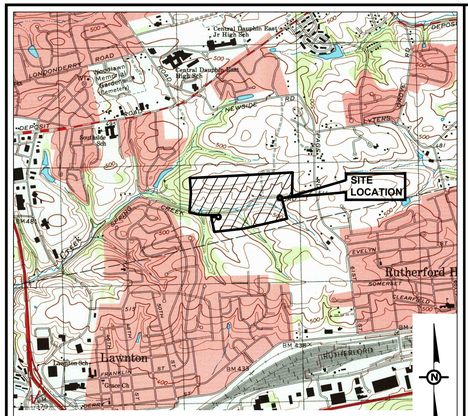
PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

WINTER SPORTS FIELD HOUSE & VENUE PHASE 1

FOR

BISHOP MCDEVITT HIGH SCHOOL

LOWER PAXTON TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA



LOCATION MAP

SCALE: 1"=2000 FEET

LANDOWNER / APPLICANT

DIOCESE OF HARRISBURG
4800 UNION DEPOSIT ROAD
HARRISBURG, PA 17111

TELEPHONE: 717-236-7973
CONTACT: VINCENT HARPER, PRINCIPAL

SITE ENGINEER / PLAN PREPARER

KUROWSKI & WILSON, LLC
2201 NORTH FRONT STREET, SUITE 200
HARRISBURG, PA 17110

TELEPHONE: 717.635.2835
CONTACT: CAROLYN E. DUBOIS, RLA

SITE SURVEYOR

KUROWSKI & WILSON, LLC
2201 NORTH FRONT STREET, SUITE 200
HARRISBURG, PA 17110

TELEPHONE: 717.635.2835
CONTACT: DENNIS P. BURKHARD, PLS

WAIVER REQUESTS

THE FOLLOWING WAIVERS OF THE LOWER PAXTON TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE ARE REQUESTED BY THE APPLICANT:

SECTION 180-303 PRELIMINARY PLAN

ACT 287 UTILITY INFORMATION

THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF PENNSYLVANIA UNDERGROUND UTILITY LINE PROTECTION (UULP) LAW, PA ACT 287 OF 1974, AS AMENDED BY ACT 50 OF 2017 FOR NOTIFICATION OF UTILITIES BEFORE EXCAVATION IN CONTRACT AREA. THE UNDERGROUND UTILITIES LOCATION CALL NUMBER IS 1-800-242-1776 (or 811)

PA ONE-CALL SERIAL NUMBER: 20250653195 (DESIGN TICKET)
PA ONE-CALL SERIAL NUMBER DATE: 03/06/2025

THE FOLLOWING UTILITY FACILITY OWNERS WERE NOTIFIED BY THE PA ONE-CALL SYSTEM, INC.

LOWER PAXTON TOWNSHIP AUTHORITY
5993 LOCUST LN
HARRISBURG, PA. 17109
CONTACT:JAMES WETZEL
EMAIL:JWETZEL@LOWERPAXTON-PA.GOV
PHONE:717-657-5623

ZAYO BANDWIDTH FORMERLY PPL TELCOM LLC
170 ROBBINS RD
DOWNINGTOWN, PA. 19335
CONTACT:JOHN HOWELLS
EMAIL:JOHN.HOWELLS@ZAYO.COM
PHONE:610-476-1634

PPL ELECTRIC UTILITIES CORPORATION
437 BLUE CHURCH RD
PAXINOS, PA. 17860
CONTACT:DOUG HAUPT
EMAIL:dlhaupt@pplweb.com
PHONE:570-490-5684

COMCAST
4601 SMITH STREET
HARRISBURG, PA. 17109
CONTACT:MICHAEL SWEIGARD
EMAIL:mike_sweigard@cable.comcast.com
PHONE:717-298-6450

UGI UTILITIES INC
1301 AIP DR
MIDDLETOWN, PA. 17057-5987
CONTACT:GEOFFREY FERGUSON
EMAIL:GFERGUSON@UGI.COM
PHONE:610-807-3118

ZONING DATA

ZONING DISTRICT: (IN) INSTITUTIONAL			
PROPOSED USE: EDUCATIONAL			
REQUIREMENT:	REQUIRED:	EXISTING:	PROPOSED:
MINIMUM LOT AREA:	15,000 SF	84.24 AC.	84.24 AC.
MINIMUM LOT WIDTH:	100 FEET	± 623 FEET	± 623 FEET
FRONT YARD SETBACK:	40 FEET	± 132 FEET	± 132 FEET
SIDE YARD SETBACK:	25 FEET	± 138 FEET	± 138 FEET
REAR YARD SETBACK:	25 FEET	± 989 FEET	± 989 FEET
MAX. IMPERVIOUS COVERAGE:	75%	18%	18%
MAX. BUILDING COVERAGE:	60%	3.1%	3.4%

SITE DATA

TAX PARCEL:	35-077-022
DEED REF. / INSTRUMENT #:	20100030565
EXISTING LOT AREA:	86.54 ACRES (DEED) 84.24 (MEASURED)
PROPOSED SEWAGE DISPOSAL:	PUBLIC
PROPOSED WATER SUPPLY:	PUBLIC

PARKING DATA

PARKING REQUIRED:	1 PER 4 STUDENTS AGE 16 OR OLDER	450/4=113 SPACES
	1 PER 1.1 EMPLOYEES	81/1.1=74 SPACES
OUTDOOR RECREATION	1 PER 4 PERSONS OF CAPACITY, 50% MAY BE ON GRASS	3000/4=750 SPACES
	TOTAL PARKING REQUIRED =	937
	TOTAL PARKING PROVIDED =	969

*NO ENROLLMENT CHANGES ARE PROPOSED AS PART OF THIS PLAN AND NO ADDITIONAL PARKING IS BEING PROPOSED.

CERTIFICATE OF ACCURACY (PLAN)

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE LAND DEVELOPMENT PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT.

_____, 20_____

_____
J. MARC KUROWSKI, PE

CERTIFICATE OF ACCURACY (SURVEY)

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE BOUNDARY SURVEY SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT.

_____, 20_____

_____
DENNIS P. BURKHARD, PLS

SHEET INDEX

LAND DEVELOPMENT PLANS

SHEET NUMBER	SHEET TITLE
C-001	COVER SHEET
C-002	E&S SUPPORTING INFORMATION
C-101	OVERALL EXISTING FEATURES PLAN
C-101.1	EXISTING FEATURES PLAN
C-102	DEMOLITION PLAN
C-103	SITE PLAN
C-103.1	EXTENDED SITE PLAN
C-104	GRADING PLAN
C-105	UTILITY PLAN
C-301	STORMWATER PROFILES
C-302	STORMWATER PROFILES
C-401	SANITARY SEWER PROFILE
C-501	DETAILS
C-502	DETAILS
C-701	OVERALL E&S PLAN
C-701.1	E&S PLAN
C-702	E&S DETAILS
C-801	OFFSITE DRAINAGE PLAN

STORMWATER CERTIFICATION OF ACCURACY

I, _____, HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF LOWER PAXTON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

_____, 20_____ _____

CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF DAUPHIN

ON THIS THE_____ DAY OF _____, 20_____ BEFORE ME THE

UNDERSIGNED PERSONALLY APPEARED.

OWNER(S) _____

OWNER(S) _____

WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT THEY ARE THE OWNERS OF THE PROPERTY SHOWN ON THIS PLAN AND THAT THEY ACKNOWLEDGE THE SAME TO BE THEIR ACT AND DEED AND DESIRE THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW. WITNESS MY HAND AND NOTORIAL SEAL THE DAY AND THE DATE ABOVE WRITTEN

_____
NOTARY PUBLIC MY COMMISSION EXPIRES

IT IS HEREBY CERTIFIED THAT THE UNDERSIGNED ARE THE OWNERS OF THE PROPERTY SHOWN ON THIS PLAT AND THAT ALL STREETS OR PARTS THEREOF, IF NOT PREVIOUSLY DEDICATED, ARE HEREBY TENDERED FOR DEDICATION TO PUBLIC USE.

OWNER(S) _____

OWNER(S) _____

TOWNSHIP ENGINEER

THIS PLAN REVIEWED BY THE LOWER PAXTON TOWNSHIP ENGINEER THIS

_____ DAY OF _____ 20_____

TOWNSHIP ENGINEER _____

TOWNSHIP BOARD OF COMMISSIONERS

THIS PLAN APPROVED BY THE LOWER PAXTON TOWNSHIP BOARD OF COMMISSIONERS, AND ALL CONDITIONS IMPOSED WITH RESPECT TO SUCH APPROVAL WERE COMPLETED ON THIS

_____ DAY OF _____ 20_____

_____ _____
PRESIDENT SECRETARY

TOWNSHIP PLANNING COMMISSION

THIS PLAN RECOMMENDED FOR APPROVAL BY THE LOWER PAXTON TOWNSHIP

PLANNING COMMISSION THIS _____ DAY OF _____ 20_____

CHAIRMAN _____

SECRETARY _____

OWNER STORMWATER STATEMENT

I _____ (OWNER) ACKNOWLEDGE THAT THE STORMWATER SCM'S SHOWN WITHIN THESE PLANS ARE PERMANENT FIXTURES THAT CANNOT BE ALTERED OR REMOVED WITHOUT PRIOR APPROVAL BY LOWER PAXTON TOWNSHIP.

GENERAL NOTES

1. THE PURPOSE OF THIS PLAN IS THE CONSTRUCTION OF A FIELD HOUSE AND WINTER SPORTS VENUE.
2. THE EXISTING SITE FEATURES, TOPOGRAPHY AND PROPERTY BOUNDARY LINES SHOWN HEREON ARE OBTAINED FROM A DRAWING OF SURVEY INFORMATION PRODUCED BY KUROWSKI & WILSON, LLC.
3. PUBLIC WATER TO BE PROVIDED BY LOWER PAXTON TOWNSHIP.
4. PUBLIC SEWER TO BE PROVIDED BY LOWER PAXTON TOWNSHIP.
5. THE SITE DEVELOPMENT WILL COMPLY WITH ALL APPLICABLE TOWNSHIP ORDINANCES IN EFFECT AT THE TIME OF THIS LAND DEVELOPMENT PLAN SUBMISSION.
6. STREET CURB & SIDEWALKS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF LOWER PAXTON TOWNSHIP, AS APPLICABLE.
7. ALL SIGNS SHALL CONFORM TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND TOWNSHIP SPECIFICATIONS AND SHALL BE INSTALLED BY THE DEVELOPER IN A MANNER SPECIFIED BY THE MUNICIPAL ENGINEER. A SEPARATE PERMIT IS REQUIRED FOR ANY NEW SIGNS AND ALL NEW SIGNS MUST MEET TOWNSHIP REQUIREMENTS.
8. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES OUTSIDE OF THE PUBLIC RIGHT-OF-WAY SHALL BE OWNED, OPERATED, AND MAINTAINED BY THE PROPERTY OWNER. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE DEDICATED TO LOWER PAXTON TOWNSHIP OR PENNDOT.
9. THERE ARE NO EXISTING COVENANTS FOR THE SUBJECT TRACT.
10. THE DEVELOPER / CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A MINIMUM OF 48 HOURS NOTICE AND TO COORDINATE WITH THE TOWNSHIP / TOWNSHIP ENGINEER IN REGARDS TO ALL MUNICIPAL INSPECTION WORK REQUIRED ON THE PROJECT SITE.
11. A WETLAND INVESTIGATION OF THE SUBJECT PROPERTY WAS PERFORMED BY STEVE GOODYEAR OF AQUA NICHE (717-957-3577). ALL DELINEATED WETLANDS HAVE BEEN SURVEYED AND ARE SHOWN ON THE PLAN.

