FINAL LAND DEVELOPMENT PLANS FOR:

COURTYARDS AT VALLEY BROOK -

PROPOSED TOWNHOUSE DEVELOPMENT

PETERS TOWNSHIP
WASHINGTON COUNTY, PENNSYLVANIA

DATE: DECEMBER 12, 2024

REVISION: 1-2-2025
1-28-2025
2-13-2025

OWNER:
THOMAS ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
MCMURRAY, PA 15317

BUILDER:
SCARMAZZI HOMES
127 ADAMS AVE.
CANONSBURG, PA 15317

LANDSCAPE ARCHITECT:
VICTOR-WETZEL ASSOCIATES
409 BROAD STREET, SUITE 270
SEWICKLEY, PA. 15143
PHONE: (412) 741-2290

CIVIL ENGINEER/STORMWATER:
KDH CONSULTING ENGINEERS, INC.
593 RUGH ST.
GREENSBURG, PA 15601
PHONE: (878) 295-8914

SURVEYORS:
KEYSTONE SURVEYING & MAPPING
608 E. McMURRAY ROAD, SUITE 104
McMURRAY, PA 15317
PHONE: 724-514-7949

APPROVED VARIANCES:
(ZONING HEARING BOARD APPROVAL - AUGUST 18, 2020)

PART 11 - FLOODPLAIN CONTROLS

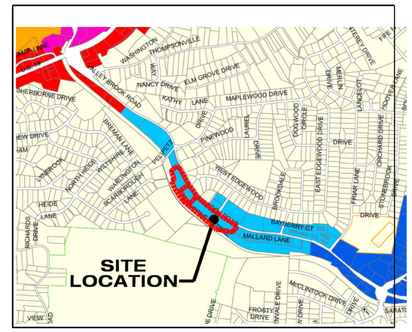
1. SECTION 440-1110 - PERMITTED LAND USES
(ALLOW FOR THE BUILDINGS AND STRUCTURES IN THE FLOODPLAIN)

2. SECTION 440-1111 - PROHIBITED LAND USES

ITEM A. - ALLOW THE BUILDING WITHIN THE IDENTIFIED FLOODPLAIN

ITEM B. - FILLING OF FLOODPLAINS FOR THE BUILDING AND PARKING LOT

NOTE: THE TRAFFIC IMPACT FEE OF $12,250 (OR $1,020.83 PER UNIT) SHALL BE PAID AT THE TIME OF THE BUILDING PERMIT ISSUANCE.

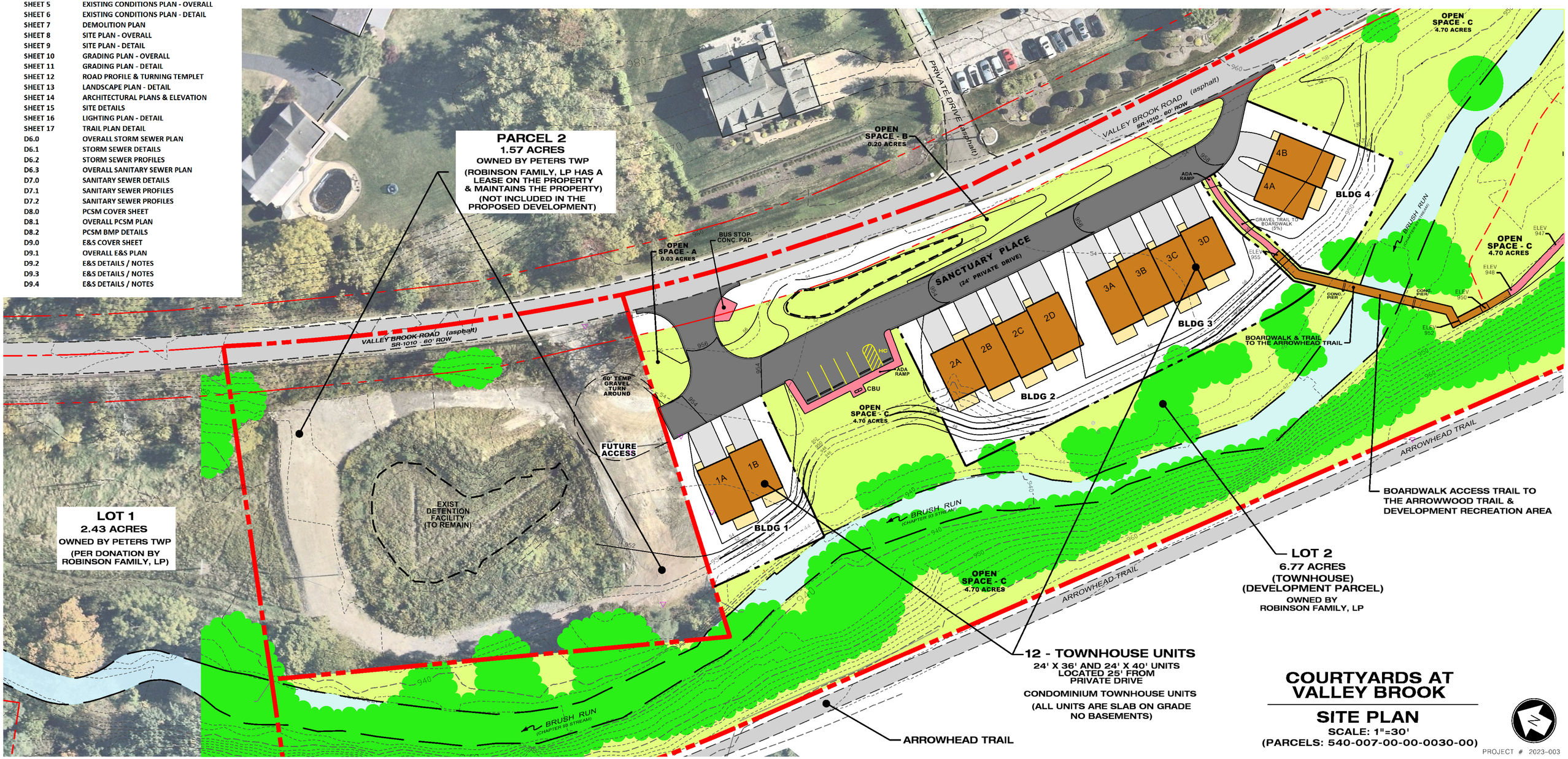


N

LOCATION MAP
NOT TO SCALE

DRAWING SCHEDULE

SHEET 1	COVERSHEET
SHEET 2	EXISTING BOUNDARY SURVEY
SHEET 3	EXISTING PARCEL EXHIBIT
SHEET 4	TOPOGRAPHIC SURVEY
SHEET 5	EXISTING CONDITIONS PLAN - OVERALL
SHEET 6	EXISTING CONDITIONS PLAN - DETAIL
SHEET 7	DEMOLITION PLAN
SHEET 8	SITE PLAN - OVERALL
SHEET 9	SITE PLAN - DETAIL
SHEET 10	GRADING PLAN - OVERALL
SHEET 11	GRADING PLAN - DETAIL
SHEET 12	ROAD PROFILE & TURNING TEMPLET
SHEET 13	LANDSCAPE PLAN - DETAIL
SHEET 14	ARCHITECTURAL PLANS & ELEVATION
SHEET 15	SITE DETAILS
SHEET 16	LIGHTING PLAN - DETAIL
SHEET 17	TRAIL PLAN DETAIL
D6.0	OVERALL STORM SEWER PLAN
D6.1	STORM SEWER DETAILS
D6.2	STORM SEWER PROFILES
D6.3	OVERALL SANITARY SEWER PLAN
D7.0	SANITARY SEWER DETAILS
D7.1	SANITARY SEWER PROFILES
D7.2	SANITARY SEWER PROFILES
D8.0	PCSM COVER SHEET
D8.1	OVERALL PCSM PLAN
D8.2	PCSM BMP DETAILS
D9.0	E&S COVER SHEET
D9.1	OVERALL E&S PLAN
D9.2	E&S DETAILS / NOTES
D9.3	E&S DETAILS / NOTES
D9.4	E&S DETAILS / NOTES



COURTYARDS AT VALLEY BROOK

SITE PLAN

SCALE: 1"=30'
(PARCELS: 540-007-00-00-0030-00)

PROJECT # 2023-003

PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NAD83

LEGEND

- SUBJECT PROPERTY LINE
- ADJOINER PROPERTY LINES
- EXISTING RIGHT-OF-WAY LINES
- SETBACK LINES
- EXISTING SANITARY EASEMENT
- EXISTING EVIDENCE FOUND
- SET 5/8" IRON PIN AND CAP NO. SU 075168

FLOODPLAIN LEGEND

ZONE AE-SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY 1% ANNUAL CHANCE FLOOD (BASE FLOOD ELEVATIONS DETERMINED)

FLOODWAY AREAS IN ZONE AE

ZONE X-OTHER FLOOD AREAS(AREAS OF 2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.)

ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.)

LOT AND AREA REQUIREMENTS

"VB" VALLEY BROOK MIXED-USE CORRIDOR DISTRICT

1.	LOT SIZE:	21,780 SQ. FT. MINIMUM
2.	LOT WIDTH:	100 FEET MINIMUM AT PROPERTY LINE
3.	PRINCIPAL BUILDING SETBACKS:	FRONT - 25 FEET MINIMUM
		SIDE - 10 FEET MINIMUM
		REAR - 25 FEET MINIMUM
4.	ACCESSORY BUILDING SETBACKS:	FRONT - 30 FEET MINIMUM
		SIDE - 10 FEET MINIMUM
		REAR - 10 FEET MINIMUM
6.	BUILDING HEIGHT:	45 FEET MAXIMUM (3 STORIES)
7.	LOT COVERAGE:	30%

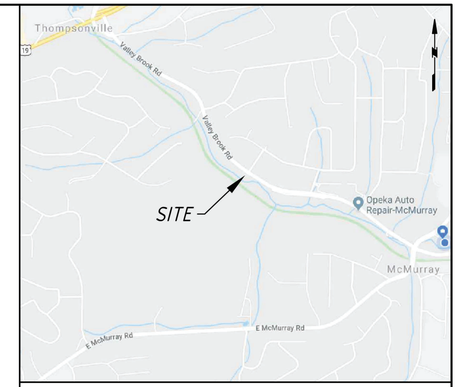
GENERAL NOTES

1. THE MERIDIAN OF THIS SURVEY IS REFERENCED TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NAD 1983.
2. VERTICAL DATA SHOWN (IF ANY) IS BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 1988.
3. STREET NAMES AND ROW WIDTHS, BLOCK AND LOT NUMBERS AS PER THE CURRENT TAX MAPS.
4. BOUNDARY INFORMATION SHOWN IS BASED ON A FIELD SURVEY PERFORMED BY KEYSTONE SURVEYING AND MAPPING INC ON AUGUST 27, 2019.
5. OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION OF ANY TYPE.
6. WETLANDS, ENVIRONMENTAL, AND/OR HAZARDOUS MATERIALS LOCATIONS, IF ANY, NOT COVERED UNDER THIS CONTRACT.
7. AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAPS TITLED "WASHINGTON COUNTY, PENNSYLVANIA" MAP NUMBER 42125C0211E, COMMUNITY PANEL NUMBER 422153 0211 E; EFFECTIVE DATE: SEPTEMBER 30, 2015. THE SUBJECT PROPERTIES LIE WITHIN ZONES AS SHOWN.
8. THIS PLAN IS NOT VALID UNLESS EMBOSSED OR STAMPED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
9. THE SUBJECT PROPERTIES ARE IN ZONE "VB" VALLEY BROOK MIXED-USE CORRIDOR DISTRICT. ZONING DATA SHOWN FOR INFORMATION PURPOSES ONLY AND DOES NOT REPRESENT A ZONING OPINION.
10. KEYSTONE SURVEYING AND MAPPING, INC. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO OUR STAKING, FINDINGS, RECOMMENDATIONS, PLANS, SPECIFICATIONS, OR PROFESSIONAL ADVICE EXCEPT THAT THE WORK WAS PERFORMED PURSUANT TO GENERALLY ACCEPTED STANDARDS OF PRACTICE AND DEGREE OF CARE EXERCISED BY MEMBERS OF THE SAME PROFESSION ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. AS USED IN THIS SURVEY, THE WORD CERTIFY (CERTIFIED, CERTIFICATION, AND/OR CERTIFICATE) SHALL BE INTERPRETED AS MEANING A PROFESSIONAL OPINION REGARDING THE CONDITIONS OF THOSE FACTS AND/OR FINDINGS WHICH ARE THE SUBJECT OF THE CERTIFICATION AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESS OR IMPLIED.
11. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE SEARCH OR BOUNDARY SURVEY. THEREFORE THIS PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS, RIGHT-OF-WAYS, COVENANTS, ETC. AS MAY BE DISCLOSED IN A CURRENT, COMPREHENSIVE TITLE SEARCH.
12. NO ADDITIONAL SUBDIVISION OF ANY LOT SHOWN HEREIN SHALL BE PERMITTED WITHOUT SUBMITTING THE PLAN FOR REVIEW.

REFERENCES

THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:

1. DRAWING ENTITLED "PROPERTY OF VALLEY BROOK PROPERTY, LLC" BY MDM SURVEYING DATED 10/27/2017.
2. DRAWING BY PVE, LLC, UNDATED.
3. DRAWING ENTITLED "EXISTING CONDITIONS PLAN" BY DULL SURVEYING, DATED 05/04/2019.



