTATION CONTROL PLAN	3 of 6	8/30/2023
ESD-1	EROSION & SEDIMENTATION CONTROL DETAILS	4 of 6	8/30/2023
ESD-2	EROSION & SEDIMENTATION CONTROL DETAILS	5 of 6	8/30/2023
DE-1	CONSTRUCTION DETAILS	6 of 6	8/30/2023

USERS (OWNERS, CONTRACTORS) OF THIS PLAN ARE ADVISED THAT ALL PLANS SHOWN IN THE ABOVE REFERENCED PLAN INDEX SHALL BE UTILIZED WHEN PREPARING ESTIMATES, MANUFACTURING STRUCTURES, AND PERFORMING CONSTRUCTION. CERTAIN PLANS MAY HAVE FEATURES (EXISTING OR PROPOSED) WHICH MAY BE HIDDEN FROM VIEW TO PROVIDE CLARITY FOR THAT PARTICULAR PLAN. ALL DRAWINGS WITHIN THIS PLAN SET SHALL BE REVIEWED AND UTILIZED.

**SOIL CLASSIFICATION**

- BaC** BATH CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES
- BaD** BATH CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES
- BaE** BATH CHANNERY SILT LOAM, 8 TO 25 PERCENT SLOPES
- LBE** LAGORAMA AND BATH SOILS, STEEP, RUBBLY

**NOTES:**

- THIS DRAWING HAS BEEN PREPARED BASED ON THE BEST AVAILABLE INFORMATION. THE SURVEYOR HAS NOT VERIFIED THE ACCURACY OF THE UNDERGROUND UTILITIES AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT. CONTRACTORS SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS PRIOR TO ANY FUTURE CONSTRUCTION.
- DATE OF SURVEY: MAY 2, 2023.
- THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE CONSTRUED AS ONE. ALL BOUNDARY LINE INFORMATION IS SHOWN AS PER DEEDS OF RECORD.
- THE OWNER/DEVELOPER OF THE LOT SHALL BE RESPONSIBLE FOR ACQUIRING ANY APPLICABLE APPROVALS/PERMITS PRIOR TO SITE DEVELOPMENT.
- HORIZONTAL DATUM: S.P.C.S. NAD83 & VERTICAL DATUM: NAVD88
- PROJECT SITE IS IN AREA OF MINIMAL FLOOD HAZARD, ZONE X, ACCORDING TO FEMA FIRM PANEL 42089C0432E, EFFECTIVE 05/02/2013.
- NO ADDITIONAL LANDSCAPING OR SCREENING IS PROPOSED FOR THE PROJECT AREA.
- LIMIT OF DETAILED TOPO SURVEY VS DRONE SURVEY AS NOTED ON THE PLAN.

**SITE DATA**

OWNER: WATER GAP ACQUISITIONS PARTNERS, LLC.  
PROPERTY ADDRESS: 296 MOUNTAIN ROAD  
STROUDSBURG, PA 18360  
DEED REFERENCE: D.B.V. 2418 - PG. 6739  
PARCEL NO.: 16/9/1/26  
PIN: 16732000755147  
TOTAL AREA: 105.71 AC.  
PROPOSED USE: PROPOSED BUILDING FOR GOLF CART STORAGE AND GREENHOUSE  
NO WATER OR SEWER SERVICE  
ELECTRIC SERVICE BY OTHERS

**ZONING DATA**

DISTRICT: R-1; LOW DENSITY RESIDENTIAL  
ON-SITE SEWER AND WATER  
MINIMUMS:  
LOT SIZE: 50,000 S.F.  
LOT WIDTH: 150 FT.  
LOT DEPTH: 200 FT.  
FRONT YARD: 35 FT.  
SIDE YARD: 30 FT.  
REAR YARD: 25 FT.  
MAXIMUMS:  
BUILDING COVERAGE: 20%  
BUILDING HEIGHT: 35 FT.

ZONING NOTE:  
ZONING DATA PROVIDED IS BASED ON AN INTERPRETATION OF THE ZONING ORDINANCE BY THE PLAN PREPARER AND IS SUBJECT TO CONFIRMATION BY THE APPROPRIATE MUNICIPAL OFFICIAL.

**LEGEND**

	EXISTING	PROPOSED
PROPERTY BOUNDARY		
LOT LINE		
CURBING		
BUILDING		
GRAVEL DRIVE		
PAVEMENT		
CONCRETE WALKWAY		
ZONING BOUNDARY		
SOIL BOUNDARY		
UTILITY POLE		
OVERHEAD WIRES		
UNDERGROUND ELECTRIC		
WATER MAIN & VALVE		
FIRE HYDRANT		
WELL		
GAS MAIN & VALVE		
SANITARY LINE, MANHOLE, & CLEANOUT		
STORM LINE, MANHOLE, & INLET		
CHAIN-LINK FENCE		
SIGN		
DECIDUOUS TREE		
EVERGREEN TREE		
CONTOUR		
SPOT ELEVATION		
EDGE OF PAVEMENT		
EDGE OF CONCRETE		
BITUMINOUS		
TYPICAL		
FINISHED FLOOR		
DOOR SILL		
TO BE REMOVED		