DAUPHIN COUNTY PLANNING COMMISSION

THIS PLAN REVIEWED BY THE DAUPHIN COUNTY PLANNING COMMISSION

THIS _____ DAY OF _____, 20_____

CHAIRMAN _____

SECRETARY_____

RECORDER OF DEEDS

THIS PLAN RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS IN AND

FOR DAUPHIN COUNTY THIS _____ DAY OF _____, 20_____

INSTRUMENT NUMBER_____

K&W DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
WINTER SPORTS FIELD HOUSE & VENUE PHASE 1
FOR
BISHOP MCDEVITT SCHOOL HIGH SCHOOL
LOWER PAXTON TOWNSHIP DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	
CAD DRAWING:	2160018-A_ld CVR_24x36.dwg

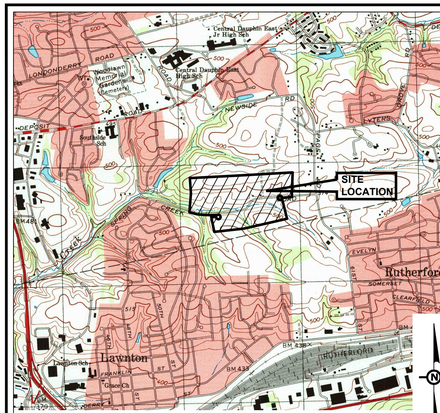
REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

PLAN TYPE:
COVER SHEET

SHEET:
C-001

2160018-A Ross Robert\Desktop\2160018-A_CVR_24x36.dwg 5/8/25 8:48:31 jdonovan


SITE LOCATION
Rutherford H
Lawton
Central Dauphin East Jr High Sch
Central Dauphin Middle School
Londonderry Elementary School
Londonderry Park
Londonderry Township Municipal Building
Londonderry Township Police Department
Londonderry Township Public Works Garage
Londonderry Township Volunteer Fire Company
Londonderry Township Volunteer Fire Company
Londonderry Township Volunteer Fire Company

SURVEY NOTES

1. THIS SURVEY WAS PERFORMED AND MAPPING PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH.
2. TOPOGRAPHIC INFORMATION SHOWN ARE BASED ON A FIELD SURVEY PERFORMED BY K&W ENGINEERS AND CONSULTANTS, COMPLETED IN MARCH, 2025. BOUNDARY IS SHOWN BASED ON PREVIOUS SURVEY DATA PERFORMED BY K&W ENGINEERS IN 2009.
3. PROPERTY LINES SHOWN ARE BASED ON PROPERTY CORNER MARKERS AND OTHER EVIDENCE FOUND, CURRENT DEEDS OF RECORD, AND THE FOLLOWING PLAN:
   INSTRUMENT 20100003919
4. CONSOLIDATION OF LOTS 1, 2, & 3 AS SHOWN ON FINAL SUBDIVISION PLANS PREPARED FOR BISHOP McDEVITT HIGH SCHOOL BY K&W ENGINEERS, DATED JANUARY 21, 2009, PROJECT NO. 2039.011, RECORDED IN INSTRUMENT 20100003919.
5. CONTOURS AND ELEVATIONS ARE BASED ON NATIONAL AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
6. BEARINGS ARE BASED ON PENNSYLVANIA STATE PLANE COORDINATES, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
8. UTILITY LOCATIONS ARE BASED ON SURFACE EVIDENCE AND LIMITED PA ONE-CALL MARKINGS EVIDENT AT THE TIME OF THE FIELD SURVEY. PA ONE-CALL SERIAL NO. 20250653195 WAS ASSIGNED ON MARCH 6, 2025.
9. SOME UTILITIES AND UNDERGROUND PIPE LOCATIONS COULD NOT BE VERIFIED AND FURTHER INVESTIGATION IS REQUIRED. APPROXIMATE UTILITY AND PIPE LOCATIONS SHOWN ARE BASED ON THE PREVIOUSLY MENTIONED PLANS, AND DATA PROVIDED BY A SUBSURFACE UTILITY INVESTIGATION (SUI) PERFORMED BY THE LEXIS GROUP, COMPLETED IN MARCH, 2025.
10. A PORTION OF THE SUBJECT PROPERTY DESCRIBED ON THIS SURVEY LIES WITHIN THE 100-YEAR FLOODPLAIN (ZONE AE, SPECIAL FLOOD HAZARD AREA) SHOWN ON THIS PLAN, AND AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AND SHOWN ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR LOWER PAXTON TOWNSHIP, COMMUNITY PANEL NO. 420384, FIRM NUMBER 42043C0345D, EFFECTIVE DATE AUGUST 2, 2012.

SOILS INFORMATION

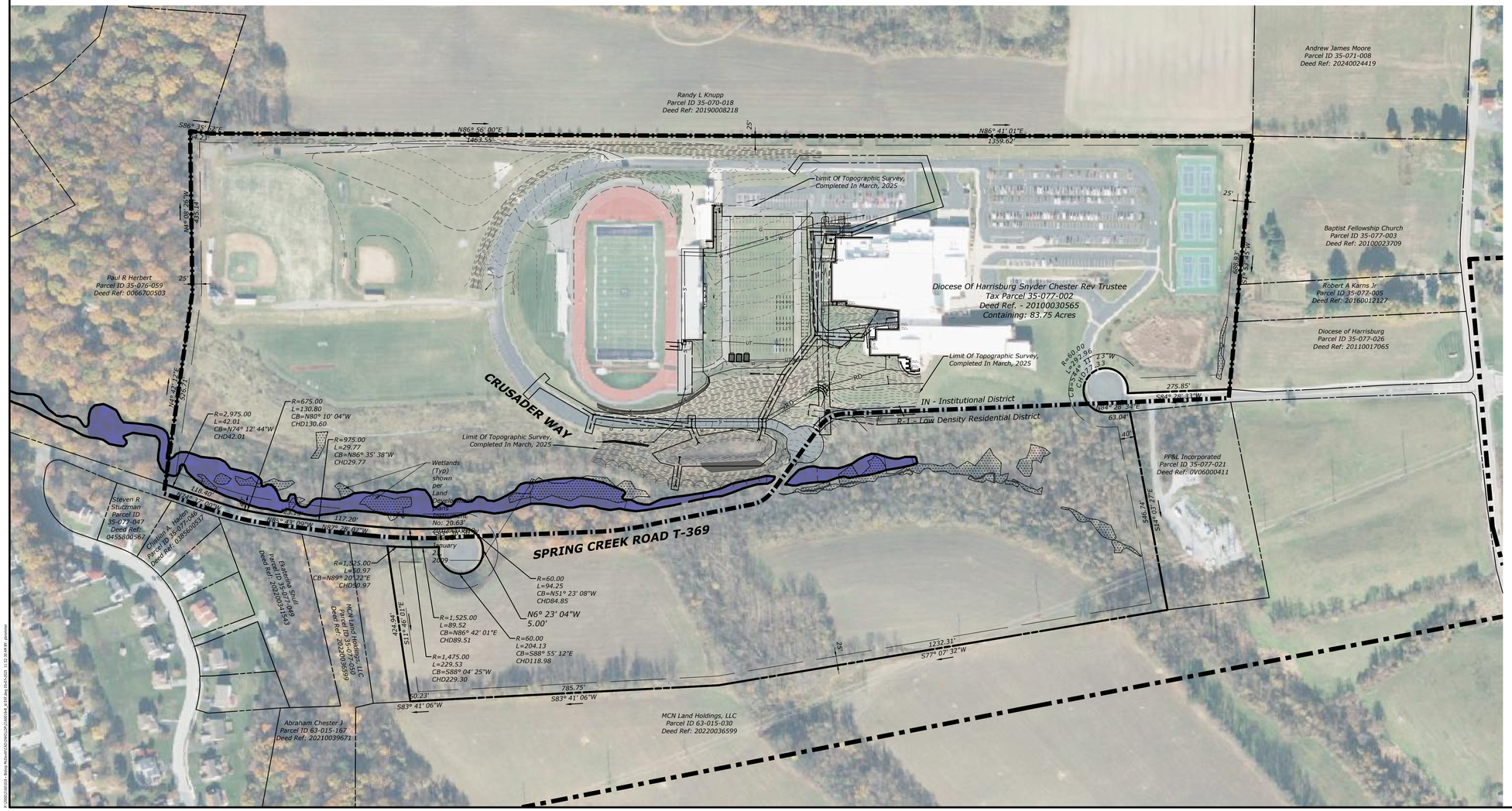
BhC2 — *BERKS CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES [HYDROLOGIC GROUP B]*

BkB2 — *BERKS SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES [HYDROLOGIC GROUP B]*

LEGEND

EXISTING FEATURES

- EDGE OF PAVED BITUMINOUS SURFACE
- EDGE OF GRAVEL OR CRUSHED STONE SURFACE
- PROPERTY BOUNDARY LINE
- EASEMENT LINE
- LEGAL RIGHT OF WAY LINE
- ZONING DISTRICT BOUNDARY LINE
- EDGE OF EXISTING SURFACE WATERCOURSE
- 420 INDEX CONTOUR LINE
- 421 INTERMEDIATE CONTOUR LINE
- x 500.00 SPOT ELEVATION
- BUILDING
- CONCRETE SURFACE
- CURB
- OE OVERHEAD ELECTRIC LINES
- UE UNDERGROUND ELECTRIC LINES
- UT UNDERGROUND TELECOM LINES
- MANHOLE
- UTILITY POLE
- GUY WIRE
- Ls LIGHT STANDARD OR LAMPPOST
- GL GROUND LAMP
- Bol BOLLARD
- Em ELECTRIC METER
- Eb ELECTRIC BOX
- Tb TELEPHONE BOX
- Rfl REFLECTOR
- Ds DOWNSPOUT
- DRAINAGE PIPE
- DRAINAGE INLET
- RIP-RAP
- G UNDERGROUND NATURAL GAS LINE
- Gv GAS VALVE
- Gm GAS METER
- TREELINE
- WALL
- S SANITARY SEWER GRAVITY LINE
- Co SANITARY SEWER CLEANOUT
- W WATER LINE
- Wv WATER VALVE
- Fh FIRE HYDRANT
- FENCE
- GUIDERAIL
- SIGN
- SOIL TYPE BOUNDARY LINE
- WETLANDS
- 100 YEAR FLOODPLAIN BOUNDARY
- 100 YEAR FLOODPLAIN HATCH



GRAPHIC SCALE
0 75 150 300
SCALE: 1" = 150'

K&W
DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
FOR
WINTER SPORTS FIELD HOUSE & VENUE PHASE 1
BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP — DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-B_ld EXF.dwg

REVISIONS NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

PLAN TYPE:
OVERALL EXISTING FEATURES PLAN

SHEET:
C-101

2160018-B Bishop McDevitt\Civil\2160018-B_LD EXF.dwg 5/8/2025 11:13:30 AM By: pkessler

San. MH (MH 317.16)
Rim = 506.76
4" PVC (N) Inv = 502.76
8" PVC (NE) Inv = 490.41
8" PVC (W) Inv = 490.31

San. MH (MH 317.15)
Rim = 504.84
Inv = Undetermined
(Under Bleachers)

6' High Chain-Link Fence

Walls

Gate

8" PVC

4" PVC

Possible Approximate Location Of Buried 2" Gas Line Based On Design Plans (Not Survey Verified)

Possible Approximate Location Of Buried 4" PVC Waterline Based On Design Plans (Not Survey Verified)

Storm Inlet (I-25)
Grate = 505.58
24" SLCPP (E) Inv = 495.53
24" SLCPP (SE) Inv = 495.43

108 Lf. 24" SLCPP @ 0.52%

18" SLCPP

Elec. MH
Rim = 506.02

Gate

Stone Wall

Transformer On Pad
PPL 26709-S34444
(Not Survey Located)

Storm Inlet (I-26)
Grate = 505.69
8" PVC (S) Inv = 501.59
15" SLCPP (E) Inv = 496.39
24" SLCPP (W) Inv = 496.09

10' Wide Crosswalk

Doors 12
Th:506.76

Diocese Of Harrisburg Snyder
Chester Rev Trustee
Tax Parcel 35-077-002
Deed Ref. - 20100030565
Containing: 83.75 Acres

22' Wide Gravel Drive

Utility Pole w/Conduit
PPL 26709-S34439

2'Ø Concrete Footer For Press Box (Typ.)

280 Lf. 24" SLCPP @ 0.77%

Lawn

3 Conduits

Press Box

Bleachers

22' Wide Gravel Drive

High School Building

Doors 13
Th:506.76

Steps w/Railing

Grass Overflow Parking & Practice Field shown per Land Development plans Instrument No: 20100003919 dated January 21, 2009

LIMIT OF DISTURBANCE
= 0.87 ACRES

Storm Inlet (I-24)
Grate = 496.83
15" SLCPP (E) Inv = 487.83
24" SLCPP (NW) Inv = 493.28
24" SLCPP (SW) Inv = 487.73

Doors 14
Th:492.79

Door 15
Th:492.79

Ramp w/Railing

6' High Chain-Link Fence

Yard Inlet (I-8.13)
Grate = 504.87
15" SLCPP Inv = 499.87

Steps w/Railing

15" SLCPP

Tb Tb
Eb Eb

Storm Inlet (I-24.2)
Grate = 491.90
6" PVC (NE) Inv = 489.65
8" PVC (NE) Inv = 489.65
15" SLCPP (W) Inv = 489.15

78 Lf. 15" SLCPP @ 0.44%

91 Lf. 15" SLCPP @ 2.15%

Doors 17
Th:492.78

Wood Ramps

130 Lf. 24" SLCPP @ 10.48%

Utility Pole w/Conduits
PPL 26708-S34420

Storm Inlet (I-24.1)
Grate = 493.02
15" SLCPP (E) Inv = 488.27
15" SLCPP (W) Inv = 488.17

3-Co

Macadam

Sheds

Gate

Storm Inlet (I-23A)
Grate = 497.47
15" SLCPP Inv = 494.62

91 Lf. 15" SLCPP @ 0.57%

Storm Inlet (MH-23)
Rim = 499.70
15" SLCPP (W) Inv = 494.10
24" SLCPP (NE) Inv = 494.10
24" SLCPP (SW) Inv = 474.00

Area Of Stone Plaques

Walls

Shrub (Typ.)

Saplings

Stone

Swale

4" SLCPP

San. MH (MH 317.14)
Rim = 504.48
8" PVC (N) Inv = 485.08
8" PVC (SW) Inv = 485.03

Lawn

Retaining Wall

135 Lf. 24" SLCPP @ 11.07%

Stormwater Easement
For Lower Paxton Township
Recorded in Instrument 20100003919

San. MH (MH 317.13)
Rim = 481.82
6" PVC (NW) Inv = 470.17
8" PVC (E) Inv = 470.12
8" PVC (W) Inv = 470.02

San. MH (MH 317.12)
Rim = 472.36
Inv = Undetermined
(Bolted)

Outfall = 470.24

Rip-Rap Pad

Yard Inlet
Grate = 473
15" SLCPP h

12" SLC

CRUSADER WAY

San. MH (MH 317.10)
Rim = 475.82
Cent. Inv = 454.82

6' High Chain-Link Fence

No Parking Sign

8" PVC

Storm Inlet (I-17.1)
Grate = 473.20
15" SLCPP Inv = 470.00

Storm Inlet (I-22)
Grate = 462.45
6" PVC (NE) Inv = 459.05
24" SLCPP (NE) Inv = 459.05
24" SLCPP (S) Inv = 459.00

15" Decid.