VICINITY MAP
NOT TO SCALE

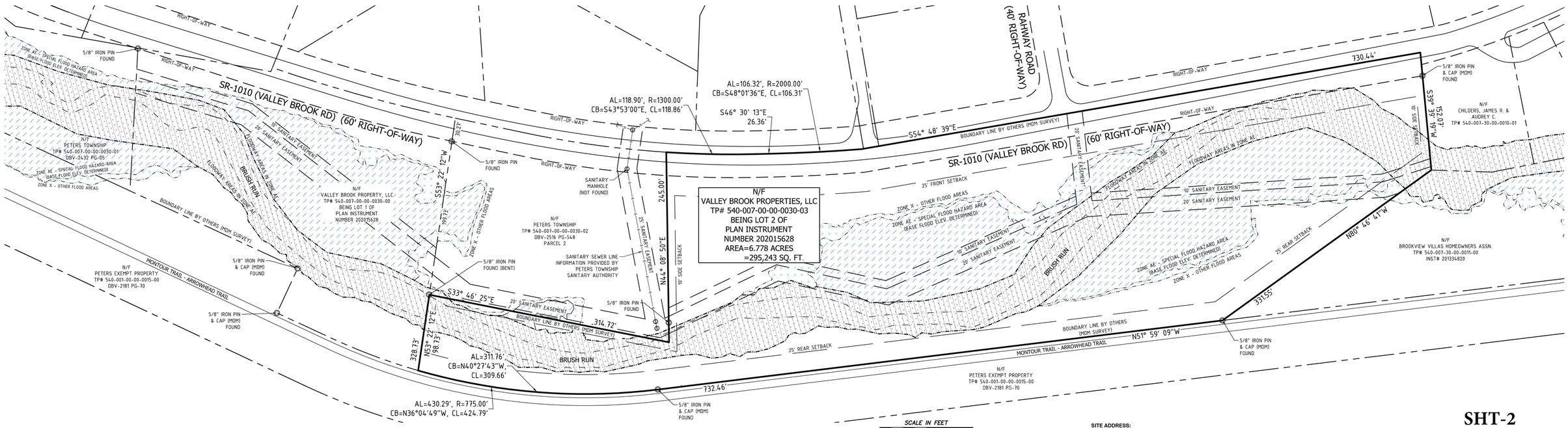
LAND SURVEYOR'S CERTIFICATION

I, KEITH H. HIGGINS, A REGISTERED PROFESSIONAL LAND SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE WITHIN PLAT CORRECTLY REPRESENTS THE SUBDIVISION OF THE LAND AS SURVEYED BY ME AT THE DIRECTION AND REQUEST OF THE ABOVE NAMED OWNERS; THAT SAID PLAT OF SUBDIVISION HAS BEEN REVIEWED AND APPROVED BY THE OWNER ABOVE NAMED; AND THAT THE PROFESSIONAL OPTION OF THE UNDERSIGNED SAID SUBDIVISION, AS SHOWN ON THE WITHIN PLAT, IS FULLY CONFORMING TO AND COMPLIES WITH THE REQUIREMENTS AND PROVISIONS OF THE SUBDIVISION ORDINANCE OF THE TOWNSHIP OF PETERS, WASHINGTON COUNTY AND THE COMMONWEALTH OF PENNSYLVANIA.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — KEITH H. HIGGINS — LAND SURVEYOR No.SU075168

Keith Higgins — 11/06/2020

KEITH H. HIGGINS — DATE
PROFESSIONAL LAND SURVEYOR
PA LIC No. SU075168



SCALE IN FEET
0 60 120

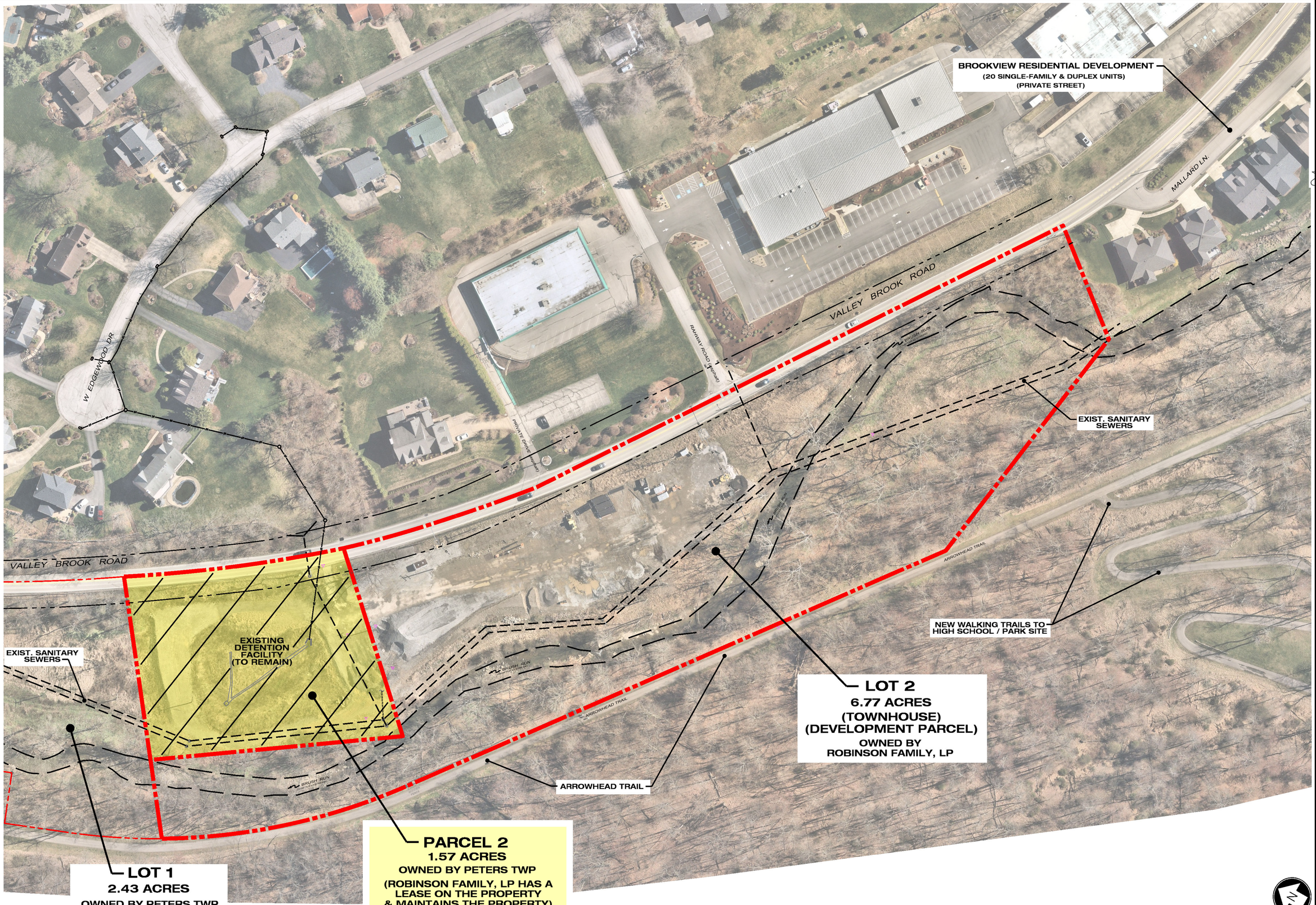
SITE ADDRESS:
VALLEY BROOK RD.
McMURRAY, PA 15317

SHT-2

PROJECT NO.: EXISTING-VALLEY BROOK	DRAWING NO.:	PROJECT: CLIENT: KDH CONSULTING ENGINEERS, INC. 593 RUGH ST GREENSBURG, PA 15601 OWNER: VALLEY BROOK PROPERTY, LLC 1299 McLAUGHLIN RUN RD BRIDGEVILLE, PA 15017 PETERS TOWNSHIP WASHINGTON COUNTY COMMONWEALTH OF PENNSYLVANIA	DRAWING TITLE: MAP OF COURTYARDS at VALLEYBROOK OF TAX PARCEL NUMBERS 540-007-00-00-0030-03	KEYSTONE SURVEYING & MAPPING INC. 608 E. McMURRAY ROAD, SUITE 104 McMURRAY, PA 15317 OFFICE (724) 514-7949
DATE: 11/06/2020				
SCALE: 1" = 60'				
DRAWN BY: MES				
CHECKED BY: KHH	1 OF 1			

© 2020 KEYSTONE SURVEYING AND MAPPING INC.

K:\2020\VWA - VALLEY BROOK MEDICAL OFFICE\CADD\PROPERTY SURVEY DWG\KDH-VALLEY BROOK_EXISTING.DWG



AERIAL DATE: SPRING 2024

SCALE: 1" = 50'
0 25' 50' 100'

REVISIONS:

PENNSYLVANIA
CHARLES STEVEN VICTOR
REGISTRATION NUMBER 646-E
REGISTERED LANDSCAPE ARCHITECT

Victor-Wetzel Associates
Landscape Architects
409 Broad Street
Sewickley, PA 15143
Phone | 412-741-5599
Fax | 412-741-6596
E-mail | vwa@vwla.net

P.M.
D.B.
C.B.

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

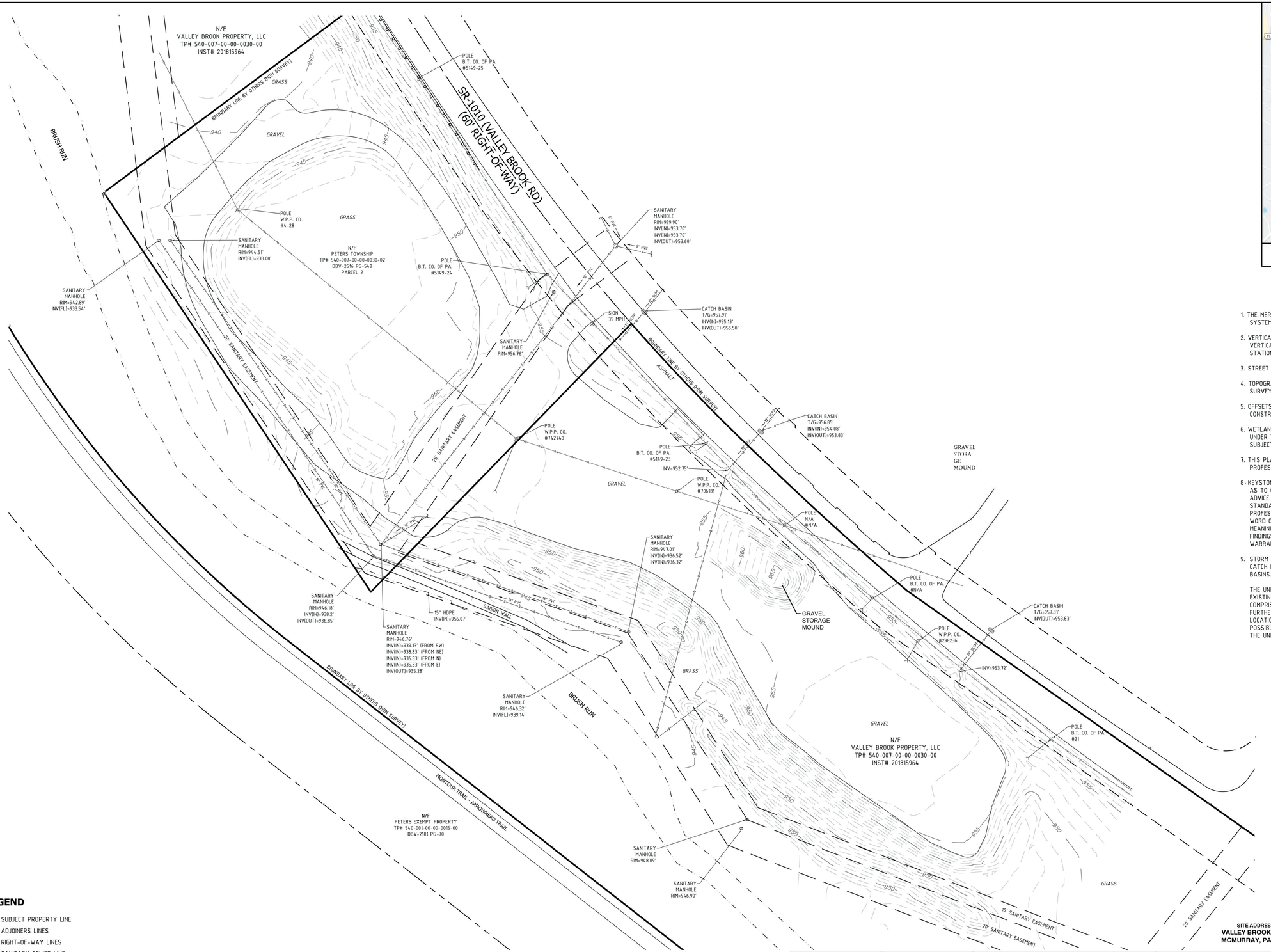
OWNER: THOMAS A. ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

EXISTING PARCEL EXHIBIT

SHT- 3

SCALE: 1" = 50'
AT 24 X 36
ISSUE DATE: DEC. 12, 2024
JOB NO. 2023-88

PENNSYLVANIA STATE PLANE
COORDINATE SYSTEM, NAD83



VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1. THE MERIDIAN OF THIS SURVEY IS REFERENCED TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NAD 1983.
2. VERTICAL DATUM REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 1988. VERTICAL DATUM IS ALSO REFERENCED TO THE NOAA CORS (CONTINUOUSLY OPERATING REFERENCE STATION) NETWORK
3. STREET NAMES AND ROW WIDTHS, BLOCK AND LOT NUMBERS AS PER THE CURRENT TAX MAPS.
4. TOPOGRAPHIC INFORMATION SHOWN IS BASED ON A FIELD SURVEY PERFORMED BY KEYSTONE SURVEYING AND MAPPING INC ON JANUARY 22, 2023.
5. OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION OF ANY TYPE.
6. WETLANDS, ENVIRONMENTAL, AND/OR HAZARDOUS MATERIALS LOCATIONS, IF ANY, NOT COVERED UNDER THIS CONTRACT. THE SURVEYOR HAS OBSERVED NO FIELD DELINEATION MARKERS ON THE SUBJECT SITE AT THE TIME OF THE SURVEY.
7. THIS PLAN IS NOT VALID UNLESS EMBOSSED OR STAMPED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
8. KEYSTONE SURVEYING AND MAPPING, INC. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO OUR STAKING, FINDINGS, RECOMMENDATIONS, PLANS, SPECIFICATIONS, OR PROFESSIONAL ADVICE EXCEPT THAT THE WORK WAS PERFORMED PURSUANT TO GENERALLY ACCEPTED STANDARDS OF PRACTICE AND DEGREE OF CARE EXERCISED BY MEMBERS OF THE SAME PROFESSION ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. AS USED IN THIS SURVEY, THE WORD CERTIFY (CERTIFIED, CERTIFICATION, AND/OR CERTIFICATE) SHALL BE INTERPRETED AS MEANING A PROFESSIONAL OPINION REGARDING THE CONDITIONS OF THOSE FACTS AND/OR FINDINGS WHICH ARE THE SUBJECT OF THE CERTIFICATION AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESS OR IMPLIED.
9. STORM AND SANITARY SEWER INFORMATION WAS MEASURED AT FIELD LOCATED MANHOLES/ CATCH BASINS AND RUNS WERE ASSUMED TO BE STRAIGHT BETWEEN LOCATED MANHOLES/ CATCH BASINS.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

LEGEND

- SUBJECT PROPERTY LINE
- ADJOINERS LINES
- RIGHT-OF-WAY LINES
- SANITARY SEWER LINE
- STORMWATER LINE
- METAL GUARD RAIL
- OVERHEAD UTILITY LINE
- SANITARY MANHOLE
- STORMWATER CATCH BASIN
- UTILITY POLE
- GUY WIRE
- SIGN

Know what's below. Call before you dig.

SCALE IN FEET
0 30 60

SITE ADDRESS:
VALLEY BROOK ROAD
MCMURRAY, PA 15317

SHT-4

PROJECT NO.: VWA – VALLEY BROOK RD.	DRAWING NO.:	PROJECT: CLIENT: VICTOR-WETZEL ASSOCIATES 525 LOCUST PLACE SEWICKLEY, PA 15143	DRAWING TITLE: MAP OF	KEYSTONE SURVEYING & MAPPING INC. 534 VALLEY BROOK ROAD VENETIA, PA 15367 OFFICE (724) 514-7949
DATE: 01/30/2023		OWNER: VALLEY BROOK PROPERTY, LLC 1299 MCLAUGHLIN RUN ROAD BRIDGEVILLE, PA 15017	TOPOGRAPHY SURVEY	
SCALE: 1" = 30'		*PETERS TOWNSHIP* *WASHINGTON COUNTY* *COMMONWEALTH OF PENNSYLVANIA*	OF	
DRAWN BY: MES/MSABO			TAX PARCEL NUMBER 540-007-00-00-0030-00	
CHECKED BY: KHH	1 OF 1			

© 2023 KEYSTONE SURVEYING AND MAPPING INC.