NOTE:  
VERTICAL TEXT INDICATES PROPOSED FEATURES  
SLANTED TEXT INDICATES EXISTING FEATURES



REVISIONS	DATE	BY	TAL
1. STORMWATER MGMT PLAN	8/1/2023		

610.398.0904  
barryisett.com  
85 South Route 100  
Allentown, PA 18106

**BARRY ISETT & associates**  
MULTIDISCIPLINE ENGINEERS AND CONSULTANTS

**ZONING SITE PLAN**

**WATERGAP WELLNESS STORAGE & GOLF CART BUILDING**

**WATERGAP ACQUISITIONS PARTNERS, LLC**

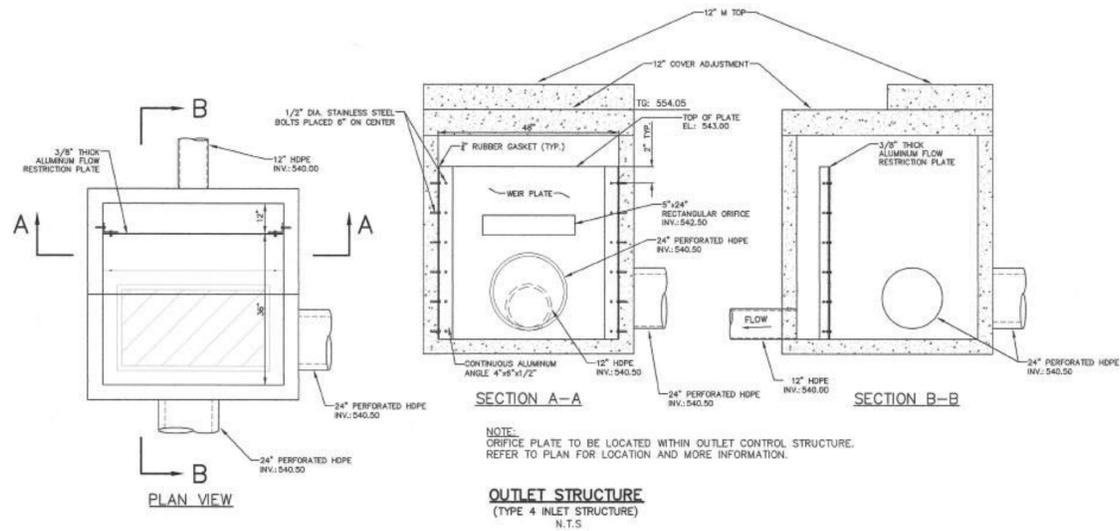
**SMITHFIELD TOWNSHIP**

**MONROE COUNTY, PA**

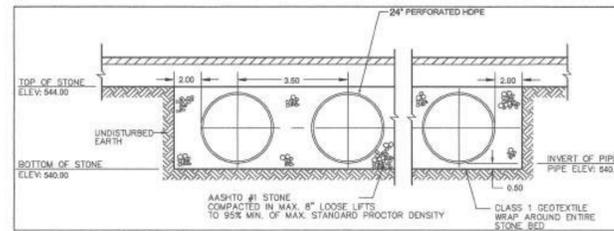
DATE:	5/19/2023	DSGN:	CHN
SCALE:	1"=40'	CHK:	CHN
DRAWN:	TAL	APPRD:	CHN
JOB:	1022419.003	P.MGR:	CHN

COPYRIGHT 2022  
SHEET: 1 OF 6

**ZP-1**

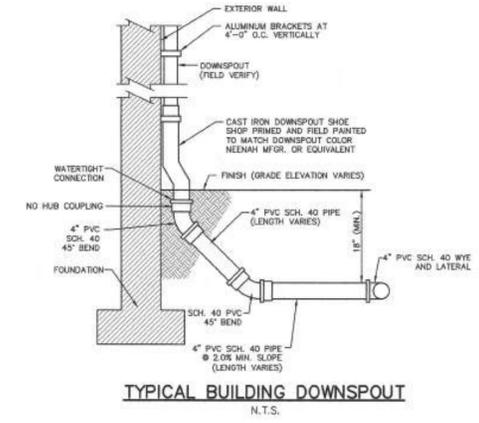


- NOTES:**
- ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
  - ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
  - MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
  - FILTER FABRIC:** A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
  - FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE, AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
  - BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4" - 24" (100mm-600mm); 6" (150mm) FOR 30" - 60" (750mm-900mm).
  - INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 12" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
  - MINIMUM COVER:** MINIMUM COVER OVER ALL RETENTION/RETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION FOR TRAFFIC APPLICATIONS. MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLOORSLAB PAVEMENT OR TO TOP OF RIGID PAVEMENT.
  - BITUMINOUS PAVEMENT AREAS - COVER OVER DET/DET:** IF SUBBASE DEPTH VARIES OVER THE DET/DET BASIN IN AREAS WHERE PAVEMENT SLOPES ARE GREATER THAN THE PAVEMENT SUBBASE DEPTH, THE SAME SUBBASE PAVEMENT MATERIAL IS TO BE UTILIZED TO BRING THE GRADE TO THE PAVEMENT SUBBASE MATERIAL DEPTH.



NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING	TYPICAL WALL THICKNESS	TYPICAL SIDE WALL	H (NON-TRAFFIC)	H (TRAFFIC)
12"	14.5"	11"	25.4"	8"	12"	12"
300 MM	368 MM	(279 MM)	(645 MM)	(203 MM)	(292 MM)	(292 MM)
18"	20"	12"	28.5"	8"	12"	12"
375 MM	457 MM	(292 MM)	(734 MM)	(203 MM)	(292 MM)	(292 MM)
18"	20"	12"	33.0"	8"	12"	12"
450 MM	533 MM	(434 MM)	(882 MM)	(229 MM)	(292 MM)	(292 MM)
24"	26"	12"	40.7"	10"	12"	12"
600 MM	711 MM	(330 MM)	(1034 MM)	(254 MM)	(292 MM)	(292 MM)
30"	36"	18"	53.1"	18"	12"	12"
750 MM	914 MM	(457 MM)	(1347 MM)	(457 MM)	(292 MM)	(292 MM)
36"	42"	22"	63.7"	18"	12"	12"
900 MM	1067 MM	(559 MM)	(1600 MM)	(457 MM)	(292 MM)	(292 MM)
42"	48"	24"	71.9"	18"	12"	12"
1050 MM	1219 MM	(610 MM)	(1826 MM)	(457 MM)	(292 MM)	(292 MM)
48"	54"	25"	78.5"	18"	12"	12"
1200 MM	1372 MM	(635 MM)	(1924 MM)	(457 MM)	(292 MM)	(292 MM)
60"	67"	24"	90"	18"	12"	12"
1500 MM	1792 MM	(910 MM)	(2288 MM)	(457 MM)	(292 MM)	(292 MM)

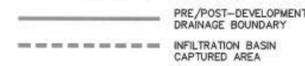
\* CLASS I BACKFILL REQUIRED AROUND 60" DIAMETER FITTINGS.



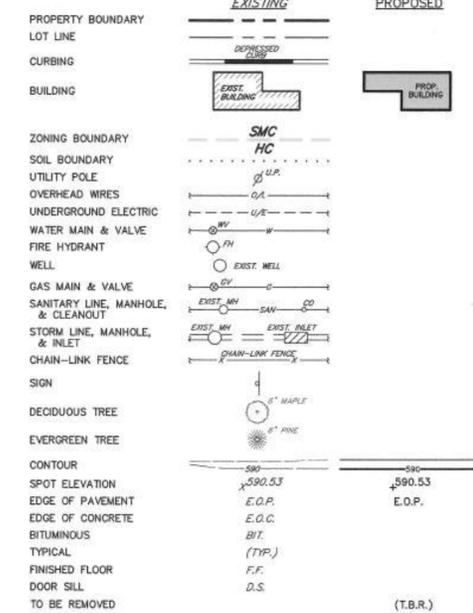
\_\_\_\_\_, ON THIS DATE, HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE NAME BROADHEAD CREEK ACT 167 AND SMITHFIELD TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

SEE PLAN SHEET DE-1 FOR SUBSURFACE INFILTRATION BED CONSTRUCTION SEQUENCING

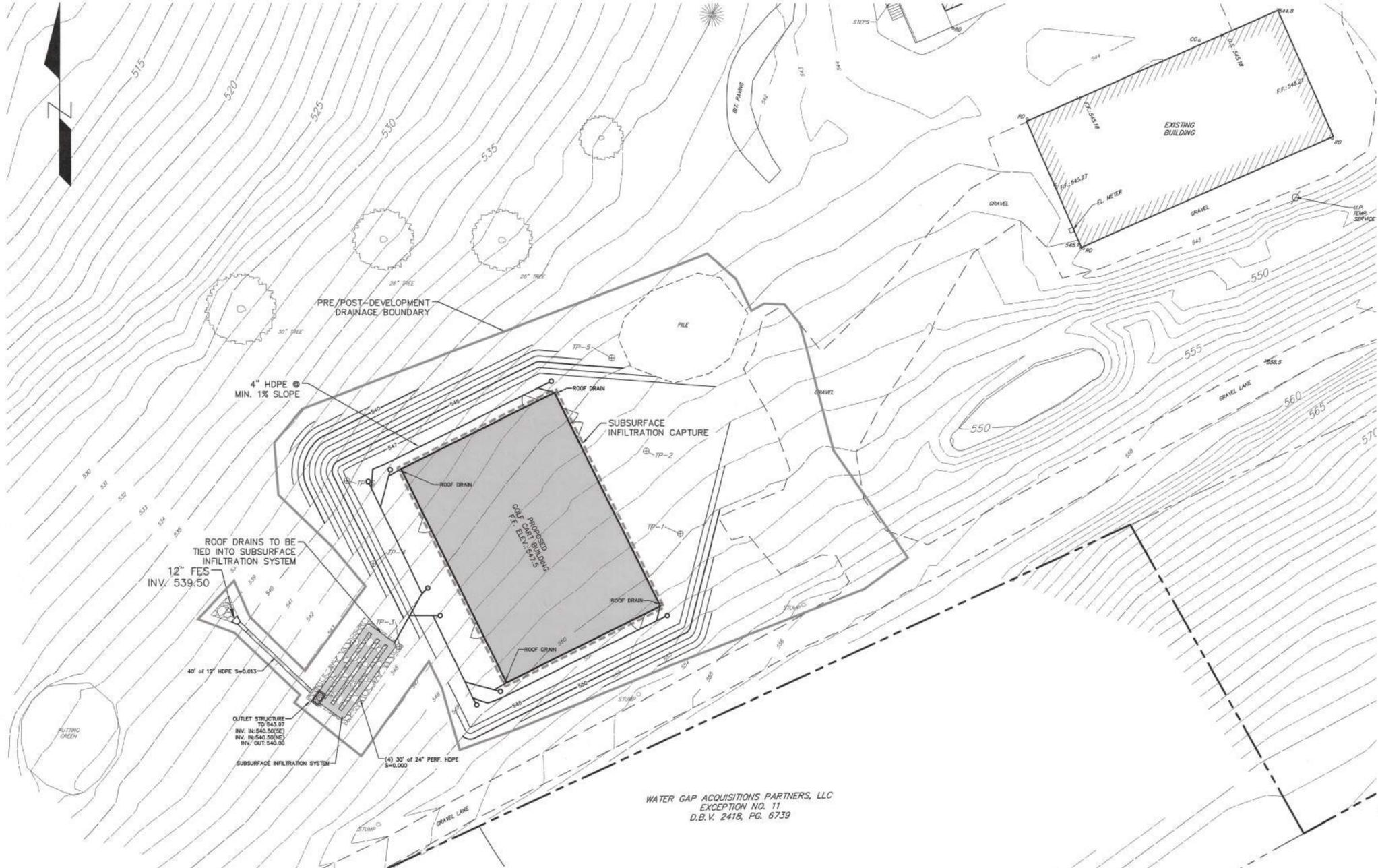
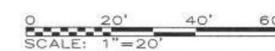
**DRAINAGE LEGEND**