21 Lf. 15" SLCPP @ 0.48%

21 Lf. 24" SLCPP @ 1.48%

264 Lf. 15" SLCPP @ 3.98%

San. MH (MH 317.11)
Rim = 462.17
8" PVC (NE) Inv = 457.57
8" PVC (W) Inv = 457.42

Traffic Gate

Utility Pole
PPL 26710-S34398

Utility Pole
PPL 26714-S34401

Utility Pole
PPL 26709-S34404

30' R/W / Easement
For PPL Electric Utilities Corp.
Recorded in Instrument 20110032087

Diocese Of Harrisburg Snyder Chester Rev Trustee
Tax Parcel 35-077-002
Deed Ref. - 20100030565
Containing: 83.75 Acres

San. MH (MH 317.09)
Rim = 474.58
Inv = Undetermined
(Bolted)

45 Lf. 15" SLCPP @ 22.13%

Storm Inlet (I-17)
Grate = 473.20
15" SLCPP (W) Inv = 470.00
15" SLCPP (N) Inv = 469.90
15" SLCPP (SE) Inv = 469.80

Storm Inlet (I-21)
Grate = 462.59
24" SLCPP (N) Inv = 458.59
24" SLCPP (SW) Inv = 458.59

34 Lf. 24" SLCPP @ 1.97%

D-W Endwall (EW-20)
Outfall = 457.92

D-W Endwall (EW-16)
Outfall = 459.84

Rip-Rap Pad

Stormwater Basin #2

Outlet Structure (OS-15)
Grate = 463.15
8"Ø Orif. (N) Inv = 459.22
8"Ø Orif. (N) Inv = 458.47
15" SLCPP (S) Inv = 457.55

78 Lf. 24" SLCPP @ 13.76%

Approximate Base Flood Elevation (Typ.)

Approximate Special Flood Hazard Area, Zone AE (FEMA)

LEGEND

EXISTING FEATURES

- EDGE OF PAVED BITUMINOUS SURFACE
- EDGE OF GRAVEL OR CRUSHED STONE SURFACE
- PROPERTY BOUNDARY LINE
- EASEMENT LINE
- LEGAL RIGHT OF WAY LINE
- ZONING DISTRICT BOUNDARY LINE
- EDGE OF EXISTING SURFACE WATERCOURSE
- 420 INDEX CONTOUR LINE
- 421 INTERMEDIATE CONTOUR LINE
- x 500.00 SPOT ELEVATION
- BUILDING
- CONCRETE SURFACE
- CURB
- OE OVERHEAD ELECTRIC LINES
- UE UNDERGROUND ELECTRIC LINES
- UT UNDERGROUND TELECOM LINES
- MANHOLE
- UTILITY POLE
- GUY WIRE
- Ls LIGHT STANDARD OR LAMPPOST
- GL GROUND LAMP
- Bol BOLLARD
- Em ELECTRIC METER
- Eb ELECTRIC BOX
- Tb TELEPHONE BOX
- Rfl REFLECTOR
- Ds DOWNSPOUT
- DRAINAGE PIPE
- DRAINAGE INLET
- RIP-RAP
- G UNDERGROUND NATURAL GAS LINE
- Gv GAS VALVE
- Gm GAS METER
- TREELINE
- WALL
- S SANITARY SEWER GRAVITY LINE
- Co SANITARY SEWER CLEANOUT
- W WATER LINE
- Wv WATER VALVE
- Fh FIRE HYDRANT
- FENCE
- GUIDERAIL
- SIGN
- SOIL TYPE BOUNDARY LINE
- WETLANDS
- 100 YEAR FLOODPLAIN BOUNDARY
- 100 YEAR FLOODPLAIN HATCH

GRAPHIC SCALE
0 15 30 60
SCALE: 1" = 30'

K&W
DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
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PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
FOR
WINTER SPORTS FIELD HOUSE & VENUE PHASE 1
BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-B Id EXF.dwg

REVISIONS

NO.	DATE	DESCRIPTION
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PLAN TYPE:
EXISTING FEATURES PLAN

SHEET:
C-101.1

LEGEND

DEMOLITION FEATURES

- PROPOSED SAWCUT
- TBD — DENOTES A FEATURE TO BE DEMOLISHED
- TBR — DENOTES A FEATURE TO BE REMOVED AND RELOCATED
- TBS — DENOTES A FEATURE TO BE SALVAGED
- EX. BITUMINOUS PAVEMENT SURFACE TO BE REMOVED
- EX. CONCRETE PAVEMENT SURFACE TO BE REMOVED

DEMOLITION NOTES

1. ALL FEATURES IN BOLD PRINT AND SO LABELED SHALL BE DEMOLISHED, REMOVED, OR RELOCATED AS INDICATED.
2. ITEMS LABELED TO BE REMOVED BY OTHERS WILL BE RELOCATED AND/OR DEMOLISHED BY THE OWNER OR A CONTRACTOR HIRED BY THE OWNER. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK TO BE PERFORMED BY OTHERS.
3. ALL EXISTING UTILITY LIDS (MANHOLE, CLEANOUTS, VALVE COVERS, ETC.) AND ASSOCIATED APPURTENANCES TO REMAIN SHALL BE BROUGHT TO FINAL FINISHED GRADE AS PART OF CONSTRUCTION.

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 — PA LAW — CALL BEFORE YOU DIG

GRAPHIC SCALE
0 15 30 60
SCALE: 1" = 30'

K&W
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2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

WINTER SPORTS FIELD HOUSE & VENUE PHASE 1
FOR
BISHOP MCDEVITT SCHOOL HIGH SCHOOL

DAUPHIN COUNTY, PA
LOWER PAXTON TOWNSHIP

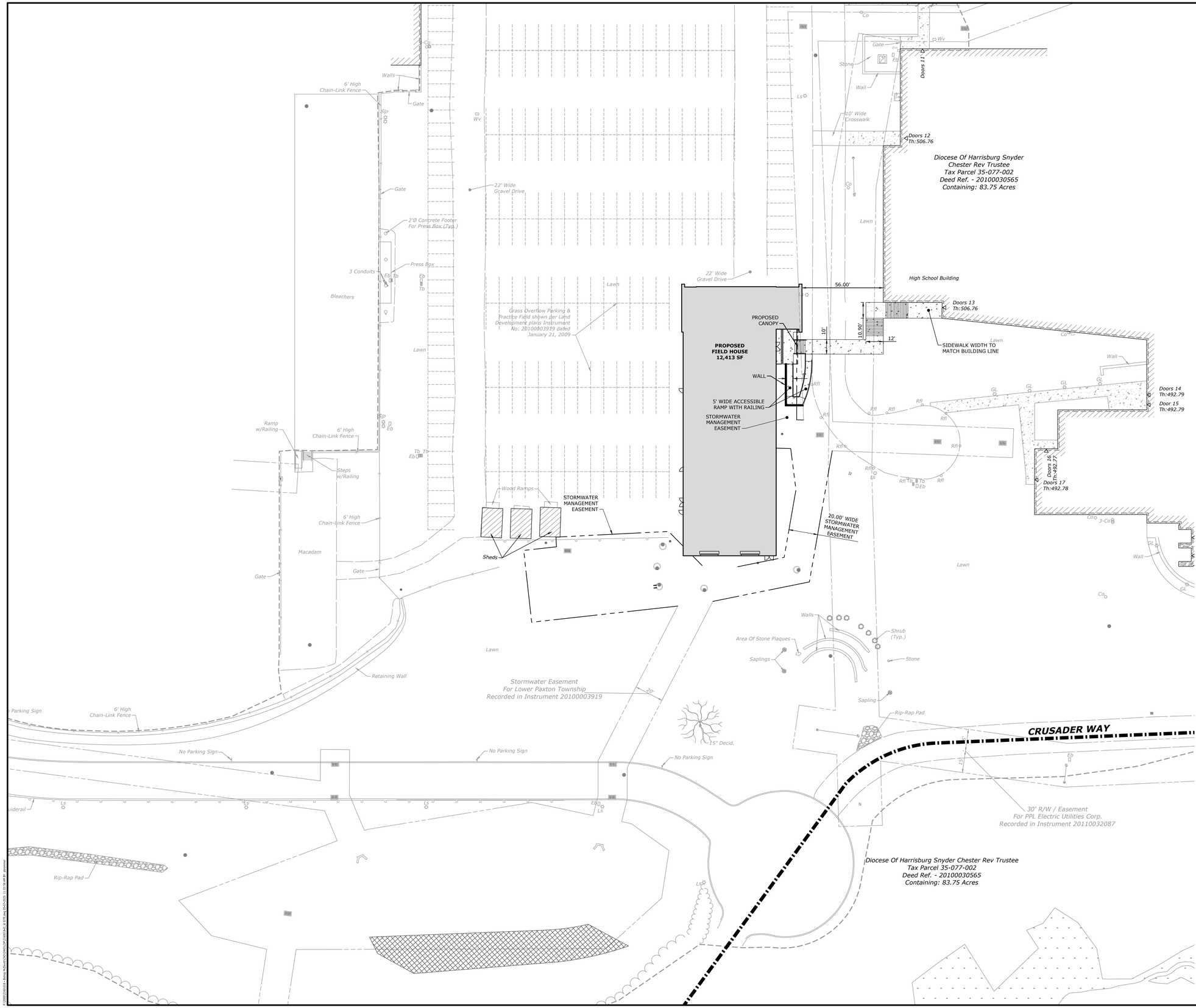
PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-C_Id DEM0.dwg

REVISIONS NO.	DATE	DESCRIPTION
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PLAN TYPE:
DEMOLITION PLAN

SHEET:
C-102



LEGEND

PROPOSED SITE FEATURES

- BUILDING
- CONCRETE SURFACE
- EASEMENT LINE
- WALL

SITE PLAN NOTES

1. REFER TO ARCHITECTURAL PLANS FOR CONCRETE PADS OUTSIDE OF EXTERIOR DOORWAYS.
2. MAXIMUM SIDEWALK CROSS SLOPE = 2%.

GRAPHIC SCALE
0 15 30 60
SCALE: 1" = 30'

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WINTER SPORTS FIELD HOUSE & VENUE PHASE 1
FOR
BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP
DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-D_ld SITE.dwg

REVISIONS

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PLAN TYPE:
SITE PLAN

SHEET:
C-103



LEGEND

PROPOSED SITE FEATURES

- BUILDING
- CONCRETE SURFACE
- EASEMENT LINE
- WALL

SITE PLAN NOTES

1. REFER TO ARCHITECTURAL PLANS FOR CONCRETE PADS OUTSIDE OF EXTERIOR DOORWAYS.
2. MAXIMUM SIDEWALK CROSS SLOPE = 2%.

GRAPHIC SCALE
0 30 60 120
SCALE: 1" = 60'

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LOWER PAXTON TOWNSHIP
DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

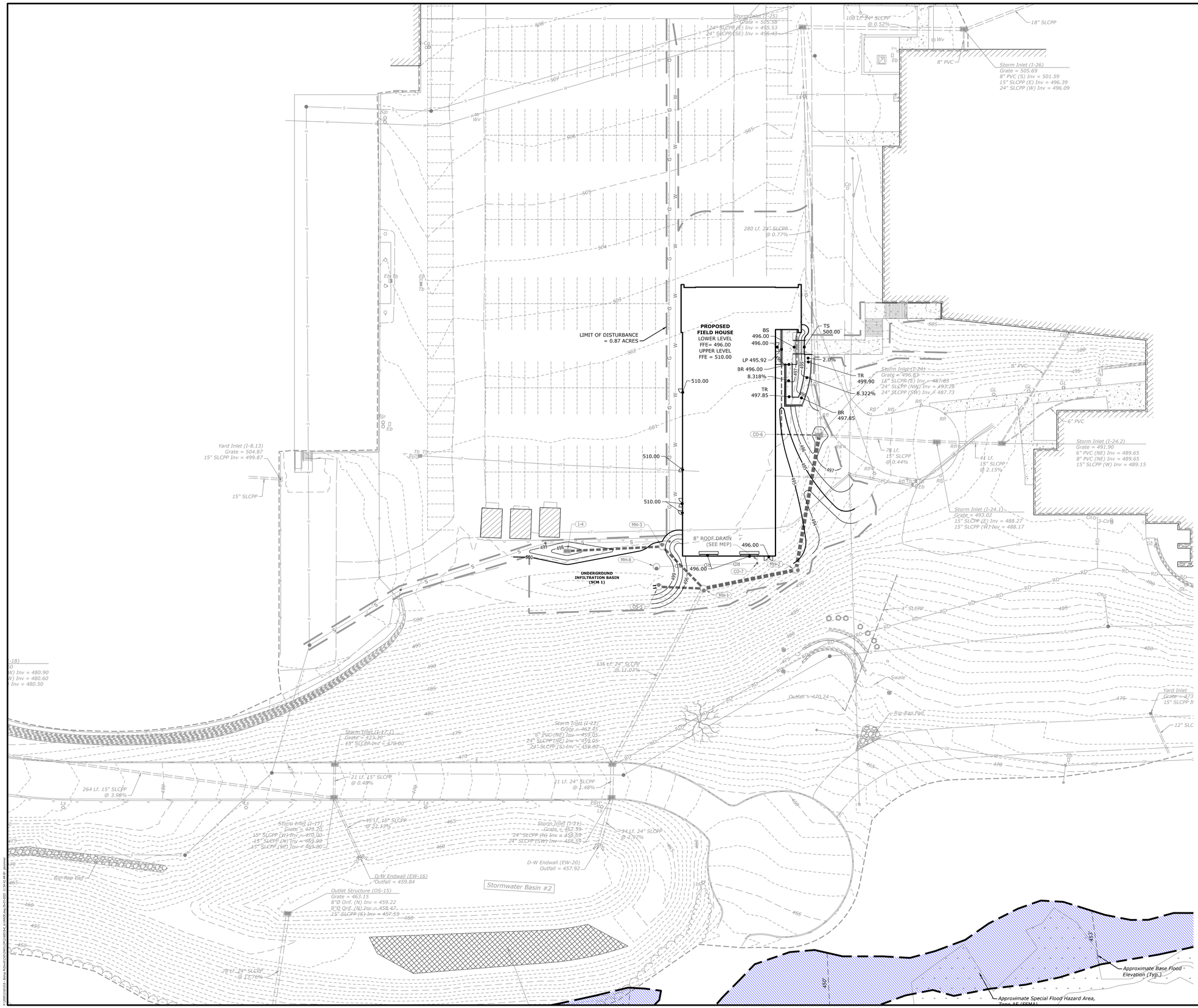
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DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-D_Id SITE.dwg