K:\2023\VWA – VALLEY BROOK RD TOPO\CADD\TOPOGRAPHIC SURVEY DWG\VWA–VALLEY BROOK RD TOPO.DWG

EXISTING BROOKVIEW RESIDENTIAL DEVELOPMENT
(20 SINGLE-FAMILY & DUPLEX UNITS)
(PRIVATE STREET)

MAYLARD LN.

W EDGEWOOD DR

EAST GAS LINE

EXIST WATER LINE

EXIST GAS LINE

HYD.

WATER FLW

RAILWAY ROAD (PRIVATE)

VALLEY BROOK ROAD (asphalt)
SR-1010 - 60' ROW

PRIVATE DRIVE (asphalt)

EXIST DETENTION FACILITY (TO REMAIN)

BRUSH RUN

ARROWHEAD TRAIL

20' SANITARY EASEMENT

S 56°09'58" E

N 82°06'00" W

N 53°20'28" W

S 35°04'

S 47°57'

L=106.32'
R=200.00'
CH BRG=S 49°22'45" E
CH DST=105.31'

L=118.90'
R=1300.00'
CH BRG=S 45°14'49" E
CH DST=118.86'

L=240.19'
R=200.00'
CH BRG=S 30°58'02" E
CH DST=225.95'

N 21°31'47" W 78.10'

N 30°29'25" W 79.00'

732.46'

337.55'

LOT 1
2.43 ACRES
OWNED BY PETERS TWP
(PER DONATION BY ROBINSON FAMILY, LP)
540-007-00-00-0030-00

PARCEL 2
1.57 ACRES
OWNED BY PETERS TWP
(ROBINSON FAMILY, LP HAS A LEASE ON THE PROPERTY & MAINTAINS THE PROPERTY)
(NOT INCLUDED IN THE PROPOSED DEVELOPMENT)
540-007-00-00-0030-02

LOT 2
6.77 ACRES
(TOWNHOUSE)
(DEVELOPMENT PARCEL)
OWNED BY
ROBINSON FAMILY, LP

GENERAL NOTES

1. THE PROPERTY SURVEY WAS COMPLETED BY MDM, LLC.
2. AS-BUILT SITE TOPOGRAHY WAS COMPLETED BY:
   KDH CONSULTING ENGINEERS, INC., AND PER THE
   APPROVED GRADING APPLICATION BY THE TWP. & WCCD.
3. THE LOCATION, DIRECTION AND SIZE OF ALL UTILITIES SHOWN ON THIS PLAN ARE BASED ON VISUAL EVIDENCE IN THE FIELD OR PER INFORMATION PROVIDED BY THE UTILITY COMPANIES OR FROM PREVIOUSLY PREPARED PLANS, AND THOSE UTILITIES SHOWN ARE NOT NECESSARILY ALL OF THE EXISITNG UTILITIES.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXACT FIELD LOCATION PRIOR TO ANY EXCAVATION BY NOTIFYING THE PENNSYLVANIA ONE CALL SYSTEM AT LEAST THREE (3) DAYS IN ADVANCE BY CALLING 1-800-242-1776.
5. ALL UNDERGROUND PIPE SIZES AND TYPES HAVE BEEN OBSERVED FROM GROUND LEVEL. NO ATTEMPT HAS BEEN MADE TO ENTER UNDERGROUND FACILITIES FOR ACTUAL MEASUREMENTS.
6. NO WETLANDS EXIST ON THE DEVELOPMENT PROPERTY AREA
7. THE FEMA MAP NUMBER FOR THIS SITE IS 42125C0211E.
8. BRUSH CREEK IS A DESIGNATED CHAPTER 93 STREAM – WARM WATER FISH.

SITE DATA

EXISTING ZONING DISTRICT IS VB: VALLEY BROOK ROAD - MIXED-USE CORRIDOR. RESTAURANT: FULL / TABLE BUILDING IS A PERMITTED USE.

THE TAX ID FOR THIS PARCEL:

LOT 2 – 540-007-00-00-0030-00
VALLEYBROOK, LLC
6.778 ACRES

LEGEND

FLOODWAY

CALCULATED FLOODPLAIN ZONE

UTILITY COMPANY CONTACT INFORMATION

WEST PENN POWER	(724) 743–2025
COLUMBIA GAS	(724) 610–8378
PENNSYLVANIA AMERICAN WATER CO.	(724) 873–3661
PETERS TWP SANITARY AUTH	(724) 941–6709
VERIZON	(724) 223–2890

PURSUANT TO ACT 187 OF 1996, (THE UNDERGROUND UTILITY LINE PROTECTION LAW) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF ALL UNDERGROUND UTILITIES AT LEAST 3 WORKING DAYS AND NOT MORE THAN 10 DAYS PRIOR TO BEGINNING EXCAVATION OR DEMOLITION WORK.

PA ONE CALL SYSTEM: 1–800–242–1776

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE & 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
Pennsylvania one Call System, Inc.
1-800-242-1776
Serial #

SCALE: 1" = 50'
0 25' 50' 100'

REVISIONS:

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
CHARLES STEVEN VICTOR
REGISTRATION NUMBER 546-E

Victor–Wetzel Associates
Landscape Architects
409 Broad Street
Sewickley, PA 15143
Phone | 412–741–2529
Fax | 412–741–0598
E-mail | vwa@vwla.net

P.M. _____
D.B. _____
C.B. _____

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A. ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

EXISTING CONDITIONS-OVERALL

SHT- 5

SCALE: 1" = 50'
AT 24 X 36
ISSUE DATE: DEC. 12, 2024
JOB NO. 2023-88

GENERAL NOTES

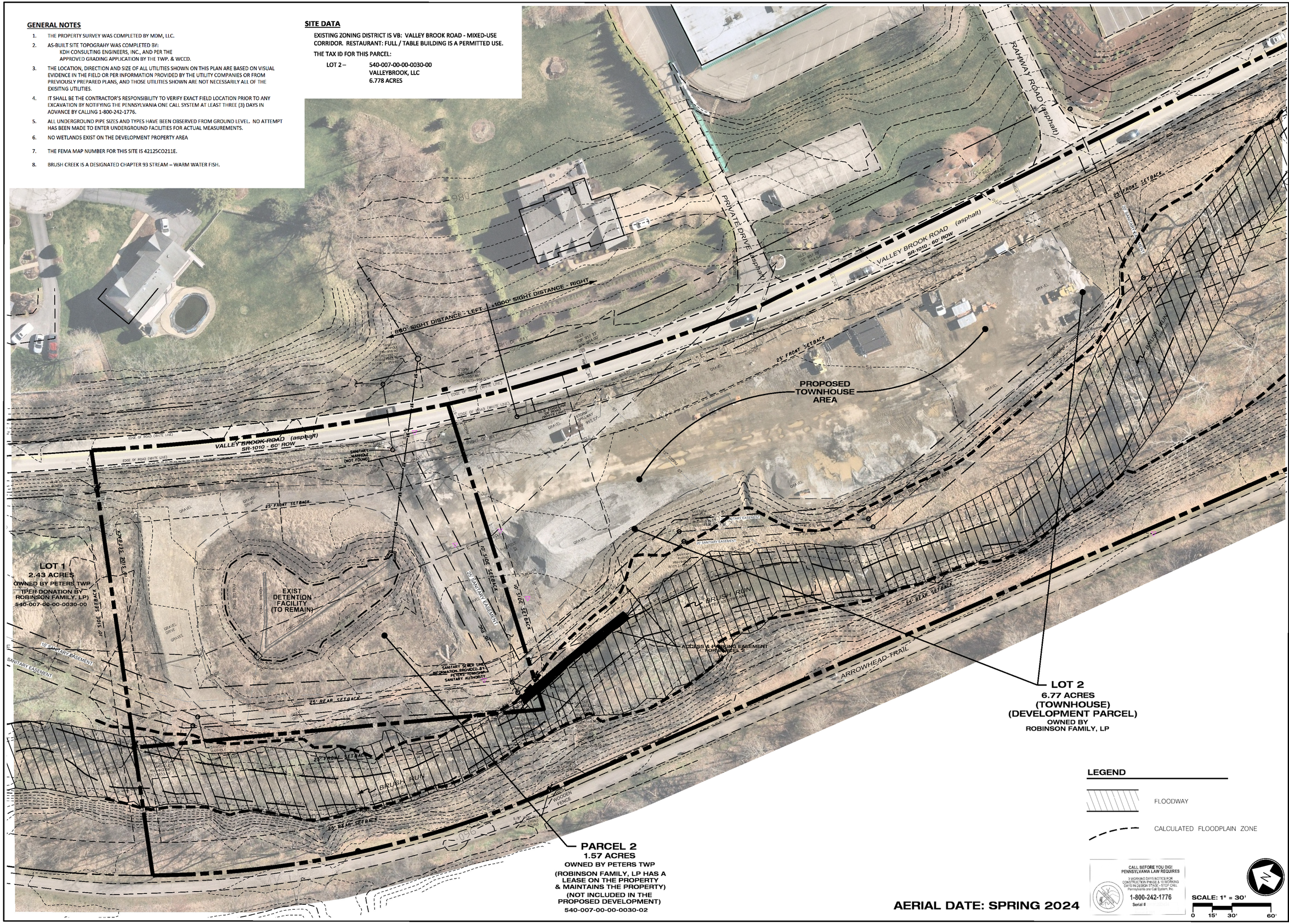
1. THE PROPERTY SURVEY WAS COMPLETED BY MDM, LLC.
2. AS-BUILT SITE TOPOGRAHY WAS COMPLETED BY:
   KDH CONSULTING ENGINEERS, INC., AND PER THE
   APPROVED GRADING APPLICATION BY THE TWP. & WCCD.
3. THE LOCATION, DIRECTION AND SIZE OF ALL UTILITIES SHOWN ON THIS PLAN ARE BASED ON VISUAL EVIDENCE IN THE FIELD OR PER INFORMATION PROVIDED BY THE UTILITY COMPANIES OR FROM PREVIOUSLY PREPARED PLANS, AND THOSE UTILITIES SHOWN ARE NOT NECESSARILY ALL OF THE EXISITNG UTILITIES.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXACT FIELD LOCATION PRIOR TO ANY EXCAVATION BY NOTIFYING THE PENNSYLVANIA ONE CALL SYSTEM AT LEAST THREE (3) DAYS IN ADVANCE BY CALLING 1-800-242-1776.
5. ALL UNDERGROUND PIPE SIZES AND TYPES HAVE BEEN OBSERVED FROM GROUND LEVEL. NO ATTEMPT HAS BEEN MADE TO ENTER UNDERGROUND FACILITIES FOR ACTUAL MEASUREMENTS.
6. NO WETLANDS EXIST ON THE DEVELOPMENT PROPERTY AREA
7. THE FEMA MAP NUMBER FOR THIS SITE IS 42125C0211E.
8. BRUSH CREEK IS A DESIGNATED CHAPTER 93 STREAM – WARM WATER FISH.

SITE DATA

EXISTING ZONING DISTRICT IS VB: VALLEY BROOK ROAD - MIXED-USE CORRIDOR. RESTAURANT: FULL / TABLE BUILDING IS A PERMITTED USE.

THE TAX ID FOR THIS PARCEL:

LOT 2 – 540-007-00-00-0030-00
VALLEYBROOK, LLC
6.778 ACRES



LEGEND

FLOODWAY

CALCULATED FLOODPLAIN ZONE

AERIAL DATE: SPRING 2024

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE & 10 WORKING DAYS IN DESIGN STAGE – STOP CALL
Pennsylvania one Call System, Inc.
1-800-242-1776
Serial #

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

REVISIONS:

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
CHARLES STEVEN VICTOR
REGISTRATION NUMBER 546-E
Steven Victor

Victor–Wetzel Associates
Landscape Architects
409 Broad Street
Sewickley, PA 15143
[Phone] 412- 741-5599
[Fax] 412- 741- 0558
[E-mail] vwa@vwla.net

P.M. _____
D.B. _____
C.B. _____

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON, FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