**LEGEND**



NOTE: VERTICAL TEXT INDICATES PROPOSED FEATURES  
SLANTED TEXT INDICATES EXISTING FEATURES



WATER GAP ACQUISITIONS PARTNERS, LLC  
EXCEPTION NO. 11  
D.B.V. 2418, PG. 6739

REVISIONS	DATE	BY

610.398.0904  
barrissett.com  
85 South Route 100  
Allentown, PA 18106

**BARRY ISETT & Associates**  
M.E.T.I. DISCIPLINE ENGINEERS AND CONSULTANTS

**DRAINAGE PLAN**

**WATERGAP WELLNESS STORAGE & GOLF CART BUILDING**

**WATERGAP ACQUISITIONS PARTNERS, LLC**

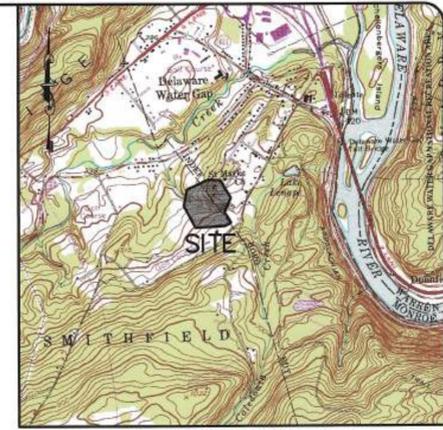
**SMITHFIELD TOWNSHIP**

**MONROE COUNTY, PA**

DATE:	8/4/2023	DSGN:	DHC
SCALE:	1"=20'	CHK:	DWR
DRAWN:	TAL	APPRD:	CHN
JOB:	1022419.003	P MGR:	CHN

COPYRIGHT 2022  
SHEET: 2 OF 6

**DP-1**



**GRADING NOTES**

- IN ACCORDANCE TO STATE LAW, THE CONTRACTOR SHALL BE REQUIRED TO CALL PA ONE-CALL FOR UTILITY MARK-OUT IN ADVANCE OF ANY UTILITY EXCAVATION.
- LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICES CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST POINTS. CROSSINGS WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED FOR INVERT ELEVATIONS AND LOCATION BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THESE DRAWINGS HAVE BEEN PREPARED BASED ON THE BEST AVAILABLE INFORMATION. THE ENGINEER CAN NOT VERIFY THE ACCURACY BETWEEN VISIBLE OR MARKED POINTS OF THE UNDERGROUND UTILITIES AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHY AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
- THE OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE AND OWNERSHIP RESPONSIBILITIES OF THE PROPOSED POST CONSTRUCTION STORMWATER BMP'S AND OTHER STORMWATER MANAGEMENT FACILITIES ON SITE.
- ALL EXCAVATIONS, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPT. OF LABOR, OSHA.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
- CONTRACTOR MUST OBTAIN ANY REQUIRED UTILITY DETAILS FOR RECONNECTION OF EXISTING SERVICES OR NEW SERVICE, AND IS RESPONSIBLE FOR THE CONSTRUCTION OF EACH NEW SERVICE. CONNECTIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE OPERATING UTILITY.
- SOILS TESTING AND ON-SITE INSPECTION SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL/SOILS ENGINEER. THE SOILS ENGINEER SHALL PROVIDE COPIES OF TEST REPORTS TO THE CONTRACTOR, THE OWNER, AND THE OWNER'S REPRESENTATIVE AND SHALL PROMPTLY NOTIFY THE OWNER, HIS REPRESENTATIVE AND THE CONTRACTOR, SHOULD WORK PERFORMED BY THE CONTRACTOR FAIL TO MEET THESE SPECIFICATIONS.
- COMPACTION OF THE BACKFILL OF ALL TRENCHES SHALL BE COMPACTED TO THE DENSITY OF 95% OF THEORETICAL MAXIMUM DRY DENSITY (ASTM D698). BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, OR OTHER FOREIGN DEBRIS AND SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES IN COMPACTED FILL THICKNESS. RUNOFF FROM IMPERVIOUS AREAS SHALL NOT BE DIRECTED INTO THE SANITARY SEWER NOR ONTO ADJACENT PROPERTIES.

PLAN PREPARER: CHARLES H. NICLAUS P.E.  
 BARRY ISETT & ASSOCIATES  
 525 MAIN STREET, SUIT 200  
 STROUDSBURG, PA 18360  
 272-200-2050  
 cniclaus@BARRYISETT.COM

STABILIZE ALL SLOPES 3:1 OR GRATER WITH  
 NAG S75 MATTING OR EQUIVALENT.