REVISIONS NO.	DATE	DESCRIPTION
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PLAN TYPE:
EXTENDED SITE PLAN

SHEET:
C-103.1

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LEGEND

PROPOSED GRADING FEATURES

- 421 — INTERMEDIATE CONTOUR LINES
- 420 — INDEX CONTOUR LINES
- 422.53 — SPOT ELEVATIONS
- 2.00% — SLOPE OR GRADE LABEL
- TEST PIT

SPOT LABEL ABBREVIATIONS:

TR	TOP OF RAMP
BR	BOTTOM OF RAMP
TS	TOP OF STAIR
BS	BOTTOM OF STAIR

GRADING NOTES

1. POSITIVE DRAINAGE SHALL BE PROVIDED ACROSS THE ENTIRE PROJECT AREA AND DIRECTED TOWARDS EXISTING AND PROPOSED DRAINAGE FACILITIES.
2. PROPOSED DOORS SHOWN ALONG WESTERN SIDE OF BUILDING ARE LOCATED ALONG THE SECOND FLOOR OF THE BUILDING. THE FFE FOR THE SECOND FLOOR AT THESE DOOR LOCATIONS ARE +/- 9' ABOVE EXISTING GRADE. THESE DOORS ARE INTENDED FOR POTENTIAL FUTURE BUILDING ADDITIONS, AND ARE NOT INTENDED TO BE ACTIVE UNTIL THESE POTENTIAL ADDITIONS ARE CONSTRUCTED.

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WINTER SPORTS FIELD HOUSE & VENUE PHASE 1

FOR

BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP — DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-E_lg GRADE.dwg

REVISIONS NO.	DATE	DESCRIPTION
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PLAN TYPE:

GRADING PLAN

SHEET:

C-104



LEGEND

PROPOSED UTILITY FEATURES

- SANITARY SEWER MANHOLE
- MH 4 — SANITARY SEWER STRUCTURE LABEL
- SANITARY SEWER SERVICE LATERAL
- G — GAS LINE
- W — WATERLINE
- DRAINAGE MANHOLE
- DRAINAGE INLET
- DRAINAGE CULVERT OR PIPE
- I-45 — DRAINAGE STRUCTURE LABEL
- RD RD — ROOF DRAIN PIPE

UTILITY NOTES

1. ALL ROOF DRAIN PIPING SHALL BE INSTALLED AT A MINIMUM SLOPE OF 1% AND SHALL CONNECT TO STUBS LEFT BY P.C. AT FIVE (5) FEET OUTSIDE THE BUILDING..
2. ALL SANITARY SEWER CONSTRUCTION MATERIALS, METHOD AND APPURTENANCES SHALL BE IN ACCORDANCE WITH PADEP'S DOMESTIC WASTEWATER FACILITIES MANUAL AND (MUNICIPALITY)'S STANDARD SPECIFICATIONS AND DETAILS AT THE TIME OF CONSTRUCTION.
3. ALL SANITARY SEWER LATERAL SECTIONS SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 1%.
4. CURB BOXES ARE REQUIRED OVER ALL SANITARY SEWER CLEANOUTS AND WATER LINE VALVES. ALL CURB BOXES SHALL BE BROUGHT TO FINISHED GRADE
5. ALL DRAINAGE STRUCTURES (INCLUDING INLETS, MANHOLES, ENDWALLS, ETC.) PROPOSED FOR DEDICATION OR LOCATED WITHIN A STREET SECTION SHALL BE CAPABLE OF HANDLING AN HS-25 LOADING.
6. ALL STORMWATER PIPES, CULVERTS, MANHOLES, INLETS, ENDWALLS AND END SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN PENNDOT PUBLICATION 408, AS AMENDED, AND SHALL CONFORM TO THE REQUIREMENTS OF THE PENNDOT, BUREAU OF DESIGN, STANDARDS FOR ROADWAY CONSTRUCTION (RC), PUBLICATION NO. 72, IN EFFECT AT THE TIME THE DESIGN IS SUBMITTED.

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WINTER SPORTS FIELD HOUSE & VENUE PHASE 1

FOR

BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-F_ld UTIL.dwg

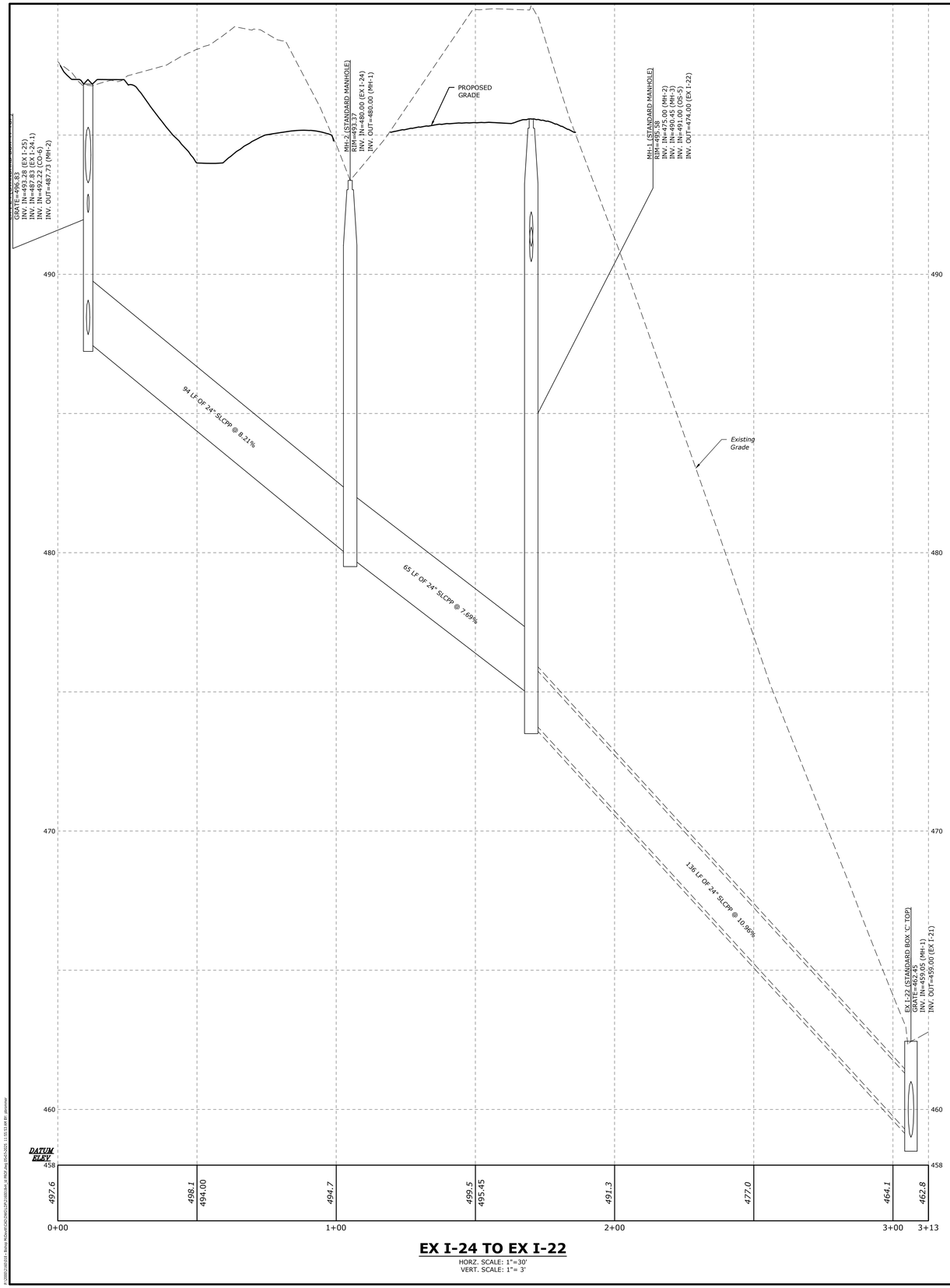
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PLAN TYPE:

UTILITY PLAN

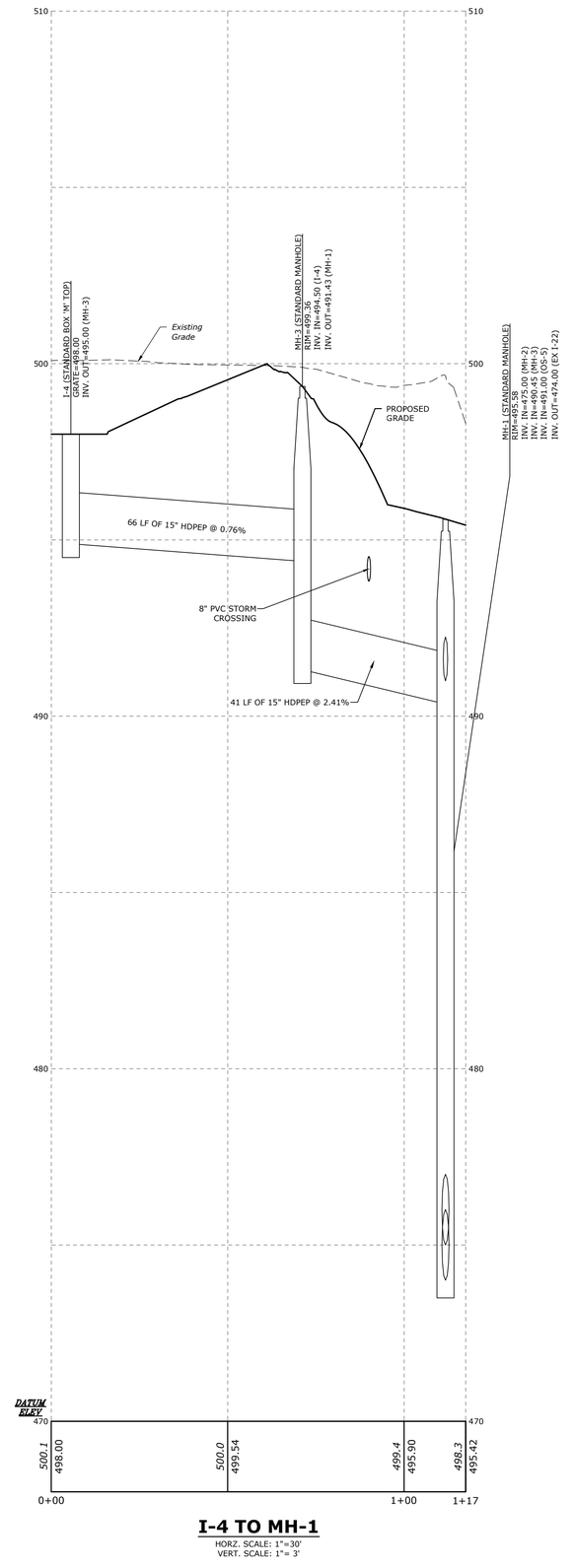
SHEET:

C-105



EX I-24 TO EX I-22

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"= 3'



I-4 TO MH-1

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"= 3'

GRAPHIC SCALE
HORIZONTAL
0 10 20 40
SCALE: 1" = 20'
VERTICAL
0 0.5 2 4
SCALE: 1" = 4'

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LOWER PAXTON TOWNSHIP DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