EXISTING CONDITIONS-DETAIL

SHT- 6

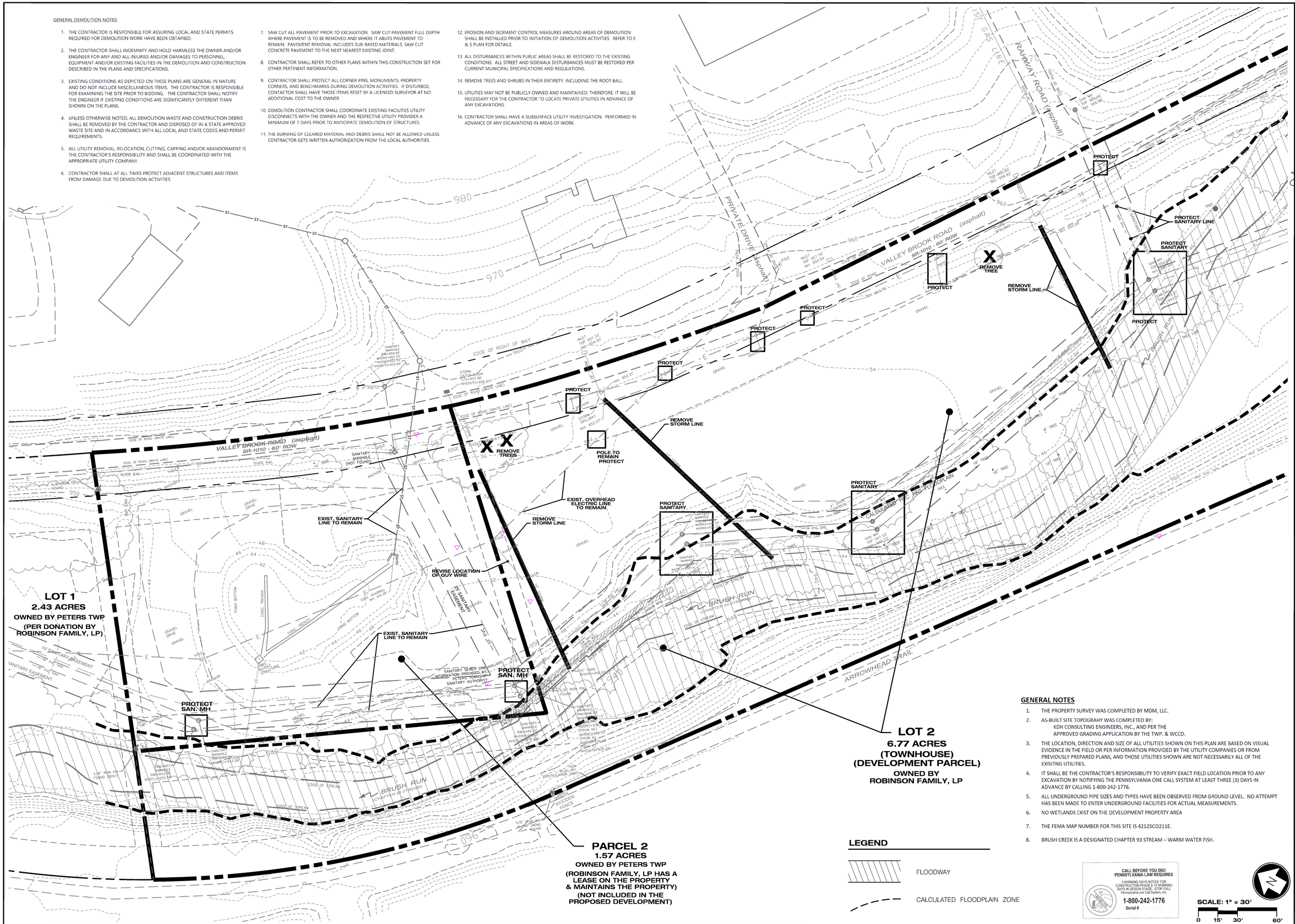
SCALE: 1" = 30'
AT 24 X 36

ISSUE DATE: DEC. 12, 2024

JOB NO. 2023-88

GENERAL DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ASSURING LOCAL AND STATE PERMITS REQUIRED FOR DEMOLITION WORK HAVE BEEN OBTAINED.
2. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND/OR ENGINEER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
3. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL IN NATURE AND DO NOT INCLUDE MISCELLANEOUS ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING THE SITE PRIOR TO BIDDING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF EXISTING CONDITIONS ARE SIGNIFICANTLY DIFFERENT THAN SHOWN ON THE PLANS.
4. UNLESS OTHERWISE NOTED, ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
5. ALL UTILITY REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
6. CONTRACTOR SHALL AT ALL TIMES PROTECT ADJACENT STRUCTURES AND ITEMS FROM DAMAGE DUE TO DEMOLITION ACTIVITIES.
7. SAW CUT ALL PAVEMENT PRIOR TO EXCAVATION. SAW CUT PAVEMENT FULL DEPTH WHERE PAVEMENT IS TO BE REMOVED AND WHERE IT ABUTS PAVEMENT TO REMAIN. PAVEMENT REMOVAL INCLUDES SUB-BASED MATERIALS. SAW CUT CONCRETE PAVEMENT TO THE NEXT NEAREST EXISTING JOINT.
8. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.
9. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTACTOR SHALL HAVE THOSE ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
10. DEMOLITION CONTRACTOR SHALL COORDINATE EXISTING FACILITIES UTILITY DISCONNECTS WITH THE OWNER AND THE RESPECTIVE UTILITY PROVIDER A MINIMUM OF 7 DAYS PRIOR TO ANTICIPATE DEMOLITION OF STRUCTURES.
11. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
12. EROSION AND SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE INSTALLED PRIOR TO INITIATION OF DEMOLITION ACTIVITIES. REFER TO E & S PLAN FOR DETAILS.
13. ALL DISTURBANCES WITHIN PUBLIC AREAS SHALL BE RESTORED TO THE EXISTING CONDITIONS. ALL STREET AND SIDEWALK DISTURBANCES MUST BE RESTORED PER CURRENT MUNICIPAL SPECIFICATIONS AND REGULATIONS.
14. REMOVE TREES AND SHRUBS IN THEIR ENTIRETY, INCLUDING THE ROOT BALL.
15. UTILITIES MAY NOT BE PUBLICLY OWNED AND MAINTAINED; THEREFORE, IT WILL BE NECESSARY FOR THE CONTRACTOR TO LOCATE PRIVATE UTILITIES IN ADVANCE OF ANY EXCAVATIONS.
16. CONTRACTOR SHALL HAVE A SUBSURFACE UTILITY INVESTIGATION. PERFORMED IN ADVANCE OF ANY EXCAVATIONS IN AREAS OF WORK.



LEGEND

- FLOODWAY
- CALCULATED FLOODPLAIN ZONE

GENERAL NOTES

1. THE PROPERTY SURVEY WAS COMPLETED BY MDM, LLC.
2. AS-BUILT SITE TOPOGRAHY WAS COMPLETED BY:
   KDH CONSULTING ENGINEERS, INC., AND PER THE
   APPROVED GRADING APPLICATION BY THE TWP. & WCCD.
3. THE LOCATION, DIRECTION AND SIZE OF ALL UTILITIES SHOWN ON THIS PLAN ARE BASED ON VISUAL EVIDENCE IN THE FIELD OR PER INFORMATION PROVIDED BY THE UTILITY COMPANIES OR FROM PREVIOUSLY PREPARED PLANS, AND THOSE UTILITIES SHOWN ARE NOT NECESSARILY ALL OF THE EXISITNG UTILITIES.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXACT FIELD LOCATION PRIOR TO ANY EXCAVATION BY NOTIFYING THE PENNSYLVANIA ONE CALL SYSTEM AT LEAST THREE (3) DAYS IN ADVANCE BY CALLING 1-800-242-1776.
5. ALL UNDERGROUND PIPE SIZES AND TYPES HAVE BEEN OBSERVED FROM GROUND LEVEL. NO ATTEMPT HAS BEEN MADE TO ENTER UNDERGROUND FACILITIES FOR ACTUAL MEASUREMENTS.
6. NO WETLANDS EXIST ON THE DEVELOPMENT PROPERTY AREA
7. THE FEMA MAP NUMBER FOR THIS SITE IS 42125CO211E.
8. BRUSH CREEK IS A DESIGNATED CHAPTER 93 STREAM – WARM WATER FISH.

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE & 10 WORKING DAYS IN DESIGN STAGE - STOP CALL Pennsylvania one Call System, Inc.
1-800-242-1776
Serial #

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

REVISIONS:

PENNSYLVANIA
CHARLES STEVEN VICTOR
REGISTERED LANDSCAPE ARCHITECT
REGISTRATION NUMBER 648-E

Victor-Wetzel Associates
Landscape Architects
409 Broad Street
Suite 100
Sewickley, PA 15143
(412) 741-0599
Fax | 412-741-0598
E-mail | vwa@vwla.net

P.M.
D.B.
C.B.

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

DEMOLITION PLAN

SHT- 7

SCALE: 1" = 30'
AT 24 X 36

ISSUE DATE: DEC. 12, 2024

JOB NO. 2023-88

SITE PLAN NOTES

1. THE EXISTING ZONING DISTRICT IS VB: VALLEY BROOK ROAD - MIXED-USE CORRIDOR. TOWNHOMES (MULTI-FAMILY) IS A PERMITTED USE.
2. THE TAX ID FOR THE DEVELOPMENT PARCEL IS:
   LOT 2 – 540-007-00-00-0030-00
   VALLEYBROOK, LLC
   6.778 ACRES
3. ALL CONSTRUCTION SHALL COMPLY WITH THE PETERS TOWNSHIP SPECIFICATIONS.
4. DEVELOPER SHALL COORDINATE ALL UTILITY LINE EXTENSIONS WITH THE RESPECTIVE UTILITY COMPANIES.
5. NO WETLANDS EXIST ON THE DEVELOPMENT PROPERTY AREA.
6. ALL SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH PETERS TOWNSHIP SANITARY AUTHORITY STANDARD DRAWINGS AND SPECIFICATIONS.
7. ALL ADA REQUIREMENTS ARE MET WITH THE SITE PLAN.
8. THE STORMWATER MANAGEMENT SYSTEM AND MAINTENANCE OF THE SYSTEM WILL BE RESPONSIBILITY OF THE HOA.
9. BRUSH CREEK IS A DESIGNATED CHAPTER 93 STREAM – WARM WATER FISH.
10. THE PROPOSED PRIVATE DRIVE (SANCTUARY PLACE) WILL REMAIN PRIVATE AND SHALL NOT BE DEDICATED TO OR ACCEPTED BY PETERS TOWNSHIP.
11. THE HOMEOWNERS ASSOC. (HOA) WILL OWN AND MAINTAIN ALL PROPOSED PRIVATE DRIVE (ROADWAY AREA), DRIVEWAYS, SIDEWALKS, LAWN AREAS, OPEN SPACE AND UNDER GROUND DETENTION FACILITIES.
12. ALL TOWNHOUSE UNITS WILL BE CONDOMINIUM. THIS MEANS THAT THE PURCHASE OF THE TOWNHOUSE UNIT INCLUDES THE GROUND UNDERNEATH THE PHYSICAL STRUCTURE BUT NOTHING ELSE. ALL GROUND SURROUNDING THE TOWNHOUSE UNITS WILL BE MAINTAINED BY THE HOA.
13. ALL TOWNHOUSE UNITS ARE SLAB ON GRADE – (NO BASEMENTS)
14. **THE TRAFFIC IMPACT FEE OF $12,250 (OR $1,020.83 PER UNIT) SHALL BE PAID AT THE TIME OF THE BUILDING PERMIT ISSUANCE.**
15. **THE 50' ACCESS & UTILITY EASEMENT INCLUDES TOWNSHIP ACCESS TO THE TOWNSHIP. PROPERTY FOR MAINTENANCE OF THE STORMWATER POND.**

DIMENSIONAL REQUIREMENTS IN THE VB: VALLEY BROOK MIXED-USE CORRIDOR

Dimension	Requirement	Courtyards at Valleybrook
Minimum Gross Lot Size (No Max Lot Size)	21,780 ft	294,900 SF (6.77 AC)
F. A. R. (Floor Area Ratio)	0.30 Max.	0.03
Lot Width (At Front Property Line)	100'	983'
Build-To/Setback	Front: 25'	Front: 25'
	Side: 10'	Side: 10' & 10'
	Rear: 25'	Rear: 25'
Minimum Accessory Building Setback	Front: 30'	
	Side: 10'	N/A
	Rear: 10'	
Building Height	45' (3 Stories)	3 Stories

Sight Line	Approach Grade (%)	Required Minimum[1] Sight Distance (feet)	Preferred[2] Sight Distance (feet)	Available Sight Distance (feet)
Valley Brook Road (SR 1010) with Proposed Site Drive				
SPEED LIMIT = 35 mph				
Corner Sight Distance Looking Left	-0.8%	369'	390'	~830'
Corner Sight Distance Looking Right	N/A	397'	390'	>1000'
Stopping Sight Distance Looking Ahead	+0.7%	359'	285'	~450'
Stopping Sight Distance from Behind	-1.0%	404'	-	~495'

85th Percentile Speeds
- Eastbound – 44 mph
- Westbound – 46 mph

PARKING CHART

PER SECTION 440-507 - OFF-STREET PARKING
STATES THAT SINGLE FAMILY ATTACHED REQUIRES: (2) PARKING SPACES PER DWELLING UNIT.

PROPOSED (12) TOWNHOUSE UNITS

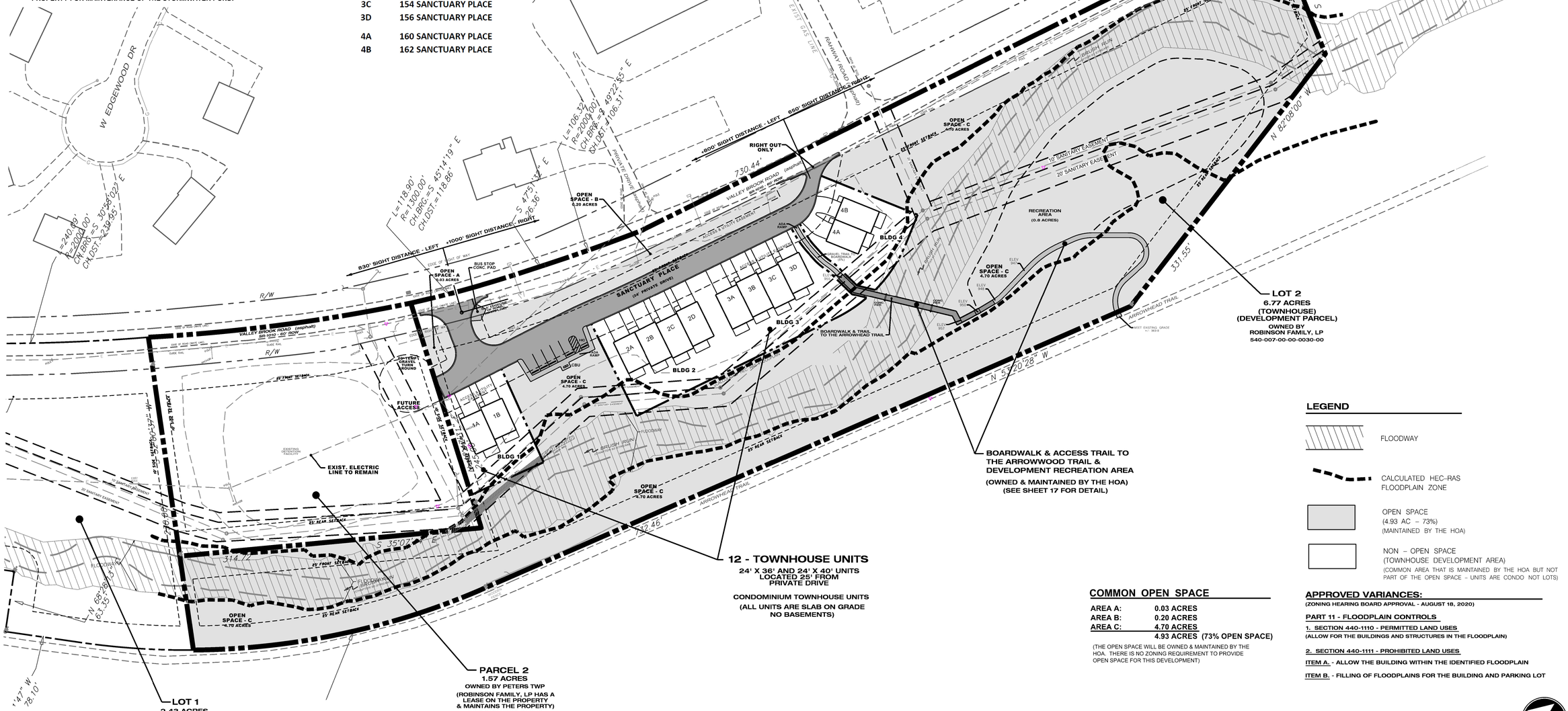
REQUIRED: 24 PARKING SPACES

PROVIDED: (2) GARAGE
(2) DRIVEWAY
(6) ADDITIONAL PARKING AT CBU

TOTAL: 54 PARKING SPACES

UNIT ADDRESS CHART

UNIT NUMBER	UNIT ADDRESS
1A	130 SANCTUARY PLACE
1B	132 SANCTUARY PLACE
2A	140 SANCTUARY PLACE
2B	142 SANCTUARY PLACE
2C	144 SANCTUARY PLACE
2D	146 SANCTUARY PLACE
3A	150 SANCTUARY PLACE
3B	152 SANCTUARY PLACE
3C	154 SANCTUARY PLACE
3D	156 SANCTUARY PLACE
4A	160 SANCTUARY PLACE
4B	162 SANCTUARY PLACE



COMMON OPEN SPACE

AREA A:	0.03 ACRES
AREA B:	0.20 ACRES
AREA C:	4.70 ACRES
	4.93 ACRES (73% OPEN SPACE)

(THE OPEN SPACE WILL BE OWNED & MAINTAINED BY THE HOA. THERE IS NO ZONING REQUIREMENT TO PROVIDE OPEN SPACE FOR THIS DEVELOPMENT)

LEGEND

- FLOODWAY
- CALCULATED HEC-RAS FLOODPLAIN ZONE
- OPEN SPACE (4.93 AC – 73%) (MAINTAINED BY THE HOA)
- NON – OPEN SPACE (TOWNHOUSE DEVELOPMENT AREA) (COMMON AREA THAT IS MAINTAINED BY THE HOA BUT NOT PART OF THE OPEN SPACE – UNITS ARE CONDO NOT LOTS)

APPROVED VARIANCES:

(ZONING HEARING BOARD APPROVAL - AUGUST 18, 2020)

PART 11 - FLOODPLAIN CONTROLS

1. SECTION 440-1110 - PERMITTED LAND USES
(ALLOW FOR THE BUILDINGS AND STRUCTURES IN THE FLOODPLAIN)

2. SECTION 440-1111 - PROHIBITED LAND USES

ITEM A. - ALLOW THE BUILDING WITHIN THE IDENTIFIED FLOODPLAIN

ITEM B. - FILLING OF FLOODPLAINS FOR THE BUILDING AND PARKING LOT

SCALE: 1" = 50'
0 25' 50' 100'

REVISIONS:
1-2-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS
2-13-25 - ADD NOTE #15

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
CHARLES STEVEN VICTOR
REGISTRATION NUMBER LA416-E
Victor–Wetzel Associates Landscape Architects
409 Broad Street
Suite 2
Sewickley, PA 15143
(724) 741-9660
[Fax] 412-741-0606
[E-mail] vwa@vwa.net

P.M.
D.B.
C.B.