SEE DRAWINGS ESD-1 & ESD-2 FOR  
 ADDITIONAL NOTES AND DETAILS

LIMIT OF DISTURBANCE: 0.55 ACRES

**UTILITY NOTE:**  
 CONTRACTOR SHALL VERIFY ALL EXISTING  
 UNDERGROUND UTILITIES PRIOR TO  
 COMMENCEMENT OF WORK

**SOIL CLASSIFICATION**

- BaC BATH CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES
- BaD BATH CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES
- BaE BATH CHANNERY SILT LOAM, 8 TO 25 PERCENT SLOPES
- LbE LACKWANNA AND BATH SOILS, STEEP, RUBBLY

**EROSION & SEDIMENT CONTROL  
 MEASURES LEGEND**

(SEE E&S DOCUMENT FOR DESCRIPTIONS AND USES)

- LIMIT OF DISTURBANCE
- 12" COMPOST FILTER SOCK
- CONCRETE WASHOUT
- EROSION CONTROL MATTING (AREAS OF 3:1 OR STEEPER)
- ROCK CONSTRUCTION ENTRANCE
- TOPSOIL STOCKPILE

**LEGEND**

- PROPERTY BOUNDARY
- LOT LINE
- CURBING
- BUILDING
- GRAVEL DRIVE
- PAVEMENT
- CONCRETE WALKWAY
- ZONING BOUNDARY
- SOIL BOUNDARY
- UTILITY POLE
- OVERHEAD WIRES
- UNDERGROUND ELECTRIC
- WATER MAIN & VALVE
- FIRE HYDRANT
- WELL
- GAS MAIN & VALVE
- SANITARY LINE, MANHOLE, & CLEANOUT
- STORM LINE, MANHOLE, & INLET
- CHAIN-LINK FENCE
- SIGN
- DECIDUOUS TREE
- EVERGREEN TREE
- CONTOUR
- SPOT ELEVATION
- EDGE OF PAVEMENT
- EDGE OF CONCRETE
- BITUMINOUS
- TYPICAL
- FINISHED FLOOR
- DOOR SILL
- TO BE REMOVED

NOTE:  
 VERTICAL TEXT INDICATES PROPOSED FEATURES  
 SLANTED TEXT INDICATES EXISTING FEATURES

DATE	BY
9/1/2023	TAL
REVISIONS	
1. STORMWATER MGMT PLAN	

**BARRY ISETT & ASSOCIATES**  
 ENGINEERS AND CONSULTANTS

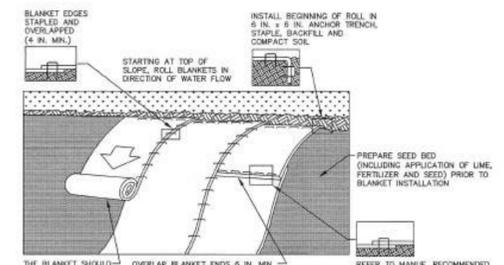
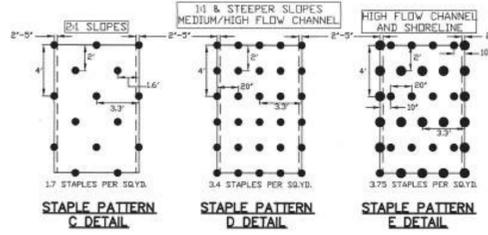
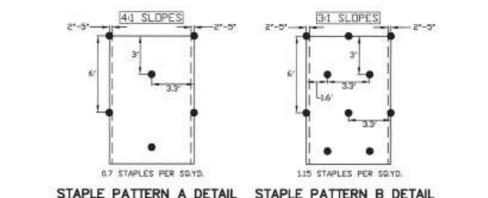
610.398.0904  
 barryisett.com  
 85 South Route 100  
 Allentown, PA 18106

**EROSION & SEDIMENTATION CONTROL PLAN**  
**WATERGAP WELLNESS STORAGE & GOLF CART BUILDING**  
**WATERGAP ACQUISITIONS PARTNERS, LLC**  
 SMITHFIELD TOWNSHIP  
 MONROE COUNTY, PA

DATE	DSGN
5/19/2023	CHN
SCALE	CHK
1"=40'	CHN
DRAWN	APPRD
TAL	CHN
JOB	P MGR
1022419.003	CHN
COPYRIGHT 2022	
SHEET: 3 OF 6	

**ES-1**





**NOTES:**

ALL EROSION CONTROL BLANKETS SHALL BE NORTH AMERICAN GREEN S75

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

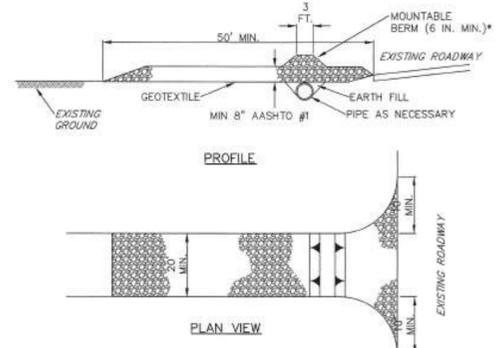
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

**MODIFIED CONSTRUCTION DETAIL #11-1 EROSION CONTROL BLANKET INSTALLATION**

N.T.S.



\* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

**NOTES:**

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

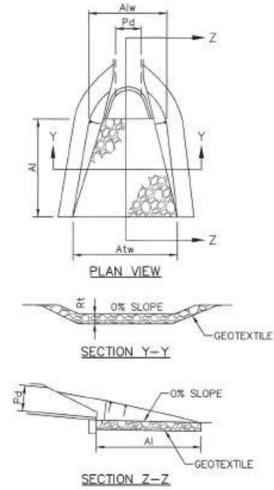
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK, WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

**STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP			APRON	
		SIZE R--	THICK. Rt (IN)	LENGTH Ai (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
RA-1	12	3	9	6	3	9

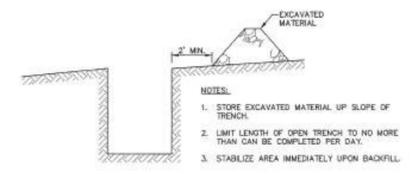
**NOTES:**

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

**STANDARD CONSTRUCTION DETAIL #9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL**

NOT TO SCALE



**NOTES:**

1. STORE EXCAVATED MATERIAL UP SLOPE OF TRENCH.

2. LIMIT LENGTH OF OPEN TRENCH TO NO MORE THAN CAN BE COMPLETED PER DAY.

3. STABILIZE AREA IMMEDIATELY UPON BACKFILL.

**EROSION & SEDIMENTATION CONTROL DETAILS**

**WATERGAP WELLNESS STORAGE & GOLF CART BUILDING**

**WATERGAP ACQUISITIONS PARTNERS, LLC**

**SMITHFIELD TOWNSHIP**

**MONROE COUNTY, PA**

DATE: 5/19/2023	DSGN: CHN
SCALE: AS NOTED	CHK: CHN
DRAWN: TAL	APPRD: CHN
JOB: 1022419.003	P MGR: CHN

COPYRIGHT 2022

SHEET: 5 OF 8

**ESD-2**

REVISIONS:	DATE:	BY:
1. STORMWATER RIGHT PLAN	05/19/2023	TAL

610.398.0904

barryisett.com

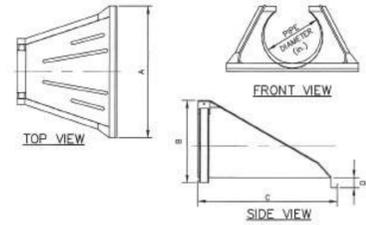
85 South Route 100

Allentown, PA 18106

**BARRY ISETT & ASSOCIATES**

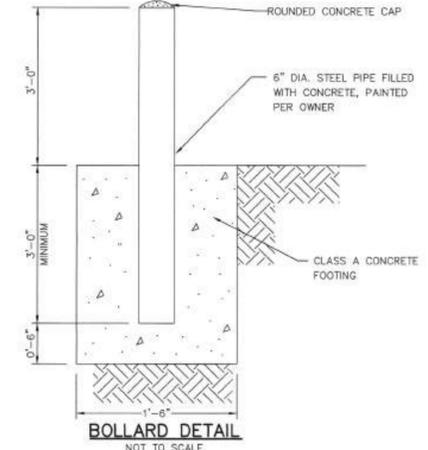
M.E.T. LICENSED PROFESSIONAL ENGINEERS AND CONSULTANTS

FILENAME: C:\Users\Gossey\Documents\Associates\1022419.003\Water\_Sep\_W\_Cor\_Bldg\Project\Treas\Cor\Treas\1022419\_003\erogon\plan.dwg - September 5, 2023 5:37 AM

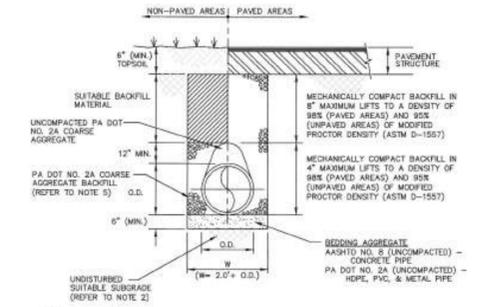


DIMENSION	PIPE DIAMETER (in.)					
	12	15	18	24	30	36
A	42	48	54	64	88	88
B	14 1/2	24 1/2	29	37	38	43
C	33	42 1/2	50	50	63 1/2	66 1/2
D	6	6	6	6	6	6

**FLARED END SECTION DETAIL**  
N.T.S.

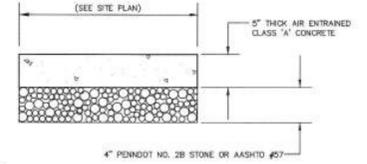


**BOLLARD DETAIL**  
NOT TO SCALE



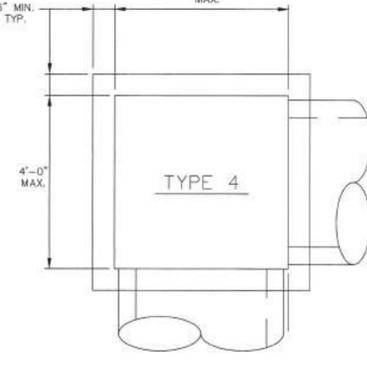
- NOTES:**
1. EXCAVATE TRENCH BOX AND INSTALL SHORING AS REQUIRED TO COMPLY WITH FEDERAL, STATE, AND LOCAL LAWS AND CODES.
  2. IF UNSUITABLE MATERIAL IS FOUND, UNDERCUT AS DIRECTED BY THE ENGINEER AND BACKFILL WITH SUITABLE MATERIAL TO BOTTOM OF BEDDING ELEVATION.
  3. KEEP EXCAVATION DRY AND FREE OF WATER INTERFLOEY AND SURFACE DRAINAGE AWAY FROM EXCAVATIONS. DEWATER ANY PRECIPITATION AND SUBSURFACE WATER FROM EXCAVATIONS. DO NOT ADVANCE TRENCHING OPERATIONS MORE THAN 100 FEET AREAS OF COMPLETED PIPING.
  4. ALL TRENCHES WITHIN PAVED AREAS SHALL BE BACKFILLED WITH FULL DEPTH PA DOT NO. 2A COARSE AGGREGATE.