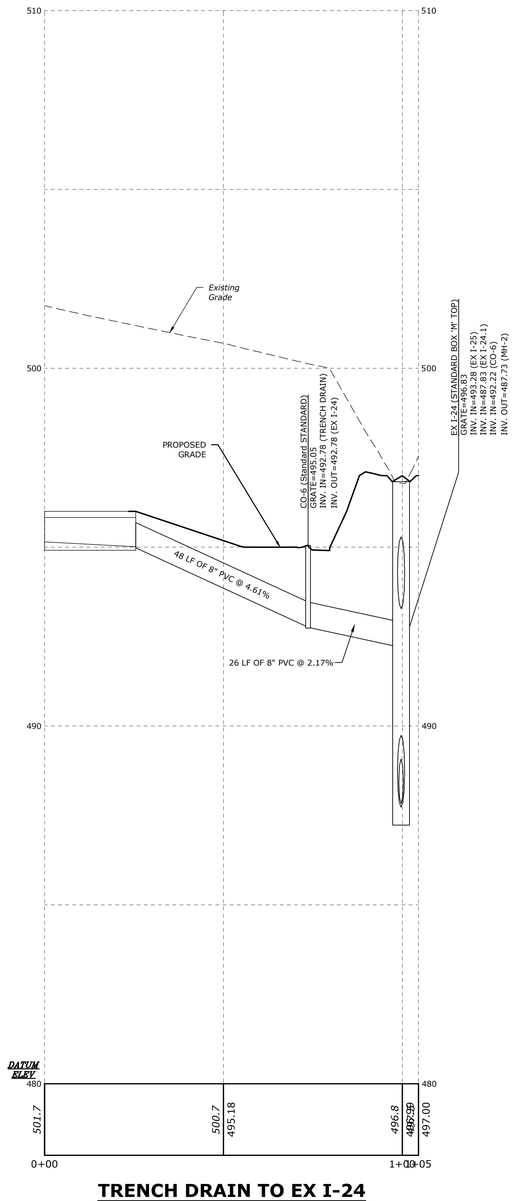
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DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-H_ld PROF.dwg

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PLAN TYPE:
STORMWATER PROFILES

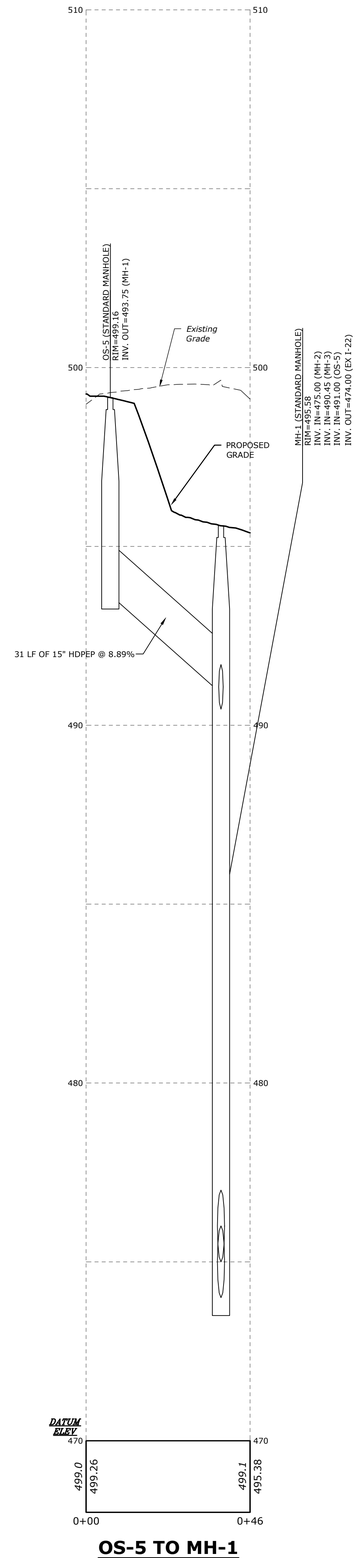
SHEET:
C-301

2160018-H_Base Mylars\Civil\2160018-H_LP PROF.dwg 24x36 by: 11:55:53 AM BY: pmoore



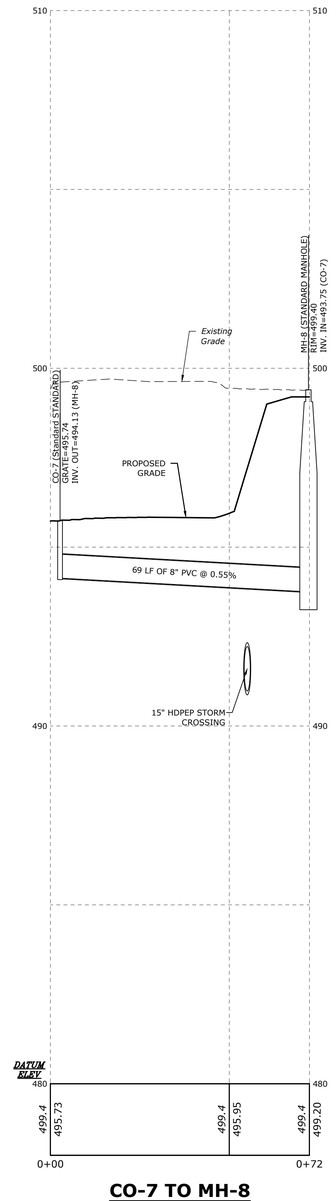
TRENCH DRAIN TO EX I-24

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"= 3'



OS-5 TO MH-1

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"= 3'



CO-7 TO MH-8

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"= 3'

GRAPHIC SCALE
HORIZONTAL
0 10 20 40
SCALE: 1" = 20'
VERTICAL
0 0.5 1 2 4
SCALE: 1" = 2'

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BISHOP MCDEVITT SCHOOL HIGH SCHOOL
LOWER PAXTON TOWNSHIP DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	2160018-H_U PROF.dwg

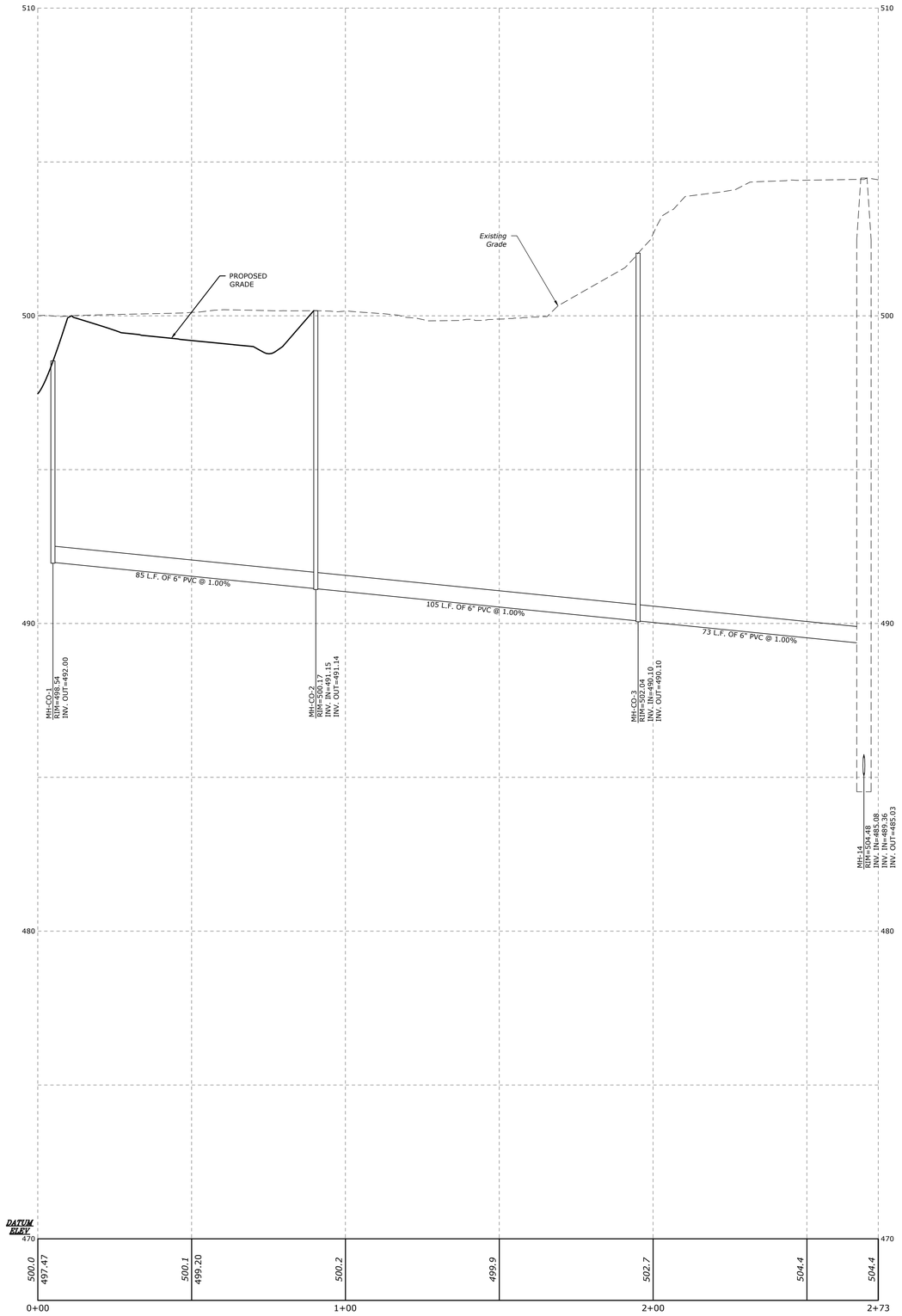
REVISIONS

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PLAN TYPE:
STORMWATER PROFILES

SHEET:
C-302

I:\2160\2160018-H_Bishop McDevitt\CAD\Profile\2160018-H_U PROF.dwg, 5/8/2025 11:03:14 AM, EP, pkessler



SANITARY SEWER

HORZ. SCALE: 1"=30'
VERT. SCALE: 1"= 3'

GRAPHIC SCALE
HORIZONTAL
0 10 20 40
SCALE: 1" = 20'
VERTICAL
0 0.5 2 4
SCALE: 1" = 2'

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FOR
BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP — DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS

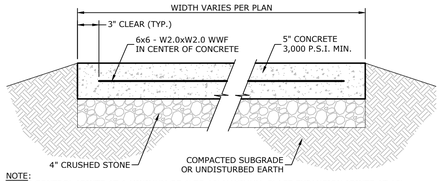
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REVISIONS NO.	DATE	DESCRIPTION
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PLAN TYPE:
SANITARY SEWER PROFILE

SHEET:
C-401

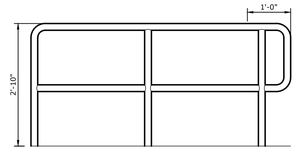
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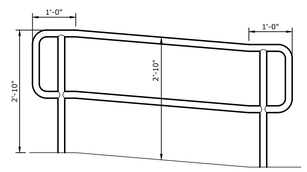
NOTE:
SPACE CONTROL JOINTS AT A MINIMUM OF 4' TO 10' MAXIMUM. PLACE EXPANSION JOINTS AT 10' MINIMUM TO 20' MAXIMUM AND MATCH EXISTING IF APPLICABLE.

CONCRETE SIDEWALK

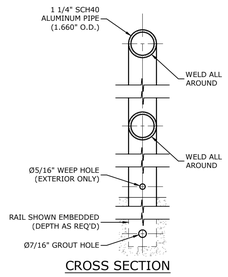
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TYPICAL ELEVATION



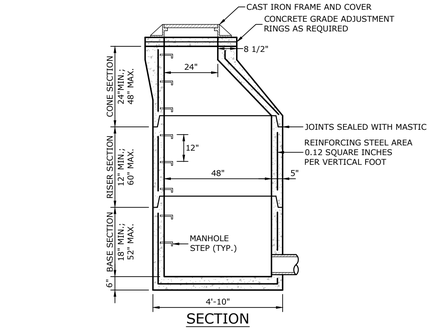
TYPICAL ELEVATION



CROSS SECTION

ADA RAILING

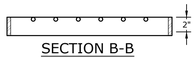
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SECTION

4' DIAMETER PRECAST CONCRETE MANHOLE

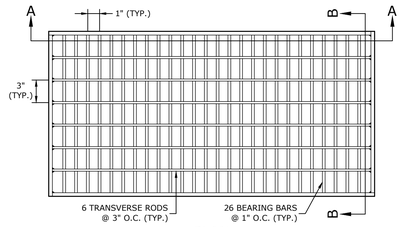
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SECTION B-B



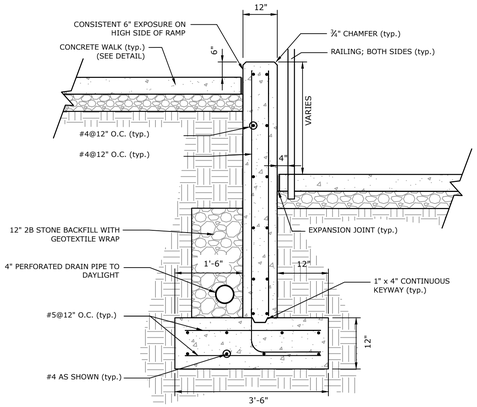
SECTION A-A



PLAN

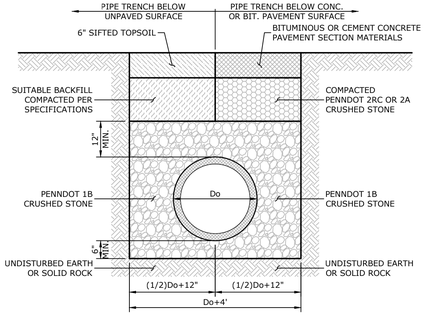
STRUCTURAL STEEL BICYCLE SAFE GRATE

NOT TO SCALE



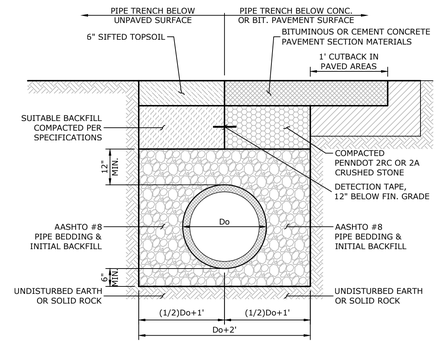
P.I.P. CONCRETE WALL AT RAMP

NOT TO SCALE



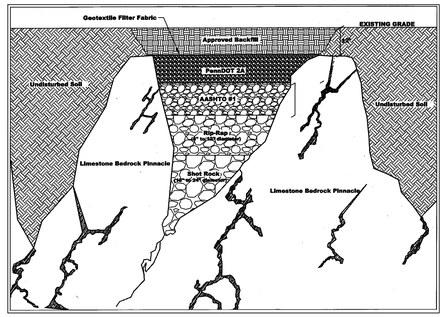
STORM PIPE TRENCH SECTION

NOT TO SCALE



SANITARY SEWER PIPE TRENCH SECTION

NOT TO SCALE



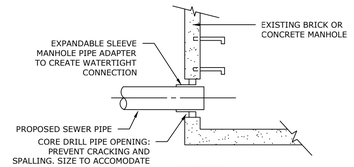
NOTES:
1. THE REPAIRS OUTLINED BELOW ARE GENERAL GUIDELINES AND EACH SINKHOLE OCCURRENCE SHOULD BE THOROUGHLY REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD FOR AN APPROPRIATE REMEDIATION PLAN:

STRUCTURAL AREAS (AREAS WITHIN THE BUILDING FOOTPRINT OR BENEATH PAVEMENT)
- ANY AND ALL LOOSE AND/OR SATURATED SOILS WITHIN THE SINKHOLE SHOULD BE EXCAVATED AND CONTINUE UNTIL STABLE SOILS, A "THROAT" IS IDENTIFIED, OR UNTIL THE EXTENT OF THE EXCAVATION EQUIPMENT IS REACHED.
- UPON REMOVAL OF THE UNSTABLE SOILS, THE EXCAVATION SHOULD BE BACKFILLED USING HIGH MOBILITY, LOW STRENGTH FLOWABLE FILL (500 PSI) TO FINAL SUBGRADE ELEVATION.

NON-STRUCTURAL AREAS (NON-BUILDING/LANDSCAPED AREAS)
- ANY AND ALL LOOSE AND/OR SATURATED SOILS SHOULD BE EXCAVATED FROM THE SINKHOLE. EXCAVATION SHOULD CONTINUE UNTIL STABLE SOILS, A "THROAT" IS IDENTIFIED, OR UNTIL THE EXTENT OF THE EXCAVATION EQUIPMENT IS REACHED.
- THE EXCAVATION SHOULD BE BACKFILLED WITH AGGREGATE OF DECREASING SIZE AS DEPICTED ON THE *INVERTED FILTER DETAIL*

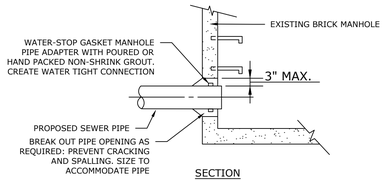
SINKHOLE REPAIR DETAIL

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SECTION

CORE DRILLED HOLE

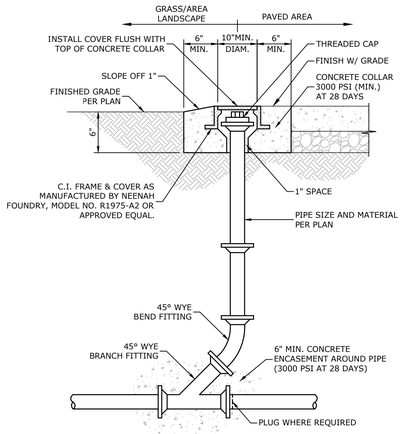


SECTION

CAST-IN-PLACE HOLE

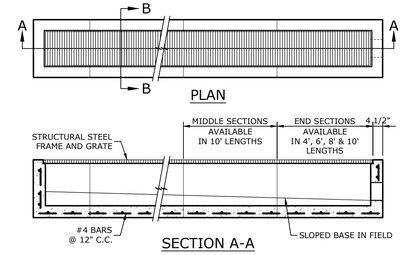
CONNECTION TO EXISTING MANHOLE DETAIL

NOT TO SCALE

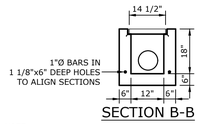


STORM SEWER CLEANOUT

NOT TO SCALE



SECTION A-A



SECTION B-B

NOTE:
1. USE (2) 6' END SECTIONS FOR THIS APPLICATION
2. FRAME, GRATE, AND BOX SHALL BE RATED FOR H-20 LOADING

TRENCH DRAIN

NOT TO SCALE

K&W
DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

WINTER SPORTS FIELD HOUSE & VENUE PHASE 1
FOR
BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	216018-1_ld DETAILS.dwg

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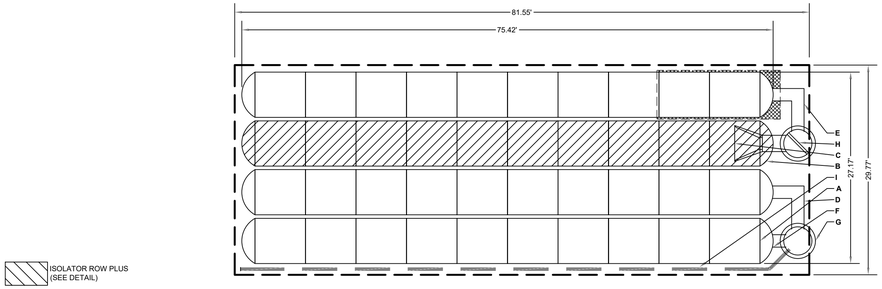
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2160\216018-1 Bishop McDevitt\DWG\PLAN\216018-1_DETAILS.dwg 5/6/2025 11:56:12 AM EP (Eric Pinkerton)

PROPOSED LAYOUT		PROPOSED ELEVATIONS	
40	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	505.50
8	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	499.50
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	499.00
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	499.00
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	499.00
8051	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	498.50
		TOP OF MC-3500 CHAMBER:	497.50
		24" ISOLATOR ROW PLUS INVERT:	493.50
		18" x 18" BOTTOM MANIFOLD INVERT:	493.90
2427	SYSTEM AREA (SF)	18" x 18" BOTTOM MANIFOLD INVERT:	493.90
222.6	SYSTEM PERIMETER (ft)	18" BOTTOM CONNECTION INVERT:	493.90
		BOTTOM OF MC-3500 CHAMBER:	493.75
		UNDERDRAIN INVERT:	493.00
		BOTTOM OF STONE:	493.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	18" BOTTOM PRE-CORED END CAP, PART#: MC3500IEPP18BC / TYP OF ALL 18" BOTTOM CONNECTIONS	1.77"	
PREFABRICATED END CAP	B	24" BOTTOM PRE-CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	D	18"x 18" BOTTOM MANIFOLD, ADS N-12	1.77"	
MANIFOLD	E	18"x 18" BOTTOM MANIFOLD, ADS N-12	1.77"	
PIPE CONNECTION	F	18" BOTTOM CONNECTION	1.77"	
CONCRETE STRUCTURE	G	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		8.0 CFS OUT
CONCRETE STRUCTURE	H	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.5 CFS IN
WWEIR				
UNDERDRAIN	I	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		



ISOLATOR ROW PLUS (SEE DETAIL)

PLACE MINIMUM 17.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

1. THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
2. NOT FOR CONSTRUCTION: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

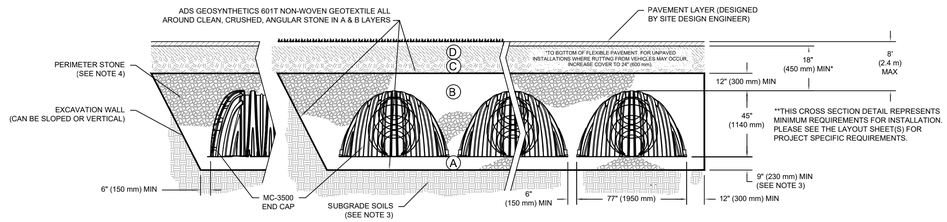
UNDERGROUND INFILTRATION BASIN (SCM-1) DETAIL
ADS STORMTECH MC-3500 CHAMBER SYSTEM

NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETES	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETES	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.2,3

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".

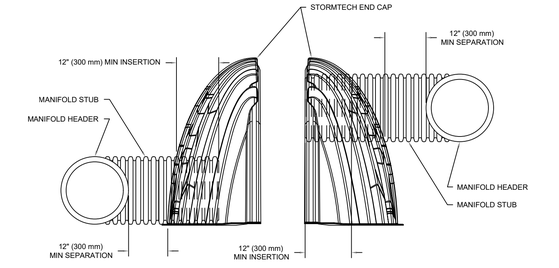


NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/% THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-3500 CROSS SECTION DETAIL

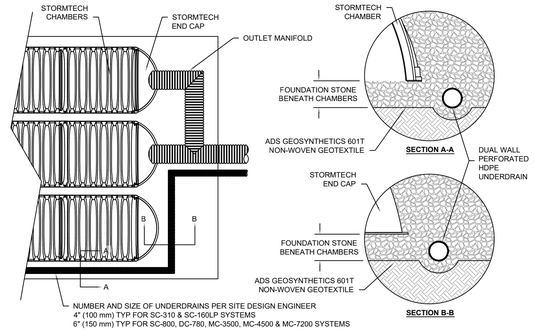
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NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

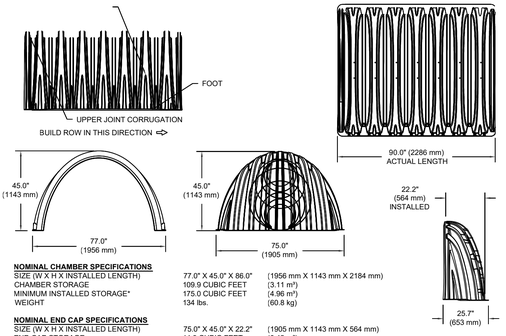
MC-SERIES END CAP INSERTION DETAIL

NOT TO SCALE



MC-3500 UNDERDRAIN DETAIL

NOT TO SCALE



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

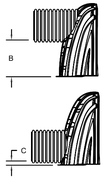
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

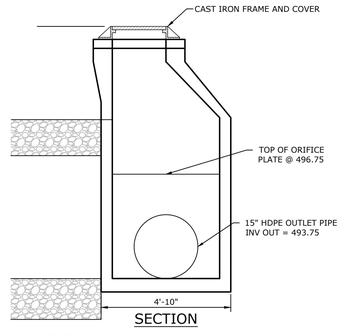
NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

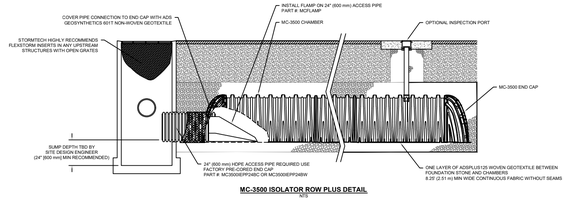
MC-3500 TECHNICAL SPECIFICATIONS

NOT TO SCALE



OS-5 (SCM 1) DETAIL

NOT TO SCALE



MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

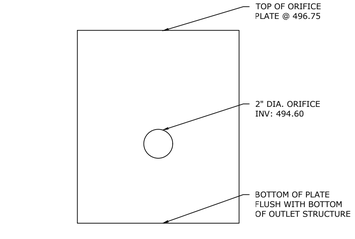
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