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

SITE PLAN - OVERALL

SHT- 8

SCALE: 1" = 50' AT 24 X 36
ISSUE DATE: DEC. 12, 2024
JOB NO. 2023-88

CLUSTER BOX UNIT:

- **SUPPLIER: SELECT COMMERCIAL MAILBOXES**
- **MODEL: FLORENCE 1570-13 – 13 UNIT +1 PACKAGE LOCKER**
- **COLOR: BLACK**

CLUSTER BOX UNIT DESIGN

NOT TO SCALE

12 - TOWNHOUSE UNITS
24' X 36' AND 24' X 40' UNITS LOCATED 25' FROM PRIVATE DRIVE
CONDOMINIUM TOWNHOUSE UNITS (ALL UNITS ARE SLAB ON GRADE NO BASEMENTS)

SANCTUARY PLACE (24' PRIVATE DRIVE)

BLDG 1 | **BLDG 2** | **BLDG 3** | **BLDG 4**

1A 130 SANCTUARY PLACE; 1B 132 SANCTUARY PLACE; 2A 140 SANCTUARY PLACE; 2B 142 SANCTUARY PLACE; 2C 144 SANCTUARY PLACE; 2D 146 SANCTUARY PLACE; 3A 150 SANCTUARY PLACE; 3B 152 SANCTUARY PLACE; 3C 154 SANCTUARY PLACE; 3D 156 SANCTUARY PLACE; 4A 160 SANCTUARY PLACE; 4B 162 SANCTUARY PLACE

OPEN SPACE - A 0.03 ACRES
OPEN SPACE - B 0.20 ACRES
OPEN SPACE - C 4.70 ACRES (×4)

6 - VISITOR SPACES
BUS STOP CONC. PAD
ENTRY SIGN
STOP SIGN "A"
STOP & RIGHT TURN ONLY SIGN
RIGHT OUT ONLY
(2) NO LEFT TURN SIGNS
NO RIGHT TURN SIGN
DO NOT ENTER SIGN
ADA RAMP
HCP
WHEEL STOPS
5' SIDEWALK
CBU
60' TEMP GRAVEL TURN AROUND
GRAVEL TRAIL TO BOARDWALK (5%)
CONC. PIER
BOARDWALK & TRAIL TO THE ARROWHEAD TRAIL
BOARDWALK ACCESS TRAIL TO THE ARROWWOOD TRAIL & DEVELOPMENT RECREATION AREA (OWNED & MAINTAINED BY THE HOA)
(SEE SHEET 17 FOR DETAIL)

50' ACCESS & UTILITY EASEMENT
ACCESS & UTILITY EASEMENT
EXIST. SAN. EASEMENT
EXIST. ELECTRICAL LINE TO REMAIN
EXIST DETENTION FACILITY (TO REMAIN)
FUTURE ACCESS
NOTE: STOP SIGN "A" WILL HAVE ADDITIONAL SIGNAGE WITH "CROSS TRAFFIC DOES NOT STOP PLAQUES UNDER THE STOP SIGN"

830' SIGHT DISTANCE - LEFT | **+1000' SIGHT DISTANCE - RIGHT**

VALLEY BROOK ROAD (asphalt) SR-1010 - 60' ROW
RAHWAY ROAD (asphalt)
PRIVATE DRIVE (asphalt)
BRUSH RUN (CHAPTER 93 STREAM)
CALCULATED HEC-RAS FLOODPLAIN
ARROWHEAD TRAIL

LOT 1
2.43 ACRES
OWNED BY PETERS TWP (PER DONATION BY ROBINSON FAMILY, LP)
540-007-00-00-0030-00

LOT 2
6.77 ACRES (TOWNHOUSE) (DEVELOPMENT PARCEL)
OWNED BY ROBINSON FAMILY, LP
540-007-00-00-0030-00

PARCEL 2
1.57 ACRES
OWNED BY PETERS TWP
(ROBINSON FAMILY, LP HAS A LEASE ON THE PROPERTY & MAINTAINS THE PROPERTY)
(NOT INCLUDED IN THE PROPOSED DEVELOPMENT)
540-007-00-00-0030-02

OPEN SPACE - C 4.70 ACRES

10' SIDE SETBACK | 25' FRONT SETBACK | 25' REAR SETBACK | 20' SANITARY EASEMENT | 10' SANITARY EASEMENT

SITE PLAN NOTES

1. THE EXISTING ZONING DISTRICT IS VB: VALLEY BROOK ROAD - MIXED-USE CORRIDOR. TOWNHOMES (MULTI-FAMILY) IS A PERMITTED USE.
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   LOT 2 – 540-007-00-00-0030-00 VALLEYBROOK, LLC 6.778 ACRES
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LEGEND

- CALCULATED HEC–RAS FLOODPLAIN ZONE
- OPEN SPACE (4.93 AC – 73%) (MAINTAINED BY THE HOA)
- NON – OPEN SPACE (TOWNHOUSE DEVELOPMENT AREA) (COMMON AREA THAT IS MAINTAINED BY THE HOA BUT NOT PART OF THE OPEN SPACE – UNITS ARE CONDO NOT LOTS)

COMMON OPEN SPACE

AREA A:	**0.03 ACRES**
AREA B:	**0.20 ACRES**
AREA C:	**4.70 ACRES**
	4.93 ACRES (73% OPEN SPACE)

(THE OPEN SPACE WILL BE OWNED & MAINTAINED BY THE HOA. THERE IS NO ZONING REQUIREMENT TO PROVIDE OPEN SPACE FOR THIS DEVELOPMENT)

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

REVISIONS:
1-2-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS
1-29-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS
2-13-25 - ADD NOTE #15

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT — STEVEN VICTOR — REGISTRATION NUMBER LA000646E

Victor–Welzel Associates
Landscape Architects
409 Broad Street
Suite 270
Sewickley, PA 15143
(O) 412 741 0500
(Fax) 412 741 0506
(E-mail) vwla@vwla.net

P.M. _____
D.B. _____
C.B. _____

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA.

OWNER: THOMAS A. ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

SITE PLAN - DETAIL

SHT- 9

SCALE: 1" = 30' AT 24 X 36
ISSUE DATE: DEC 12, 2024
JOB NO. 2023-88

EXISTING BROOKVIEW RESIDENTIAL DEVELOPMENT
(20 SINGLE-FAMILY & DUPLEX UNITS)
(PRIVATE STREET)

MAYLARD LN.

W EDGEWOOD DR

EXIST GAS LINE

RAMWAY ROAD (asphalt)

PRIVATE DRIVE (asphalt)

VALLEY BROOK ROAD (asphalt)
50-1010 - 60' ROW

OPEN SPACE - B
9.20 ACRES

OPEN SPACE - A
0.63 ACRES

OPEN SPACE - C
4.70 ACRES

RECREATION AREA
(0.8 ACRES)

RAIN GARDEN

BUS STOP CONC. PAD

SANCTUARY PLACE
(24' PRIVATE DRIVE)

BLDG 1
BLDG 2
BLDG 3
BLDG 4

1A 1B 2A 2B 2C 2D 3A 3B 3C 3D 4A 4B

BRUSH RUN

BOARDWALK & TRAIL TO THE ARROWHEAD TRAIL

ARROWHEAD TRAIL

50' TEMP GRAVEL TURN AROUND

FUTURE ACCESS

EXIST DETENTION FACILITY (TO REMAIN)

SWALE

CBU

ADA RAMP

STREET EXISTING GRADE +/- 969.8

LOT 2
6.77 ACRES
(TOWNHOUSE)
(DEVELOPMENT PARCEL)
OWNED BY ROBINSON FAMILY, LP
540-007-00-00-0030-00

BOARDWALK ACCESS TRAIL TO THE ARROWWOOD TRAIL & DEVELOPMENT RECREATION AREA
(OWNED & MAINTAINED BY THE HOA)
(SEE SHEET 17 FOR DETAIL)

12 - TOWNHOUSE UNITS
24' X 36' AND 24' X 40' UNITS LOCATED 25' FROM PRIVATE DRIVE
CONDOMINIUM TOWNHOUSE UNITS (ALL UNITS ARE SLAB ON GRADE NO BASEMENTS)

PARCEL 2
1.57 ACRES
OWNED BY PETERS TWP
(ROBINSON FAMILY, LP HAS A LEASE ON THE PROPERTY & MAINTAINS THE PROPERTY)
(NOT INCLUDED IN THE PROPOSED DEVELOPMENT)
540-007-00-00-0030-02

LOT 1
2.43 ACRES
OWNED BY PETERS TWP
(PER DONATION BY ROBINSON FAMILY, LP)
540-007-00-00-0030-00

IMPERVIOUS SURFACE COMPARISON

APPROVED MEDICAL OFFICE IMPERVIOUS PAVING

PARKING LOT PAVING - ASPHALT	23,680 Sq. Ft.	
PARKING LOT PAVING - CONCRETE	840 Sq. Ft	
SIDEWALK PAVING	3,830 Sq. Ft.	
BUILDING FOOTPRINT	4,600 Sq. Ft.	
BUILDING FOOTPRINT - FUTURE EXPANSION	1,040 Sq. Ft.	
COVERED ROOF CANOPY	570 Sq. Ft.	
SUBTOTAL:	34,560 Sq. Ft.	(0.79 acres)

PROPOSED TOWNHOUSE DEVELOPMENT

ACCESS ROAD - ASPHALT	13,660 Sq. Ft.	
TOWNHOUSE DRIVEWAYS - ASPHALT	5250 Sq. Ft.	
SIDEWALK PAVING - CONCRETE	2,400 Sq. Ft.	
BUILDING FOOTPRINTS	11,090 Sq. Ft.	
TOTAL PROPOSED IMPERVIOUS AREA:	32,400 Sq. Ft.	(0.74 acres)
APPROVED IMPERVIOUS AREA:	**34,560 Sq. Ft.**	**(0.79 acres)**
PROPOSED IMPERVIOUS AREA:	**32,400 Sq. Ft.**	**(0.74 acres)**
REDUCTION IN IMPERVIOUS PAVING:	**2,160 Sq. Ft.**	**(0.05 acres)**

LEGEND

- FLOODWAY
- CALCULATED HEC-RAS FLOODPLAIN ZONE
- OPEN SPACE (4.93 AC – 73%) (MAINTAINED BY THE HOA)
- NON – OPEN SPACE (TOWNHOUSE DEVELOPMENT AREA) (COMMON AREA THAT IS MAINTAINED BY THE HOA BUT NOT PART OF THE OPEN SPACE – UNITS ARE CONDO NOT LOTS)

SCALE: 1" = 50'
0 25' 50' 100'

REVISIONS:
1-2-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS

PENNSYLVANIA CERTIFIED SYSTEMS VERIFIER
REGISTERED LANDSCAPE ARCHITECT
REGISTRATION NUMBER 546-E

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Landscape Architects
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FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

GRADING PLAN - OVERALL

SHT- 10

SCALE: 1" = 50' AT 24 X 36
ISSUE DATE: DEC. 12, 2024
JOB NO. 2023-88

LEGEND

- FLOODWAY
- CALCULATED HEC–RAS FLOODPLAIN ZONE
- OPEN SPACE (4.93 AC – 73%) (MAINTAINED BY THE HOA)
- NON – OPEN SPACE (TOWNHOUSE DEVELOPMENT AREA) (COMMON AREA THAT IS MAINTAINED BY THE HOA BUT NOT PART OF THE OPEN SPACE – UNITS ARE CONDO NOT LOTS)

W EDGEWOOD DR

RAHWAY ROAD (asphalt)

PRIVATE DRIVE (asphalt)

VALLEY BROOK ROAD (asphalt) SR-1010 - 60' ROW

OPEN SPACE - A 0.03 ACRES

OPEN SPACE - B 0.20 ACRES

OPEN SPACE - C 4.70 ACRES

RAIN GARDEN

BUS STOP CONC. PAD

SANCTUARY PLACE (24' PRIVATE DR(VE)

UNDERGROUND DETENTION

ACCESS & UTILITY EASEMENT

ADA RAMP

BLDG 1

BLDG 2

BLDG 3

BLDG 4

1A BLDG. ELEV.: 955.5 +9.6

1B BLDG. ELEV.: 955.5 +9.6

2A BLDG. ELEV.: 955.5 +9.3

2B BLDG. ELEV.: 955.5 +9.1

2C BLDG. ELEV.: 956.2 +8.8

2D BLDG. ELEV.: 956.2 +7.0

3A BLDG. ELEV.: 957.5 +8.1

3B BLDG. ELEV.: 957.5 +8.1

3C BLDG. ELEV.: 958.2 +8.7

3D BLDG. ELEV.: 958.2 +8.7

4A BLDG. ELEV.: 958.5 +8.6

4B BLDG. ELEV.: 958.5 +8.6

60' TEMP GRAVEL TURN AROUND

FUTURE ACCESS

EXIST DETENTION FACILITY (TO REMAIN)

BRUSH RUN (CHAPTER 93 STREAM)

FLOODWAY

ARROWHEAD TRAIL

GRAVEL TRAIL TO BOARDWALK (5%)

BOARDWALK & TRAIL TO THE ARROWHEAD TRAIL

CONC. PIER

BOARDWALK ACCESS TRAIL TO THE ARROWWOOD TRAIL & DEVELOPMENT RECREATION AREA
(OWNED & MAINTAINED BY THE HOA)
(SEE SHEET 17 FOR DETAIL)

LOT 1
2.43 ACRES
OWNED BY PETERS TWP
(PER DONATION BY ROBINSON FAMILY, LP)
540-007-00-00-0030-00

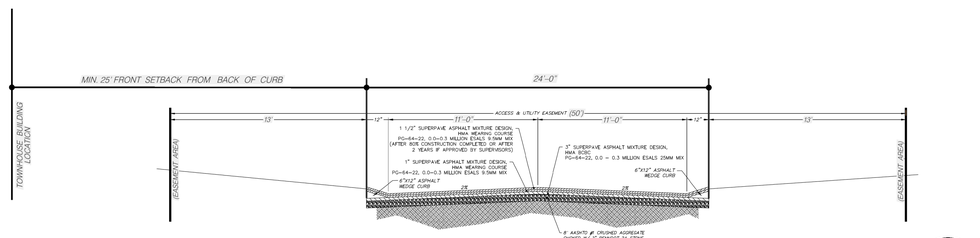
PARCEL 2
1.57 ACRES
OWNED BY PETERS TWP
(ROBINSON FAMILY, LP HAS A LEASE ON THE PROPERTY & MAINTAINS THE PROPERTY)
(NOT INCLUDED IN THE PROPOSED DEVELOPMENT)
540-007-00-00-0030-02

LOT 2
6.77 ACRES
(TOWNHOUSE)
(DEVELOPMENT PARCEL)
OWNED BY
ROBINSON FAMILY, LP
540-007-00-00-0030-00

COMMON OPEN SPACE

AREA A:	0.03 ACRES
AREA B:	0.20 ACRES
AREA C:	4.70 ACRES
	4.93 ACRES (73% OPEN SPACE)

(THE OPEN SPACE WILL BE OWNED & MAINTAINED BY THE HOA. THERE IS NO ZONING REQUIREMENT TO PROVIDE OPEN SPACE FOR THIS DEVELOPMENT)



TYPICAL PRIVATE ROADWAY CROSS SECTION

N.T.S.