**TYPICAL STORM PIPE TRENCH & BACKFILL**  
N.T.S.



- NOTES:**
1. TRANSVERSE CONTRACTION JOINTS SHALL BE 1/8" WIDE AND 1/4" THE CONCRETE THICKNESS AT THE DIRECTION OF THE TOWNSHIP ENGINEER OR HIS/HER REPRESENTATIVE IN FIELD.
  2. ISOLATION JOINTS WITH 1/2" PRE-ANNEALED MATERIAL SHALL BE PLACED A MAXIMUM OF 25 FEET ON-CENTER TO FULL DEPTH.
  3. ALL EDGES TO BE ROUNDED WITH A 1/4" TOOL.
  4. WEATHER PROTECTION AND CURING COMPOUNDS SHALL BE USED IN ACCORDANCE WITH PENNDOT SPECIFICATION PUB. 408 CURRENT EDITION.
  5. CURING COMPOUND SHALL BE AASHTO C309, TYPE 1-B.
  6. ACCESSIBLE ROUTES SHALL HAVE WALKING SURFACES WITH A RUNNING SLOPE NOT STEEPER THAN 1:20. THE CROSS SLOPE OF ACCESSIBLE ROUTES SHALL NOT BE STEEPER THAN 1:48 IN ACCORDANCE WITH ANSI 403.3.

**TYPICAL SIDEWALK**  
N.T.S.



**TYPE 4 (4'x4') INLET BOX**  
REFER TO PENNDOT RC-46M, LATEST EDITION

**SUBSURFACE INFILTRATION BED**

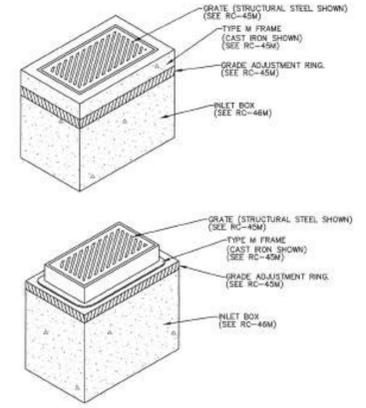
**GENERAL CONSTRUCTION NOTE:**

GIVEN THE LIMITED ACCESS TO SUBSURFACE INFILTRATION BEDS, IT IS NEARLY IMPOSSIBLE TO MAINTAIN OR REPAIR THE BMP AFTER CONSTRUCTION AND IN THE EVENT OF FAILURE, THEREFORE, PREVENTIVE MAINTENANCE IS EXTREMELY IMPORTANT. ALL RUNOFF CONVEYED TO THE INFILTRATION FACILITIES SHALL BE FILTERED. FILTERS SHALL BE PROVIDED & MAINTAINED IN ACCORDANCE WITH THIS PLAN. DOING SO SHOULD ENSURE ONLY CLEAN WATER, FREE OF SEDIMENT, POLLUTANTS, AND/OR OTHER DEBRIS, ENTERS BED THEREBY MAXIMIZING THE BMP'S EFFECTIVE LIFE.

- CONSTRUCTION SEQUENCE:**
1. DUE TO THE NATURE OF CONSTRUCTION SITES, SUBSURFACE INFILTRATION SHALL BE INSTALLED TOWARD THE END OF THE CONSTRUCTION PERIOD.
  2. INSTALL AND MAINTAIN ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES (AS PER THE PENNSYLVANIA EROSION AND SEDIMENTATION CONTROL PROGRAM MANUAL) DURING CONSTRUCTION.
  3. THE EXISTING SUBGRADE UNDER THE BED AREAS SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO GEOTEXTILE AND STONE BED PLACEMENT.
  4. WHERE EROSION OF SUBGRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE (OR EQUIVALENT) AND LIGHT TRACTOR. ALL FINE GRADING SHALL BE DONE BY HAND. ALL BED BOTTOMS SHALL BE AT LEVEL GRADE.
  5. EARTHEN BERMS (IF USED) BETWEEN INFILTRATION BEDS SHALL BE LEFT IN PLACE DURING EXCAVATION. THESE BERMS DO NOT REQUIRE COMPACTION IF PROVEN STABLE DURING CONSTRUCTION.
  6. GEOTEXTILES AND BED AGGREGATE SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION AND INSTALLATION OF STRUCTURES. GEOTEXTILES SHALL BE PLACED IN ACCORDANCE WITH MANUFACTURERS STANDARDS AND RECOMMENDATIONS. ADJACENT STRIPS OF GEOTEXTILE SHALL OVERLAP A MINIMUM OF 16 INCHES. IT SHALL BE SECURED AT LEAST 4 FEET OUTSIDE OF BED IN ORDER TO PREVENT ANY RUNOFF OR SEDIMENT FROM ENTERING THE STORAGE BED. THIS EDGE STRIP SHALL REMAIN IN PLACE UNTIL ALL BARE SOILS CONTIGUOUS TO BEDS ARE STABILIZED AND VEGETATED. AS THE SITE IS FULLY STABILIZED, EXCESS GEOTEXTILE ALONG BED EDGES CAN BE CUT BACK TO THE EDGE OF THE BED.
  7. CLEAN-WASHED, UNIFORMLY GRADED AGGREGATE SHALL BE PLACED IN THE BED IN MAXIMUM 8-INCH LIFTS. EACH LAYER SHALL BE LIGHTLY COMPACTED, WITH CONSTRUCTION EQUIPMENT KEPT OFF THE BED BOTTOM AS MUCH AS POSSIBLE.
  8. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