MC-3500 ISOLATOR ROW PLUS DETAIL

NOT TO SCALE



OS-5 ORIFICE PLATE DETAIL

NOT TO SCALE

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PROFESSIONAL SEAL

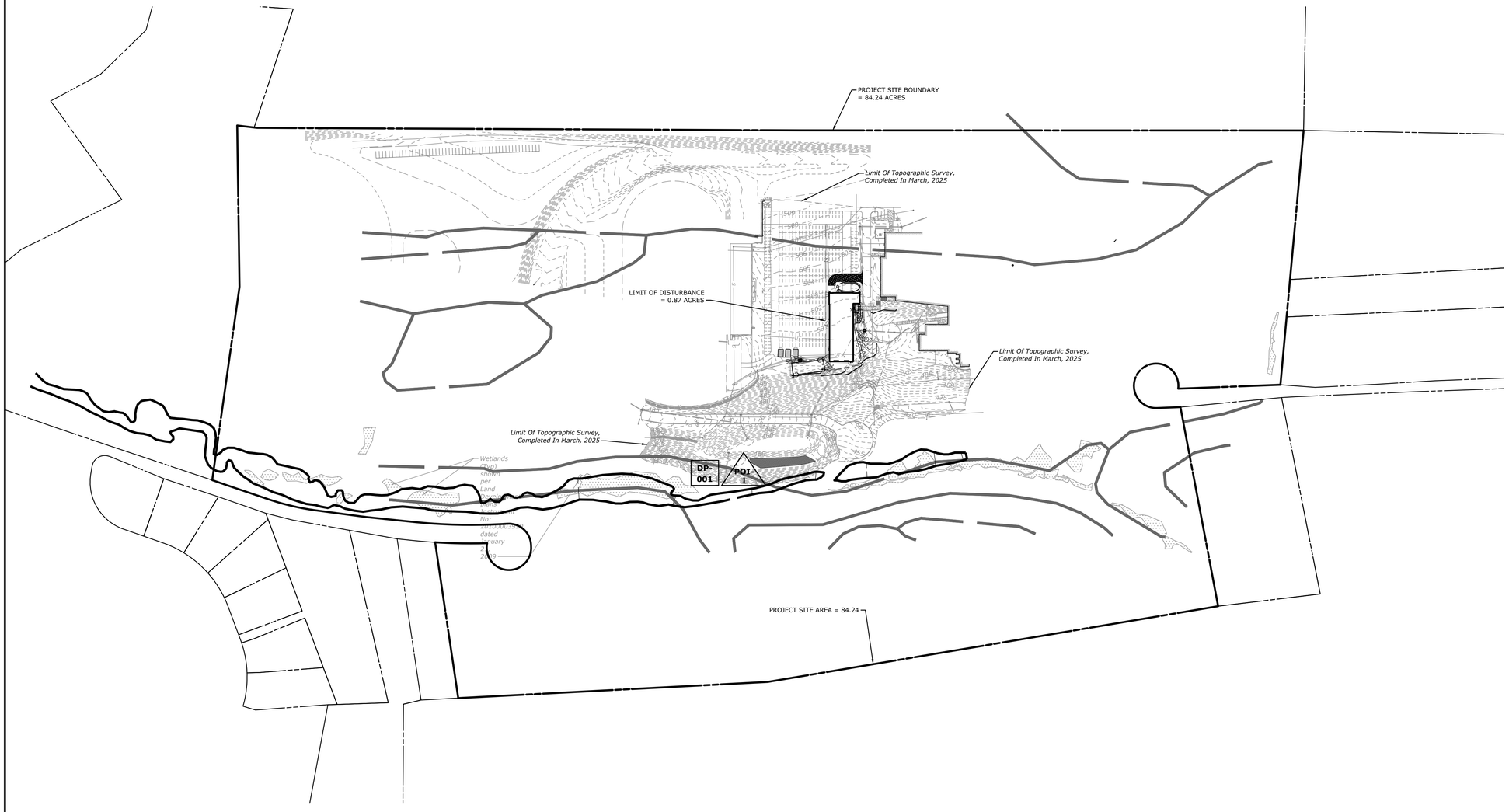
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LEGEND

PROPOSED E&S CONTROL PLAN FEATURES

- LIMIT OF DISTURBANCE
- PROJECT SITE BOUNDARY
- STABILIZED ROCK CONSTRUCTION ENTRANCE
- SOIL MATERIAL STOCKPILE
- SS — SILT SOCKS
- INLET PROTECTION
- CONCRETE WASHOUT
- CF — CONSTRUCTION FENCE

SOIL LIMITATION RESOLUTIONS

1. SLOPES - EXCAVATIONS SHOULD BE STABILIZED TO PREVENT EROSION AND CONTRACTOR SHOULD EMPLOY PROPER CONSTRUCTION TECHNIQUES TO ENSURE SAFETY ON STEEP SLOPE AREAS.
2. DEPTH OF ROCK - IF BEDROCK IS ENCOUNTERED, REMOVE AS NECESSARY IN ACCORDING WITH PROJECT SPECIFICATIONS.
3. FROST ACTION - CONTRACTOR SHALL CONSULT PROJECT GEOTECHNICAL ENGINEER/INSPECTOR REGARDING ANY SPECIAL MEASURES TO BE TAKEN FOR EARTHWORK WHICH IS TO OCCUR DURING PERIODS OF FROST.
4. SOIL pH LEVELS - CONTRACTOR SHALL HAVE SOIL pH TESTED TO DETERMINE CORRECT FERTILIZER APPLICATION RATES.
5. FLOODING POTENTIAL - ENSURE THAT THE SITE HAS PROPER DRAINAGE.
6. HIGH GROUNDWATER LEVEL - CONTRACTOR SHALL EMPLOY DEWATERING TECHNIQUES AS APPROVED BY THE CONSERVATION DISTRICT. PUMPED WATER FILTER BAGS SHALL BE USED TO DEWATER UTILITY TRENCHES AND BELOW GRADE EXCAVATIONS.
7. EROSION - ANY EROSION THAT OCCURS THAT CAN NOT BE ADDRESSED BY MEASURES FOUND IN THE PLANS THE CONTRACTOR SHALL CONTACT THE SITE DESIGN ENGINEER AND THE CONSERVATION DISTRICT.
8. BASIN AREAS AND EMBANKMENTS - FILL FOR BASIN EMBANKMENTS SHALL BE COMPACTED IN 8" LIFTS TO 98% MAXIMUM DRY DENSITY (STANDARD PROCTOR) ±2% MOISTURE CONTENT PER PER ASTM D-1557. ANTI-SEEP COLLARS SHALL BE INSTALLED ON A BASIN DISCHARGE PIPING TO PREVENT SEEPAGE OF WATER FROM THE BASIN. CONSULT WITH SITE DESIGN ENGINEER FOR THE SPECIFIC ANTI-SEEP COLLAR SIZE REQUIREMENTS.

GENERAL E&S NOTES

1. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE DAUPHIN COUNTY CONSERVATION DISTRICT.
2. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
3. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
4. SPECIAL CARE SHALL BE TAKEN TO PREVENT SEDIMENT LADEN STORMWATER FROM ENTERING ALL STORMWATER MANAGEMENT AND CONVEYANCE FACILITIES UNTIL THE SITE HAS BEEN PROPERLY STABILIZED.

GRAPHIC SCALE
0 30 60 120
SCALE: 1" = 60'

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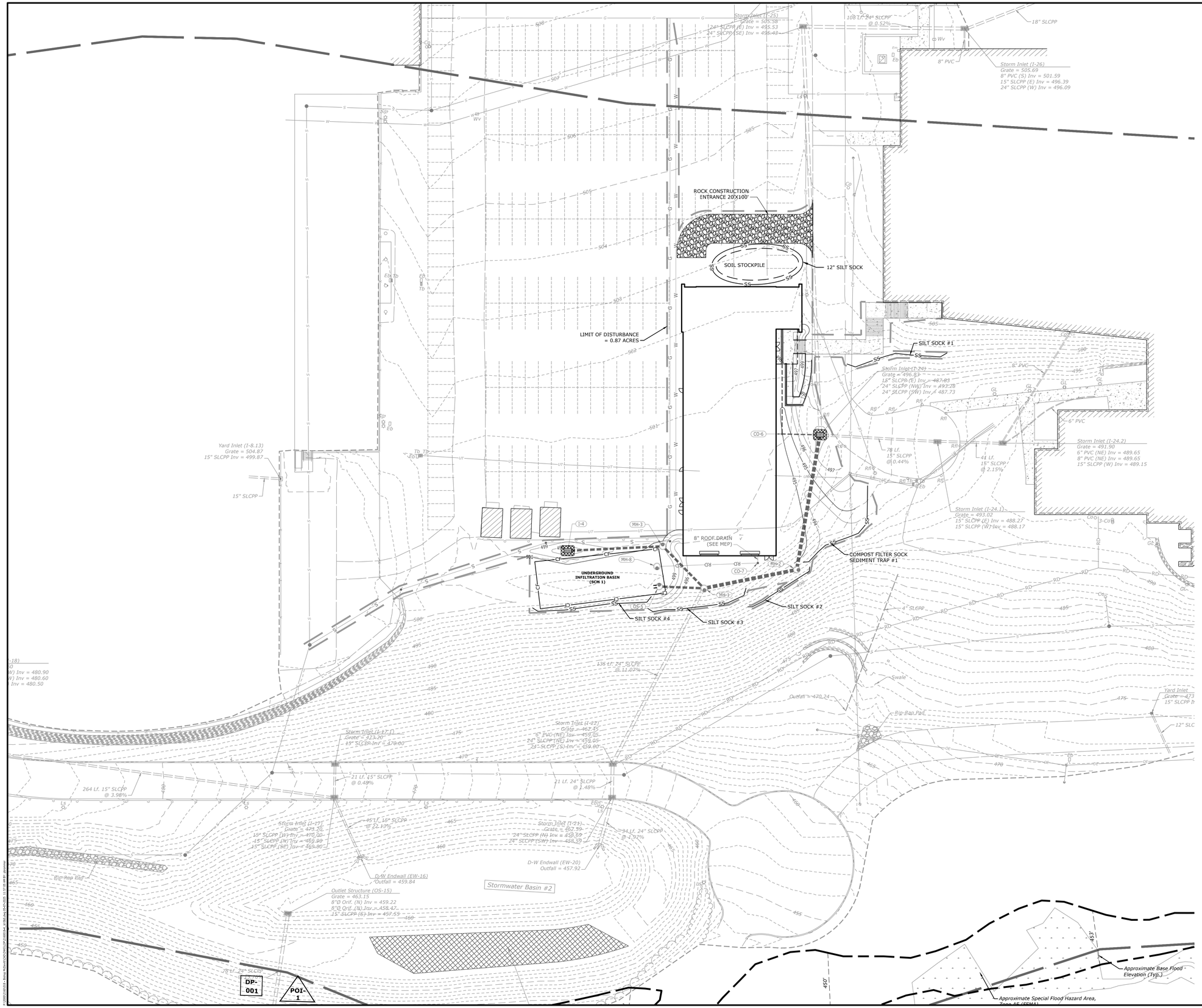
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PLAN TYPE:
OVERALL E&S PLAN

SHEET:
C-701

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LEGEND

PROPOSED E&S CONTROL PLAN FEATURES

- LIMIT OF DISTURBANCE
- PROJECT SITE BOUNDARY
- STABILIZED ROCK CONSTRUCTION ENTRANCE
- SOIL MATERIAL STOCKPILE
- SS — SS — SILT SOCKS
- INLET PROTECTION
- CONCRETE WASHOUT
- CF — CF — CONSTRUCTION FENCE

SOIL LIMITATION RESOLUTIONS

1. SLOPES - EXCAVATIONS SHOULD BE STABILIZED TO PREVENT EROSION AND CONTRACTOR SHOULD EMPLOY PROPER CONSTRUCTION TECHNIQUES TO ENSURE SAFETY ON STEEP SLOPE AREAS.
2. DEPTH OF ROCK - IF BEDROCK IS ENCOUNTERED, REMOVE AS NECESSARY IN ACCORDING WITH PROJECT SPECIFICATIONS.
3. FROST ACTION - CONTRACTOR SHALL CONSULT PROJECT GEOTECHNICAL ENGINEER/INSPECTOR REGARDING ANY SPECIAL MEASURES TO BE TAKEN FOR EARTHWORK WHICH IS TO OCCUR DURING PERIODS OF FROST.
4. SOIL pH LEVELS - CONTRACTOR SHALL HAVE SOIL pH TESTED TO DETERMINE CORRECT FERTILIZER APPLICATION RATES.
5. FLOODING POTENTIAL - ENSURE THAT THE SITE HAS PROPER DRAINAGE.
6. HIGH GROUNDWATER LEVEL - CONTRACTOR SHALL EMPLOY DEWATERING TECHNIQUES AS APPROVED BY THE CONSERVATION DISTRICT. PUMPED WATER FILTER BAGS SHALL BE USED TO DEWATER UTILITY TRENCHES AND BELOW GRADE EXCAVATIONS.
7. EROSION - ANY EROSION THAT OCCURS THAT CAN NOT BE ADDRESSED BY MEASURES FOUND IN THE PLANS THE CONTRACTOR SHALL CONTACT THE SITE DESIGN ENGINEER AND THE CONSERVATION DISTRICT.
8. BASIN AREAS AND EMBANKMENTS - FILL FOR BASIN EMBANKMENTS SHALL BE COMPACTED IN 8" LIFTS TO 98% MAXIMUM DRY DENSITY (STANDARD PROCTOR) ±2% MOISTURE CONTENT PER PER ASTM D-1557. ANTI-SEEP COLLARS SHALL BE INSTALLED ON A BASIN DISCHARGE PIPING TO PREVENT SEEPAGE OF WATER FROM THE BASIN. CONSULT WITH SITE DESIGN ENGINEER FOR THE SPECIFIC ANTI-SEEP COLLAR SIZE REQUIREMENTS.

GENERAL E&S NOTES

1. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE DAUPHIN COUNTY CONSERVATION DISTRICT.
2. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
3. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
4. SPECIAL CARE SHALL BE TAKEN TO PREVENT SEDIMENT LADEN STORMWATER FROM ENTERING ALL STORMWATER MANAGEMENT AND CONVEYANCE FACILITIES UNTIL THE SITE HAS BEEN PROPERLY STABILIZED.

GRAPHIC SCALE
0 15 30 60
SCALE: 1" = 30'

K&W DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
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PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

WINTER SPORTS FIELD HOUSE & VENUE PHASE 1 FOR BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP, DAUPHIN COUNTY, PA

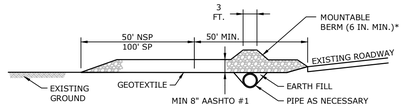
PROFESSIONAL SEAL

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K&W PROJECT:	2160.018
DRAWN BY:	PKS
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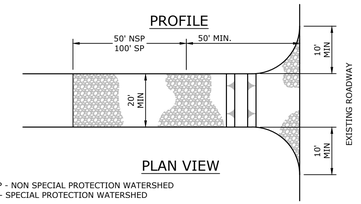
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PLAN TYPE:
E&S PLAN

SHEET:
C-701.1



PROFILE



PLAN VIEW

NSP - NON SPECIAL PROTECTION WATERSHED
SP - SPECIAL PROTECTION WATERSHED

* 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.