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

REVISIONS:
1-2-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS
1-28-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
CHARLES STEVEN VICTOR
REGISTRATION NUMBER LA416-E

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Landscape Architects
409 Broad Street
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(412) 741-0506
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[E-mail] vwla@vwla.net

P.M.
D.B.
C.B.

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

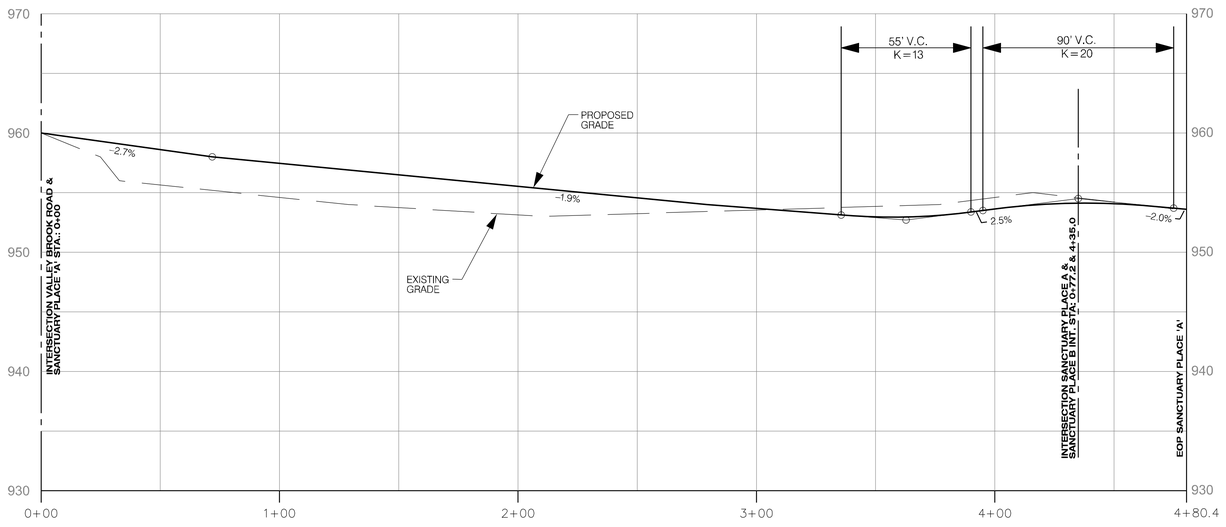
GRADING PLAN - DETAIL

SHT- 11

SCALE: 1" = 30'
AT 24 X 36

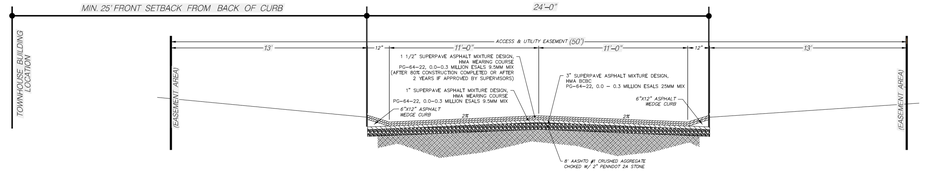
ISSUE DATE: DEC. 12, 2024

JOB NO. 2023-88



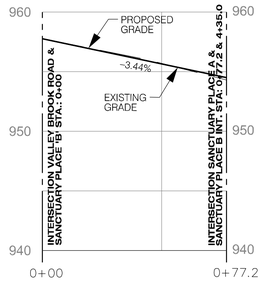
SANCTUARY PLACE 'A'

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6'



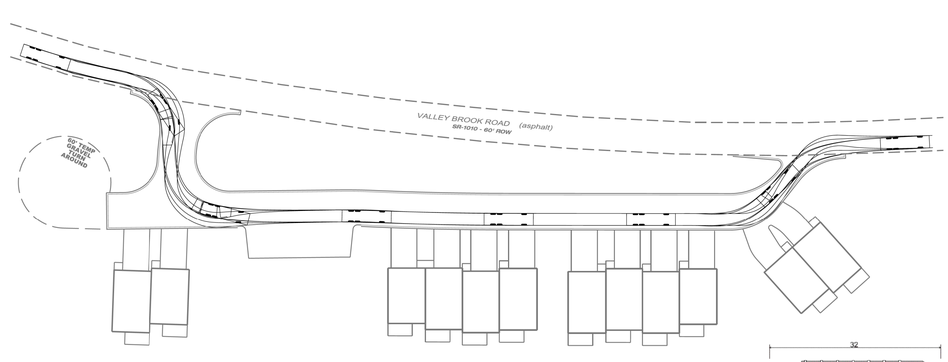
TYPICAL PRIVATE ROADWAY CROSS SECTION

N.T.S.



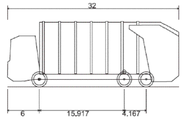
SANCTUARY PLACE 'B'

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6'

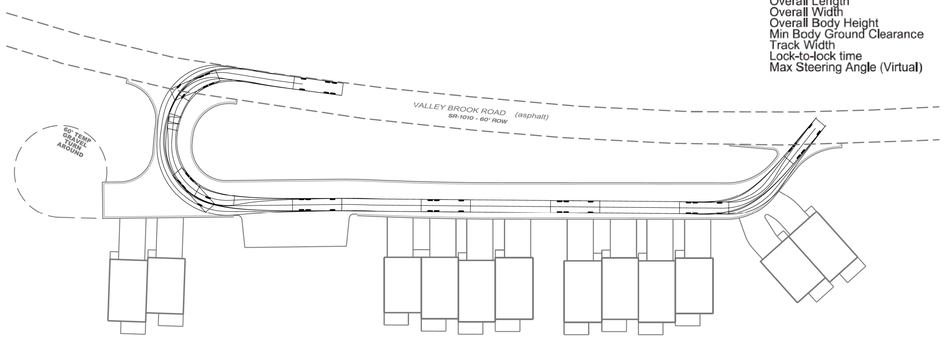


GARBAGE TRUCK TURNING TEMPLATE - ENTERING EASTBOUND

N.T.S.

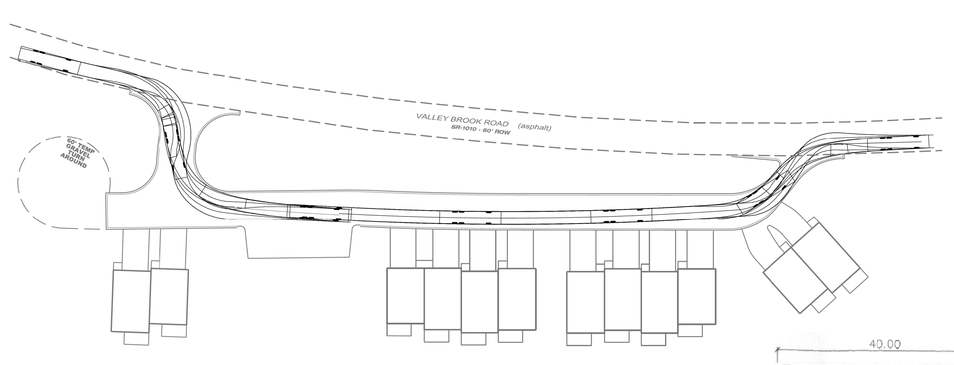


Garbage Truck	
Overall Length	32.000ft
Overall Width	8.000ft
Overall Body Height	12.272ft
Min Body Ground Clearance	0.961ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	40.00°



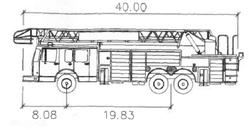
GARBAGE TRUCK TURNING TEMPLATE - ENTERING WESTBOUND

N.T.S.

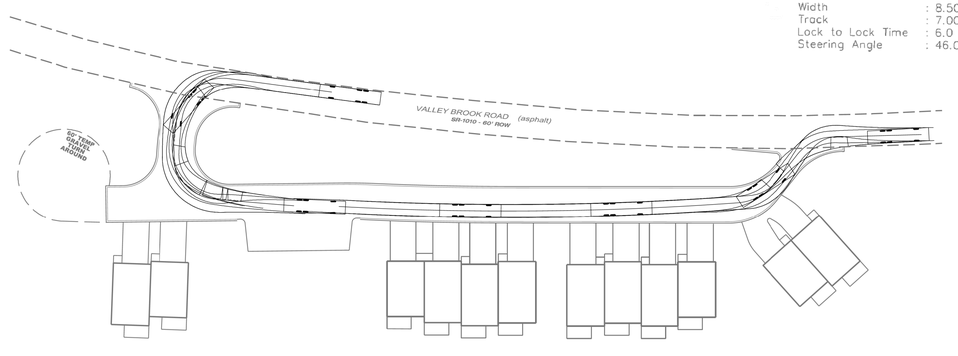


FIRE TRUCK TURNING TEMPLATE - ENTERING EASTBOUND

N.T.S.



	feet
Width	: 8.50
Track	: 7.00
Lock to Lock Time	: 6.0
Steering Angle	: 46.0



FIRE TRUCK TURNING TEMPLATE - ENTERING WESTBOUND

N.T.S.

REVISIONS:
1-4-25 - ADDRESS CONSULTANT COMMENTS

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
CHARLES STEVEN VICTOR
REGISTRATION NUMBER 546-E

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(Fax) 412-741-0606
(E-mail) vwa@vwla.net

P.M. _____
D.B. _____
C.B. _____

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

ROAD PROFILE

SHT- 12

SCALE: AS NOTED AT 24 X 36
ISSUE DATE: DEC. 12, 2024
JOB NO. 2023-88

PLANT MATERIAL LEGEND

- CANOPY TREE
- UNDERSTORY TREE
- BUFFERYARD TREES
- BUFFERYARD & RAIN GARDEN SHRUBS
- EXISTING TREES

HILLSIDE SEEDING SPECIFICATION

(FOR ALL DISTURBED, NON-LAWN AREAS)

No-Mow Cover Mix - PDOT-L

	Botanical Name	Common Name
35.00 %	*Festuca rubra, 'Cardinal II'*	Creeping Red Fescue, 'Cardinal II'
27.50 %	*Festuca brevipila, 'Beacon'*	Hard Fescue, 'Beacon'
27.50 %	*Festuca ovina var. duriuscula, Gladiator*	Hard Fescue, Gladiator
10.00 %	*Lolium multiflorum*	Annual Ryegrass
100.00 %		

Seeding Rate: 233 lb per acre

Rain Garden Grass Mix

Mix Composition

45.0% *Schizachyrium scoparium, 'Camper'* (Little Bluestem, 'Camper')
20.0% *Elymus virginicus, PA Ecotype* (Virginia Wildrye, PA Ecotype)
11.0% *Chasmanthium latifolium, WV Ecotype* (River Oats, WV Ecotype)
8.0% *Panicum rigidulum, PA Ecotype* (Redtop Panicgrass, PA Ecotype)
7.0% *Agrostis perennans, Albany Pine Bush-NY Ecotype* (Autumn Bentgrass, Albany Pine Bush-NY Ecotype)
4.5% *Carex vulpinoidea, PA Ecotype* (Fox Sedge, PA Ecotype)
3.0% *Panicum sphaeroncarpon* (Round Seed Panicgrass)
1.0% *Juncus effusus* (Soft Rush)
0.5% *Carex scoparia, PA Ecotype* (Blunt Broom Sedge, PA Ecotype)

Item Number: ERNMX-180-1
Product Categories:
Stormwater Management
Height: 0.3 – 5.0 Ft.
Seeding Rate: 15 lb per acre
acre

SUPPLIER:
ERNST SEED
9006 CONNELLY RD
MEADVILLE, PA 16335
800-873-3321
WEB01.ERNSTSEED.COM

SITE SECTION A:A

NOT TO SCALE

PLANT LIST

SYM	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
DECIDUOUS TREES					
CM	5	Celebration Maple	ACER x freemanii 'Celebration'	2-1/2" cal.	B & B
CM2	1	Celebration Maple	ACER x freemanii 'Celebration'	3-1/2" cal.	B & B
SB	3	Autumn Brilliance Serviceberry	AMELANCHIER x grandiflora 'Autumn Brilliance'	3-1/2" cal.	B & B
RB	2	Flame Thrower Redbud	CERCIS canadensis 'Flame Thrower'	2-0" cal.	B & B
DW	3	Cherokee Brave Dogwood	CORNUS florida 'Cherokee Brave'	2-0" cal.	B & B
AC	3	Adirondack Crab	MALUS 'Adirondack'	2-0" cal.	B & B
TL	6	Ivory Silk Japanese Tree Lilac	SYRINGA reticulata 'Ivory Silk'	3-1/2" cal.	B & B
EVERGREEN TREES					
GG	49	Green Giant Western Arborvitae	THUJA plicata 'Green Giant'	3-1/2" cal. / 7'-0" ht.	B & B
SHRUBS					
MM	27	Magical Moonlight Buttonbush	CEPHALANTHUS occidentalis 'Magical Moonlight'	24" ht.	#5 CONT.
LH	37	Little Henry Summersweet	ITEA virginica 'Little Henry'	18" spd.	#3 CONT.
IV	12	Virginia Sweetspire	ITEA virginica	24" ht.	#3 CONT.
SG	37	Sea Green Juniper	JUNIPERUS chinensis 'Sea Green'	24" ht.	B & B
NB	5	Northern Bayberry	MYRICA pensylvanica	24" ht.	B & B

BUFFERYARD 'C' REQUIREMENTS:

BUFFERYARD '1' - BUFFER AREA 'C' REQUIRED PER ORDINANCE SECTION: 440-505

325 L.F./35 = 9.3 X (1) 3-1/2" CAL & ≥ 18' HT. DECIDUOUS TREE & (10) 24" HT. SHRUBS

REQUIRED: 10 DECIDUOUS TREES	***PROPOSED: 8 DECIDUOUS TREES***
REQUIRED: 0 EVERGREEN TREES	***PROPOSED: 44 EVERGREEN TREES***
REQUIRED: 93 SHRUBS	***PROPOSED: 100 SHRUBS***
TOTAL: 103 PLANTS	***TOTAL: 152 PLANTS***