**INSPECTION & MAINTENANCE NOTES:**

- MAINTENANCE ACTIVITIES REQUIRED FOR THE SUBSURFACE BED ARE SIMILAR TO THOSE OF ANY INFILTRATION SYSTEM AND FOCUS ON REGULAR SEDIMENT AND DEBRIS REMOVAL. THE FOLLOWING REPRESENTS THE RECOMMENDED MAINTENANCE EFFORTS:
1. SYSTEM SHALL BE INSPECTED AT LEAST QUARTERLY DURING THE FIRST YEAR IN SERVICE AND ANNUALLY THEREAFTER. INSPECTIONS SHALL ALSO BE PERFORMED AFTER MAJOR STORM EVENTS TO ENSURE PROPER FUNCTION.
  2. FLUSHING SHALL BE PERFORMED IF SEDIMENT FILLS THE LESSER OF 6" OR 15% OF THE SYSTEM HEIGHT.
  3. FLUSHING SHALL BE PERFORMED BY PUMPING WATER INTO THE TANKS AND VACUUMING SEDIMENT LADEN WATER OUT OF THE SYSTEM EITHER THROUGH THE OUTLET STRUCTURE OR THROUGH THE FLUSH PORT.
  4. ALL CATCH BASINS AND INLETS SHALL BE INSPECTED AND CLEANED AT LEAST 2 TIMES PER YEAR.
  5. THE OVERLYING VEGETATION OF SUBSURFACE INFILTRATION FEATURES SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED AS SOON AS POSSIBLE.
  6. VEHICULAR ACCESS ON SUBSURFACE INFILTRATION AREAS SHALL BE PROHIBITED, AND CARE SHALL BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS. IF ACCESS IS NEEDED, USE OF PERMEABLE, TURF REINFORCEMENT SHALL BE CONSIDERED.
  7. IN THE EVENT THAT THE INFILTRATION BEDS DO NOT INFILTRATE WITHIN 72 HOURS, THE OWNER SHALL CONTACT THE DESIGN ENGINEER AND THE BERKS COUNTY CONSERVATION DISTRICT TO DETERMINE THE APPROPRIATE COURSE OF ACTION.



- NOTES:**
- 1. CONSTRUCTION REQUIREMENTS:**
- A. CONSTRUCT IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 605, 606 AND 714; AND AS MODIFIED HEREIN.
  - B. MINIMUM CONCRETE CLASS:
    - PRE CAST CLASS AA
  - C. PROVIDE STEEL REINFORCEMENT IN ACCORDANCE WITH PUBLICATION 408, SECTION 705. PROVIDE MINIMUM YIELD STRENGTH OF 400 MPa (60,000 PSI).
  - D. CLEAR COVER FOR STEEL:
    - WALLS: PRE CAST 1"-1/2"
    - FOOTINGS: PRE CAST 2" TOP BARS 1"-1/2" BOTTOM BARS 1"-1/2" SIDE COVER
- 2. EACH TYPE OF INLET SHOWN IS SUITED FOR A PARTICULAR SITUATION AS FOLLOWS:**
- TYPE 'C' INLET IS DESIGNATED FOR INSTALLATION WITH NON-MOUNTABLE CURBS.
  - TYPE 'M' INLET IS DESIGNATED FOR INSTALLATION IN MEDIAN AREAS AND MOUNTABLE CURBS.
- 3. THE SELECTION OF COMPONENTS TO ADHERE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY.**
4. USE PRE CAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED. (REHABILITATION PROJECTS)
  5. FOR WALL REINFORCEMENT, BOTH DIRECTIONS, USE #4 MINIMUM EACH WAY, EACH FACE 8" MAXIMUM SPACING.
  6. FOR FOOTING REINFORCEMENT, TOP AND BOTTOM, USE #4 BARS AT 12" CENTER EACH WAY OR 17"/M W/ 8" MAXIMUM SPACING.
  7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS IN PARENTHESIS.
  8. PROVIDE WEEP HOLE ON INLET BOXES WHEN REQUIRED.
  9. PIPES MAY BE CONNECTED TO DRAINAGE STRUCTURES (PRE CAST INLETS, ETC.) WITH MORTAR OR WATER/TIGHT RUBBER FLEXIBLE CONNECTORS.

**TYPE "M" INLET**  
REFER TO PENNDOT RC-45M & RC-66M, LATEST EDITION  
N.T.S.

DATE	BY
8/12/2023	TAL
REVISIONS	
1. STORMWATER BMP PLAN	

610.398.0904  
baryisett.com  
85 South Route 100  
Allentown, PA 18106

**BARRY ISETT & ASSOCIATES**  
MULTIDISCIPLINARY ENGINEERS AND CONSULTANTS

**CONSTRUCTION DETAILS**  
WATERGAP WELLNESS STORAGE & GOLF CART BUILDING  
WATERGAP ACQUISITIONS PARTNERS, LLC  
SMITHFIELD TOWNSHIP  
MONROE COUNTY, PA

DATE	DSGN:
5/19/2023	CHN
SCALE:	CHK:
AS NOTED	CHN
DRAWN:	APPRD:
TAL	CHN
JOB:	P MOR:
1022419.003	CHN

COPYRIGHT 2022

SHEET: 6 OF 6

**DE-1**