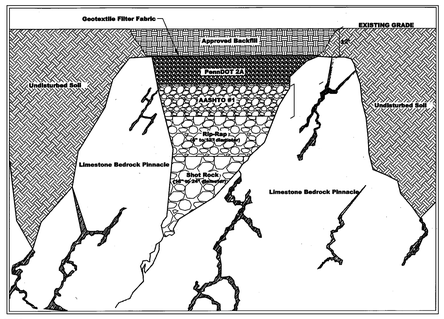
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

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.

TO BE CONSTRUCTED WITH MATERIALS AND TECHNIQUES IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL EFFECTIVE DATE MARCH 31, 2012 AS AMENDED

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE (ALTERNATIVE - ABACT)

NOT TO SCALE



NOTES:

1. THE REPAIRS OUTLINED BELOW ARE GENERAL GUIDELINES AND EACH SINKHOLE OCCURRENCE SHOULD BE THOROUGHLY REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD FOR AN APPROPRIATE REMEDIATION PLAN:

STRUCTURAL AREAS (AREAS WITHIN THE BUILDING FOOTPRINT OR BENEATH PAVEMENT)

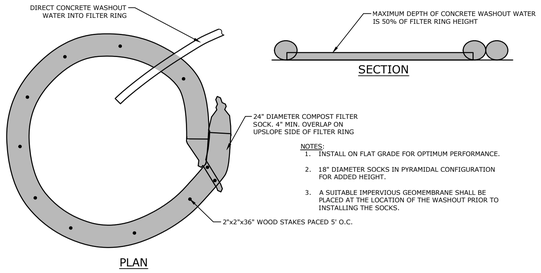
- ANY AND ALL LOOSE AND/OR SATURATED SOILS WITHIN THE SINKHOLE SHOULD BE EXCAVATED AND CONTINUE UNTIL STABLE SOILS, A "THROAT" IS IDENTIFIED, OR UNTIL THE EXTENT OF THE EXCAVATION EQUIPMENT IS REACHED.
- UPON REMOVAL OF THE UNSTABLE SOILS, THE EXCAVATION SHOULD BE BACKFILLED USING HIGH MOBILITY, LOW STRENGTH FLOWABLE FILL (500 PSI) TO FINAL SUBGRADE ELEVATION.

NON-STRUCTURAL AREAS (NON-BUILDING/LANDSCAPED AREAS)

- ANY AND ALL LOOSE AND/OR SATURATED SOILS SHOULD BE EXCAVATED FROM THE SINKHOLE. EXCAVATION SHOULD CONTINUE UNTIL STABLE SOILS, A "THROAT" IS IDENTIFIED, OR UNTIL THE EXTENT OF THE EXCAVATION EQUIPMENT IS REACHED.
- THE EXCAVATION SHOULD BE BACKFILLED WITH AGGREGATE OF DECREASING SIZE AS DEPICTED ON THE *INVERTED FILTER DETAIL*

SINKHOLE REPAIR DETAIL

NOT TO SCALE

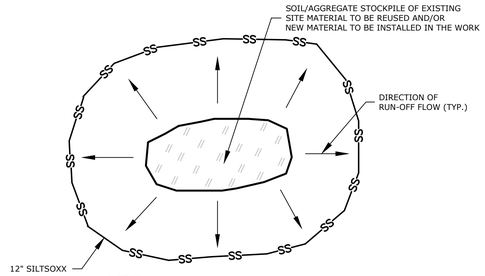


NOTES:

1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
3. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

FIGURE 3.18
TYPICAL COMPOST SOCK WASHOUT INSTALLATION

NOT TO SCALE



NOTES:

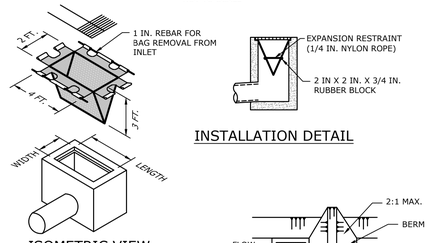
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.

2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS. SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED A MAXIMUM 2:1 SLOPE.

3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.

TEMPORARY TOPSOIL STOCKPILE

NOT TO SCALE



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

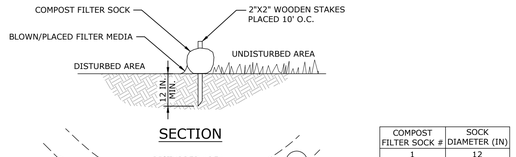
INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

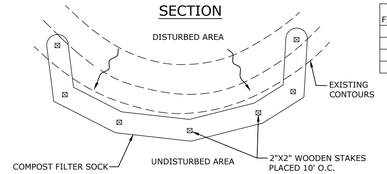
TO BE CONSTRUCTED WITH MATERIALS AND TECHNIQUES IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL EFFECTIVE DATE MARCH 31, 2012 AS AMENDED.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET

NOT TO SCALE

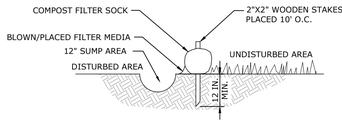


SECTION



COMPOST FILTER SOCK #	SOCK DIAMETER (IN)
1	12
2	18
3	18
4	12

PLAN VIEW



FILTER SOCK WITH SUMP SECTION

TABLE 4.2
COMPOST STANDARDS

ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30% - 50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

TABLE 4.1
COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

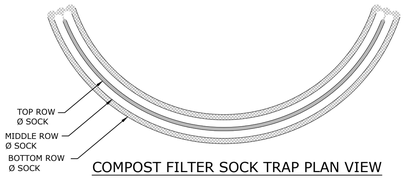
MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	26 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET CONTINUOUSLY WOUND FUSION WELDED JUNCTURES 3/4" X 3/4" MAX. APERTURE SIZE				
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH) 3/16" MAX. APERTURE SIZE				
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MO. OR LESS					

NOTES:

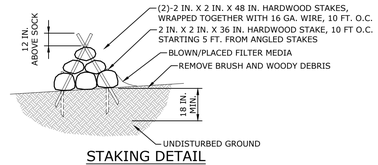
1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
8. TO BE CONSTRUCTED WITH MATERIALS AND TECHNIQUES IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL EFFECTIVE DATE MARCH 31, 2012 AS AMENDED. REFER TO TABLE 4.1 & 4.2 FOR FABRIC SPECIFICATIONS AND COMPOST STANDARDS.
9. A SUMP AREA MAY BE ADDED TO THE STANDARD COMPOST FILTER SOCK PLACEMENT AT THE DISCRETION OF THE CONTRACTOR.
10. A J-HOOK WITH SUMPED AREA MUST BE INSTALLED WHERE SPACE LIMITATIONS PREVENT THE PLACEMENT OF COMPOST FILTER SOCK AT LEVEL GRADE.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE



COMPOST FILTER SOCK TRAP PLAN VIEW



STAKING DETAIL

TRAP DESIGNATION	TOP ROW	MIDDLE ROW	BOTTOM ROW
TRAP 1	-	-	1-18" Ø SOCK

DESIGN NOTES:

1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUAL TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS SHOWN ON THE PLAN VIEW.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

NOTES:

SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW-THROUGH," NO SPILLWAY IS REQUIRED.

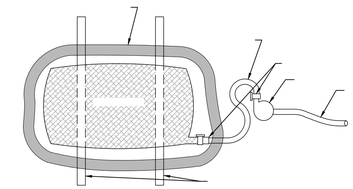
COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.

PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

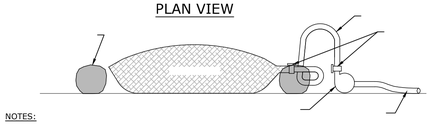
TO BE CONSTRUCTED WITH MATERIALS AND TECHNIQUES IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL EFFECTIVE DATE MARCH 31, 2012 AS AMENDED.

STANDARD CONSTRUCTION DETAIL #3-11
COMPOST SOCK SEDIMENT TRAP

NOT TO SCALE



PLAN VIEW



NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

TO BE CONSTRUCTED WITH MATERIALS AND TECHNIQUES IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL EFFECTIVE DATE MARCH 31, 2012 AS AMENDED.

ALTERNATIVE CONSTRUCTION DETAIL
PUMPED WATER FILTER BAG

NOT TO SCALE

K&W DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
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www.kandwengineers.com

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

WINTER SPORTS FIELD HOUSE & VENUE PHASE 1 FOR BISHOP MCDEVITT SCHOOL HIGH SCHOOL

DAUPHIN COUNTY, PA
LOWER PAXTON TOWNSHIP

PROFESSIONAL SEAL

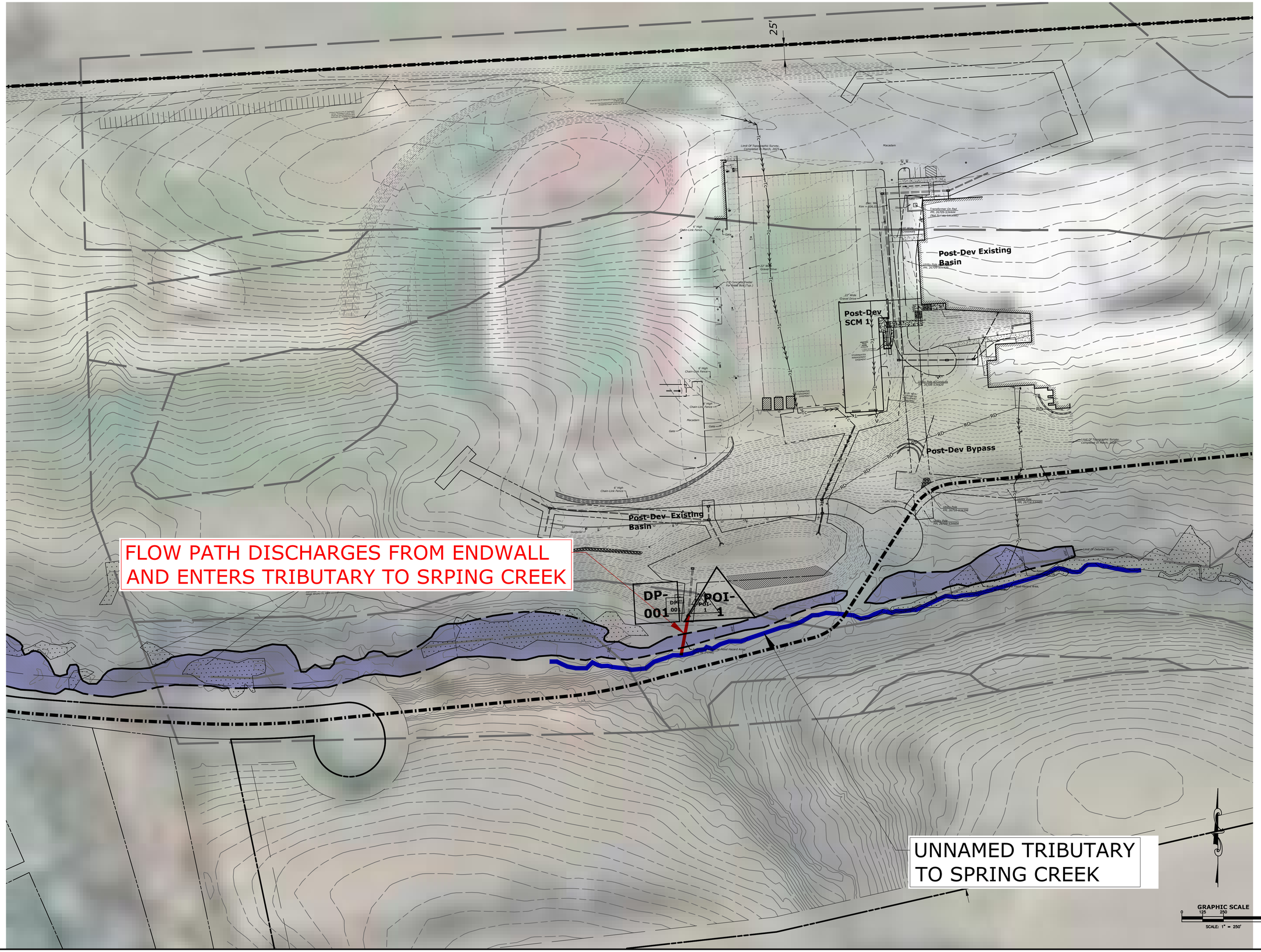
SCALE:	AS SHOWN
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	PKS
CAD DRAWING:	216001B-I_Id DETAILS.dwg

REVISIONS NO.	DATE	DESCRIPTION
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PLAN TYPE:
E&S DETAILS

SHEET:
C-702

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K&W
DESIGNING ENVIRONMENTS

2201 North Front Street, Suite 200
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PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

WINTER SPORTS FIELD HOUSE & VENUE PHASE 1

FOR

BISHOP MCDEVITT SCHOOL HIGH SCHOOL

LOWER PAXTON TOWNSHIP

DAUPHIN COUNTY, PA

PROFESSIONAL SEAL

SCALE:	
DATE:	MAY 8, 2025
K&W PROJECT:	2160.018
DRAWN BY:	
CAD DRAWING:	OFFSITE DRAINAGE PLAN.dwg

REVISIONS NO.	DATE	DESCRIPTION
1	MARCH 28, 2025	DESCRIPTION
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PLAN TYPE:

OFFSITE DRAINAGE PLAN

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