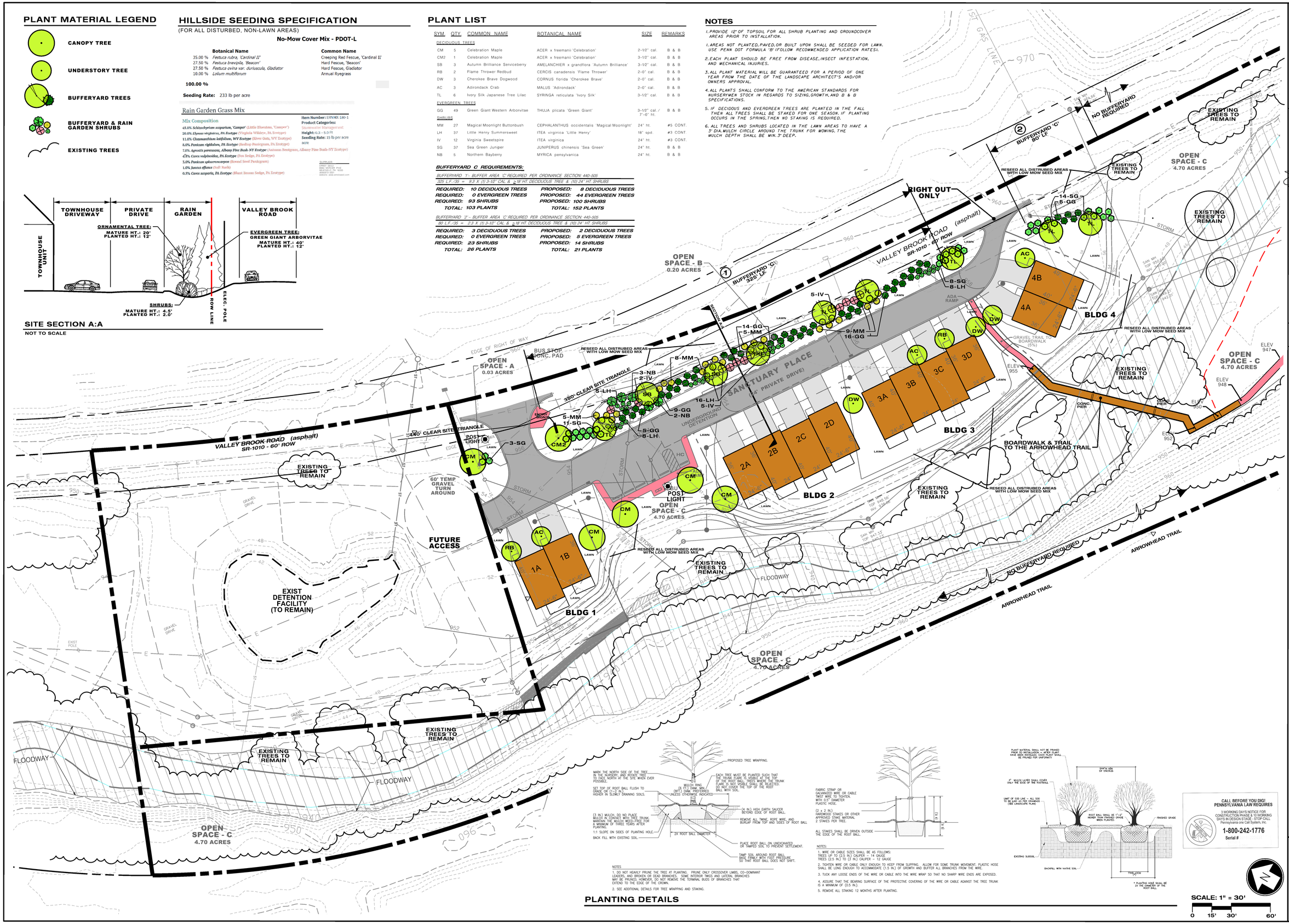
BUFFERYARD '2' - BUFFER AREA 'C' REQUIRED PER ORDINANCE SECTION: 440-505

80 L.F./35 = 2.3 X (1) 3-1/2" CAL & ≥ 18' HT. DECIDUOUS TREE & (10) 24" HT. SHRUBS

REQUIRED: 3 DECIDUOUS TREES	***PROPOSED: 2 DECIDUOUS TREES***
REQUIRED: 0 EVERGREEN TREES	***PROPOSED: 5 EVERGREEN TREES***
REQUIRED: 23 SHRUBS	***PROPOSED: 14 SHRUBS***
TOTAL: 26 PLANTS	***TOTAL: 21 PLANTS***

NOTES

1. PROVIDE 12" OF TOPSOIL FOR ALL SHRUB PLANTING AND GROUNDCOVER AREAS PRIOR TO INSTALLATION.
1. AREAS NOT PLANTED, PAVED, OR BUILT UPON SHALL BE SEEDED FOR LAWN. USE PENN DOT FORMULA 'B' (FOLLOW RECOMMENDED APPLICATION RATES).
2. EACH PLANT SHOULD BE FREE FROM DISEASE, INSECT INFESTATION, AND MECHANICAL INJURIES.
3. ALL PLANT MATERIAL WILL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE LANDSCAPE ARCHITECT'S AND/OR OWNERS APPROVAL.
4. ALL PLANTS SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERYMEN STOCK IN REGARDS TO SIZING, GROWTH, AND B & B SPECIFICATIONS.
5. IF DECIDOUS AND EVERGREEN TREES ARE PLANTED IN THE FALL THEN ALL TREES SHALL BE STAKED FOR ONE SEASON. IF PLANTING OCCURS IN THE SPRING, THEN NO STAKING IS REQUIRED.
6. ALL TREES AND SHRUBS LOCATED IN THE LAWN AREAS TO HAVE A 3' DIA. MULCH CIRCLE AROUND THE TRUNK FOR MOWING. THE MULCH DEPTH SHALL BE MIN. 3" DEEP.



NOTES

1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
2. SEE ADDITIONAL DETAILS FOR TREE WRAPPING AND STAKING.

NOTES:

1. WIRE OR CABLE SIZES SHALL BE AS FOLLOWS: TREES UP TO (2.5 IN.) CALIPER – 14 GAUGE TREES (2.5 IN.) TO (3 IN.) CALIPER – 12 GAUGE
2. TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE (1.5 IN.) OF GROWTH AND BUFFER ALL BRANCHES FROM THE WIRE.
3. TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.
4. ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM OF (3.5 IN.).
5. REMOVE ALL STAKING 12 MONTHS AFTER PLANTING.

PLANTING DETAILS

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
1 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE & 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
Pennsylvania one Call System, Inc.
1-800-242-1776
Serial #

SCALE: 1" = 30'

0 15' 30' 60'

REVISIONS:
1-2-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS
1-29-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT CHARLES STEVEN VICTOR VICTOR REGISTRATION NUMBER LA-000666-E

Victor-Wetzel Associates
Landscape Architects
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Sewickley, PA 15143
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Fax | 412-741-0606
E-mail | vwa@vwla.net

P.M. ____
D.B. ____
C.B. ____

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

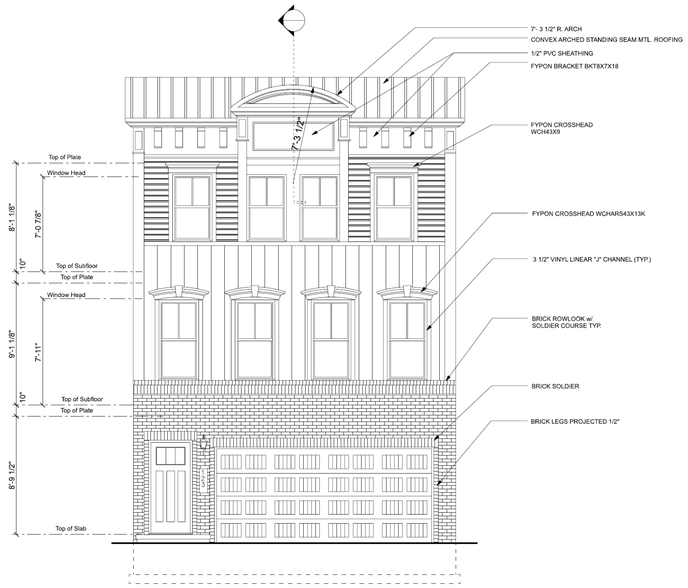
LANDSCAPE PLAN - DETAIL

SHT-13

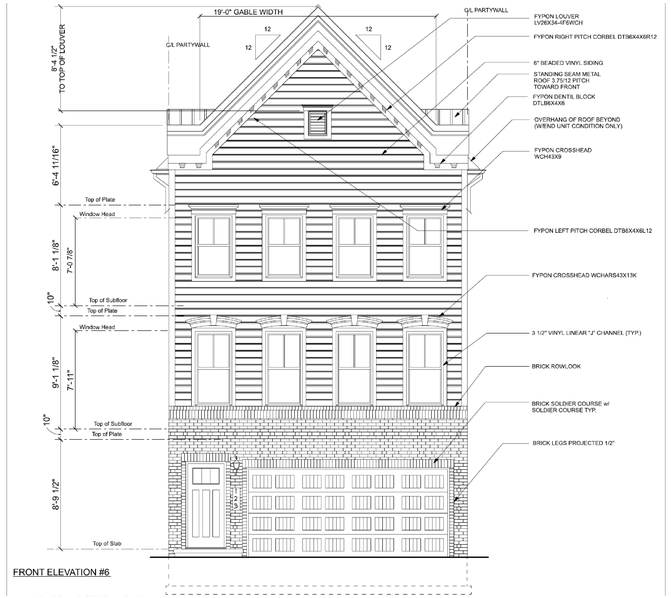
SCALE: 1" = 30'
AT 24 X 36

ISSUE DATE: DEC. 12, 2024

JOB NO. 2023-88

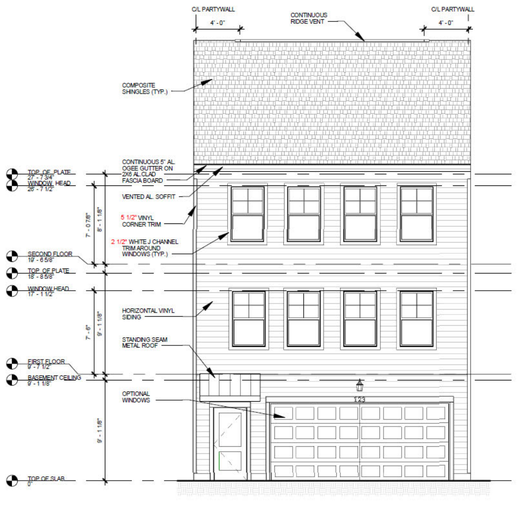


OPTION - 1



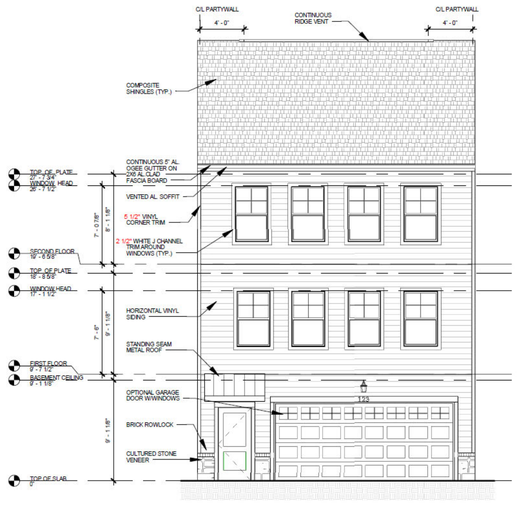
FRONT ELEVATION #6

OPTION - 2



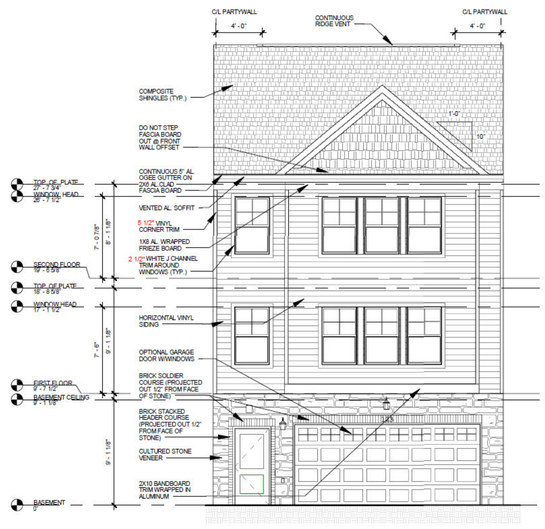
① ELEVATION 1 - FRONT ELEVATION
1/8" = 1'-0"

OPTION - 3A



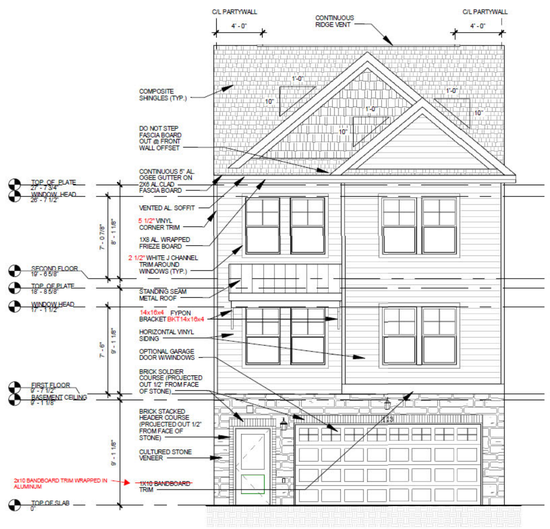
② ELEVATION 2 - FRONT ELEVATION
1/8" = 1'-0"

OPTION - 3B



① ELEVATION 3 - FRONT ELEVATION
1/8" = 1'-0"

OPTION - 4



② ELEVATION 4 - FRONT ELEVATION
1/8" = 1'-0"

OPTION - 5

FRONT ELEVATION OPTIONS

N.T.S.

REVISIONS:

SCARMAZZI HOMES
Luxury Patio Homes

P.M. _____
D.B. _____
C.B. _____

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

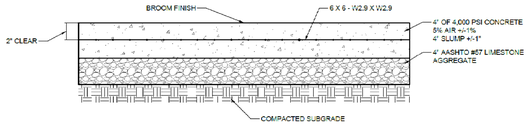
ARCH. ELEVATIONS

SHT- 14

SCALE: AS NOTED

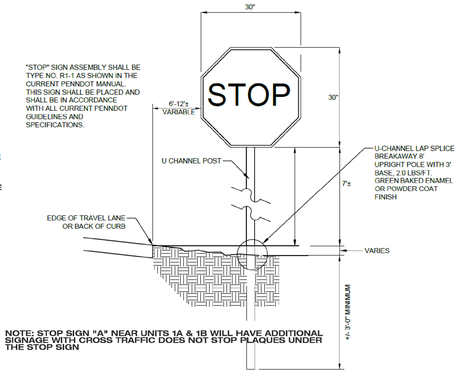
ISSUE DATE: DEC. 12, 2024

JOB NO. 2023-88



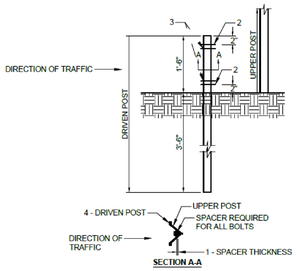
NOTES:
1. CONTRACTOR SHALL PLACE CONTROL JOINTS AT INTERVALS EQUAL TO THE PAVEMENT WIDTH NOT TO EXCEED 12'.
2. EXPANSION JOINTS SHALL BE INSTALLED AT 50' MAXIMUM INTERVALS.
3. CURING SHALL BE BY ABSORPTIVE COVER,MOISTURE-RETAINING COVER,OR APPROVED CURING COMPOUND. CONTRACTOR SHALL SUBMIT PROPOSED CURING METHOD TO OWNER FOR APPROVAL PRIOR TO CONCRETE INSTALLATION.
4. APPLY WATER BASED 40% SILANE PENETRATING SEALER AFTER A MINIMUM OF 28 DAYS PER MANUFACTURERS RECOMMENDATIONS.
5. PROVIDE MINIMUM CROSS-SLOPE OF 1.5% TO MAXIMUM CROSS SLOPE OF 2%.

CONCRETE WALK
N.T.S.



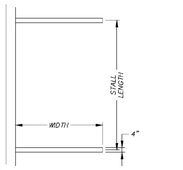
NOTE: STOP SIGN "A" NEAR UNITS 1A & 1B WILL HAVE ADDITIONAL SIGNAGE WITH CROSS TRAFFIC DOES NOT STOP PLAQUES UNDER THE STOP SIGN

STOP SIGN
N.T.S.



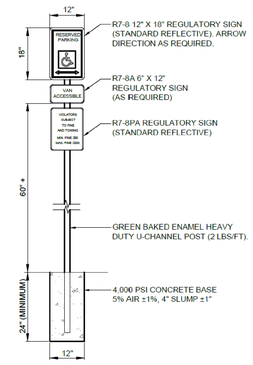
GENERAL NOTES:
1. THE SPACER THICKNESS SHALL BE NO LESS THAN THE GAP BETWEEN THE POSTS WHEN POSITIONED IN THE UNBOLTED CONFIGURATION.
2. THE EXTERIOR BOLT, SPACER, WASHER AND NUT SHALL BE INSTALLED IN A PRE-PUNCHED HOLE WITHIN THE FIRST 2" OF THE END OF THE LAPPED POST SECTION.
3. THE INTERIOR BOLT, SPACER, WASHER AND NUT SHALL BE INSTALLED IN A PRE-PUNCHED HOLE WITHIN THE FIRST 2" OF THE EXTERIOR BOLTS. THE MAXIMUM SPACING BETWEEN THE INTERIOR BOLTS SHALL BE 1'-6". IF THE LENGTH OF THE POST LAP IS INCREASED SUCH THAT THIS 1'-6" MAXIMUM IS EXCEEDED, THE ADDITIONAL INTERIOR BOLTS SHALL BE INSTALLED SUCH THAT THE MAXIMUM SPACE BETWEEN A PAIR OF INTERIOR BOLTS DOES NOT EXCEED THE 1'-6" LIMIT.
4. THE DRIVEN POST SHALL ALWAYS BE MOUNTED IN FRONT OF THE UPPER POST WITH RESPECT TO ADJACENT ONCOMING TRAFFIC, REGARDLESS OF THE DIRECTION THE SIGN IS FACING.
5. THE BOLTS SHOWN SHALL BE 1" X 3" GALVANIZED BOLTS IN ACCORDANCE WITH ASTMM A 449, OR SAE J429, GT .9DR GALVANIZED BOLTS IN ACCORDANCE WITH ASTM A 325.

U CHANNEL POST
N.T.S.

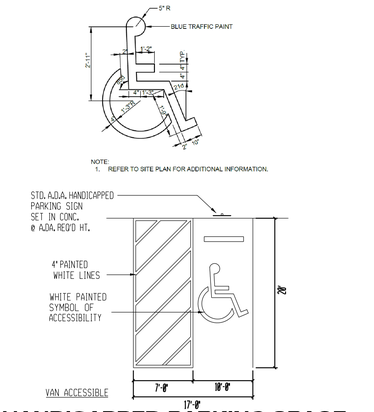


NOTES:
1. ALL LINES SHALL BE 4" IN WIDTH.
2. ALL PARKING SPACE LINES SHALL BE WHITE.
3. ALL HANDICAP MARKINGS INCLUDING LOADING ZONE SHALL BE PAINTED BLUE.

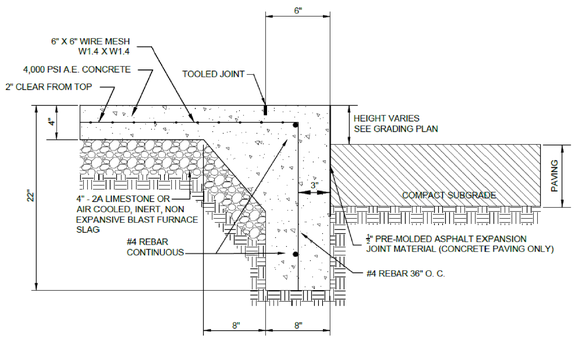
LINE STRIPPING
N.T.S.



HANDICAP SIGN
N.T.S.

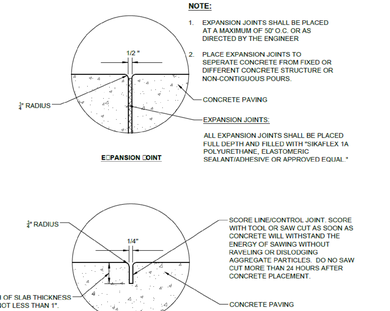


HANDICAPPED PARKING SPACE
N.T.S.



NOTES:
1. ALL CURBS AND WALKS SHALL BE MONOLITHIC POURS, SCORE JOINTS IN VERTICAL CURB SURFACE TO ALIGN WITH WALKWAY JOINTS.
2. CONTRACTOR SHALL PLACE A TOOLED JOINT AS PER SITE PLAN.
3. THE CONCRETE SHALL BE TREATED WITH A TWO-COAT APPLICATION OF SEALTIGHT CS- 309-25 OR APPROVED EQUAL. AFTER 7 DAYS, THE CONCRETE SHALL BE TREATED WITH SEALTIGHT TIAH OR APPROVED EQUAL. THE TEMPERATURE FOR APPLICATION TO THE CONCRETE SURFACE MUST BE 40°F AND RISING.

INTEGRAL CONCRETE CURB AND SIDEWALK
N.T.S.

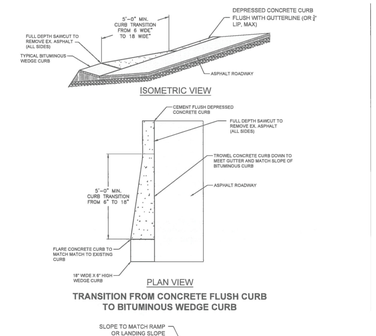


NOTE:
1. EXPANSION JOINTS SHALL BE PLACED AT A MAXIMUM OF 50' O.C. OR AS DIRECTED BY THE ENGINEER
2. PLACE EXPANSION JOINTS TO SEPERATE CONCRETE FROM FIXED OR DIFFERENT CONCRETE STRUCTURE OR NON-CONTIGUOUS POURS.

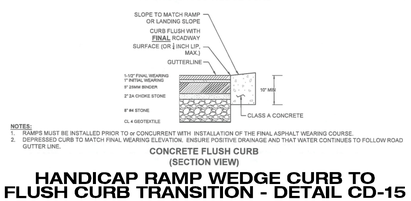
ALL EXPANSION JOINTS SHALL BE PLACED FULL DEPTH AND FILLED WITH "SIKAFLEX 1A POLYURETHANE, ELASTOMERIC SEALANT/ADHESIVE OR APPROVED EQUAL."

NOTE:
CONTROL JOINTS SHALL BE A MAXIMUM OF 5' O.C.

CONC EXPANSION / SCORE LINE
N.T.S.



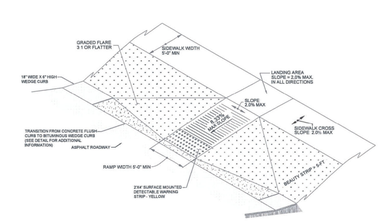
TRANSITION FROM CONCRETE FLUSH CURB TO BITUMINOUS WEDGE CURB



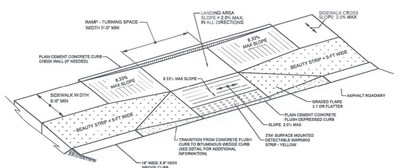
NOTES:
1. RAMPS MUST BE INSTALLED PRIOR TO or CONCURRENT WITH INSTALLATION OF THE FINAL ASPHALT WEARING COURSE.
2. DEPRESSED CURB TO MATCH FINAL WEARING ELEVATION. ENSURE POSITIVE DRAINAGE AND THAT WATER CONTINUES TO FOLLOW ROAD GUTTER LINE.

CONCRETE FLUSH CURB (SECTION VIEW)

HANDICAP RAMP WEDGE CURB TO FLUSH CURB TRANSITION - DETAIL CD-15



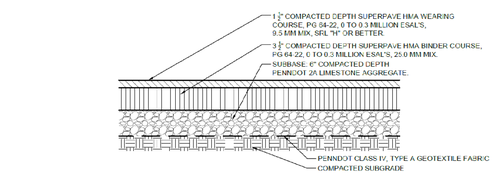
TYPE 4A CURB RAMP WITH TRANSITION FROM WEDGE CURB TO FLUSH CURB
(generally for use when the elevation of the sidewalk is the same elevation as the peak of wedge curb AND the beauty strip is 5-ft wide or more)



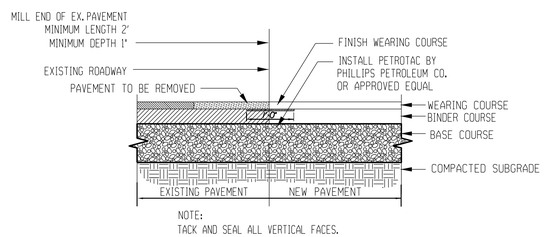
TYPE 6 CURB RAMP WITH TRANSITION FROM WEDGE CURB TO FLUSH CURB
(generally for use when the elevation of the sidewalk is higher than the peak of wedge curb AND/OR the beauty strip is less than 5-ft wide)

HANDICAP RAMP WEDGE CURB TO FLUSH CURB TRANSITION - DETAIL CD-15A

ADA CURB RAMP DETAILS
N.T.S.



BITUMINOUS WEDGE CURB
N.T.S.



NOTE:
TACK AND SEAL ALL VERTICAL FACES.

BITUMINOUS PAVEMENT TRANSITION JOINT
N.T.S.

NOTES:
1. THE CONTRACTOR SHALL SEAL THE GUTTER LINE WITH PG 64-22 ASPHALT CEMENT BY OVERLAPPING 3" ONTO THE WEDGE CURB AND EXTENDING 9" ONTO THE CARTWAY IN ACCORDANCE WITH PENNDOT PUBLICATION 408 AFTER THE COMPLETION OF THE FINAL WEARING COURSE.
2. SUBGRADE DRAINS MAY BE REQUIRED WHERE UNDERGROUND WATER IS ENCOUNTERED.
3. SUBGRADE SHALL BE COMPACTED TO VISUAL NON-MOVEMENT PRIOR TO PLACEMENT OF FABRIC AND SUBBASE.
4. SUBBASE SHALL BE COMPACTED TO 70% RELATIVE DENSITY PER ASTM D2253 AND ASTM D4254.
5. CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO PENNDOT PUBLICATION 408 UNLESS OTHERWISE INDICATED.

PROPOSED ASPHALT PAVEMENT
N.T.S.

NOTES

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 350, 409, 630, 676, 694, AND 695.
2. PROVIDE EXPANSION JOINT MATERIAL ½" THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
3. CONSTRUCT CURB RAMPS WITH A MINIMUM 4'-0" X 4'-0" CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. SEE SHEET 7 FOR CROSSWALK DETAILS.
4. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
5. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING SIDE FLARES.
6. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 8" HEIGHT.
7. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
8. TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB, RAMP LENGTH NOT TO EXCEED 15'-0". ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
9. NON-WALK AREA IS AN OBSTRUCTED OR GRASS/NON-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.
10. THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.
11. SEE TC-8803 FOR ADDITIONAL PEDESTRIAN PUSHBUTTON DETAILS NOT SHOWN.
12. ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB. SEE SHEET 9 FOR INSTALLATIONS ALONG CURVED SURFACES.
13. PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
14. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESS ROUTE.
15. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWABLE. SLOPES THAT EXCEED THOSE INDICATED IN THE DETAILS, OR CONTRACT DOCUMENTS AS APPLICABLE, WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.
16. CONSTRUCT SIDEWALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 5.00%. FOR ROADWAY PROFILE SLOPES THAT EXCEED 5.00%, CONSTRUCT PARALLEL SIDEWALKS ADJACENT TO ROADWAY AT A LONGITUDINAL SLOPE NOT TO EXCEED ROADWAY PROFILE SLOPE.
17. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 13.33%. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A CURB RAMP, TURNING SPACE OR BLENDED TRANSITION IS NOT TO EXCEED 5.00%. SEE SHEET 8 FOR DETAILS.
18. THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
19. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6'-0" FOR A 12:1 SLOPE.
20. SIDEWALK WIDTH MAY BE REDUCED TO 4'-0", WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.
21. THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
22. CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE. AT THE JOINT BETWEEN DEPRESSED CURB AND ROADWAYS, REMOVE EXCESS JOINT SEALER AND COVER THE SEALED AREA WITH A LIGHT APPLICATION OF DRY SAND.
23. CHEEK WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 OR FLATTER. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN PATH.
24. CONSTRUCT TOP OF PLAIN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).
25. FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES. SEE SHEET 7 FOR DETAILS.
26. A 4'-0" MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMPS AND SIDEWALKS.
27. INSTALL DUMMY JOINTS WHERE RAMPS, TURNING SPACES, FLARES, AND SIDEWALKS ABUT.
28. CONSTRUCT DEPRESSED CURB SLOPE TO MATCH ROADWAY PROFILE AND HAVE A FLUSH CONNECTION. TRANSITION CURB RAMP CROSS SLOPE TO MATCH ROADWAY PROFILE AS GRADUALLY AS POSSIBLE. DO NOT EXCEED 3.00% PER 1'-0" CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
29. DO NOT SCORE OR MAKE GROOVES ON SLOPED SURFACES. LINES SHOWN ON DETAILS ARE FOR ILLUSTRATION ONLY. SEE NOTE 5.

REVISIONS: 12-26 - ADDRESS CONSULTANT COMMENTS

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT Swen Victor
Victor–Wetzel Associates Landscape Architects
409 Broad Street Suite 200 Sewickley, PA 15143 (724) 741-0570 (Fax) 412-741-0578 E-mail: ww@vwla.net

P.M. _____
D.B. _____
C.B. _____

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A. ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

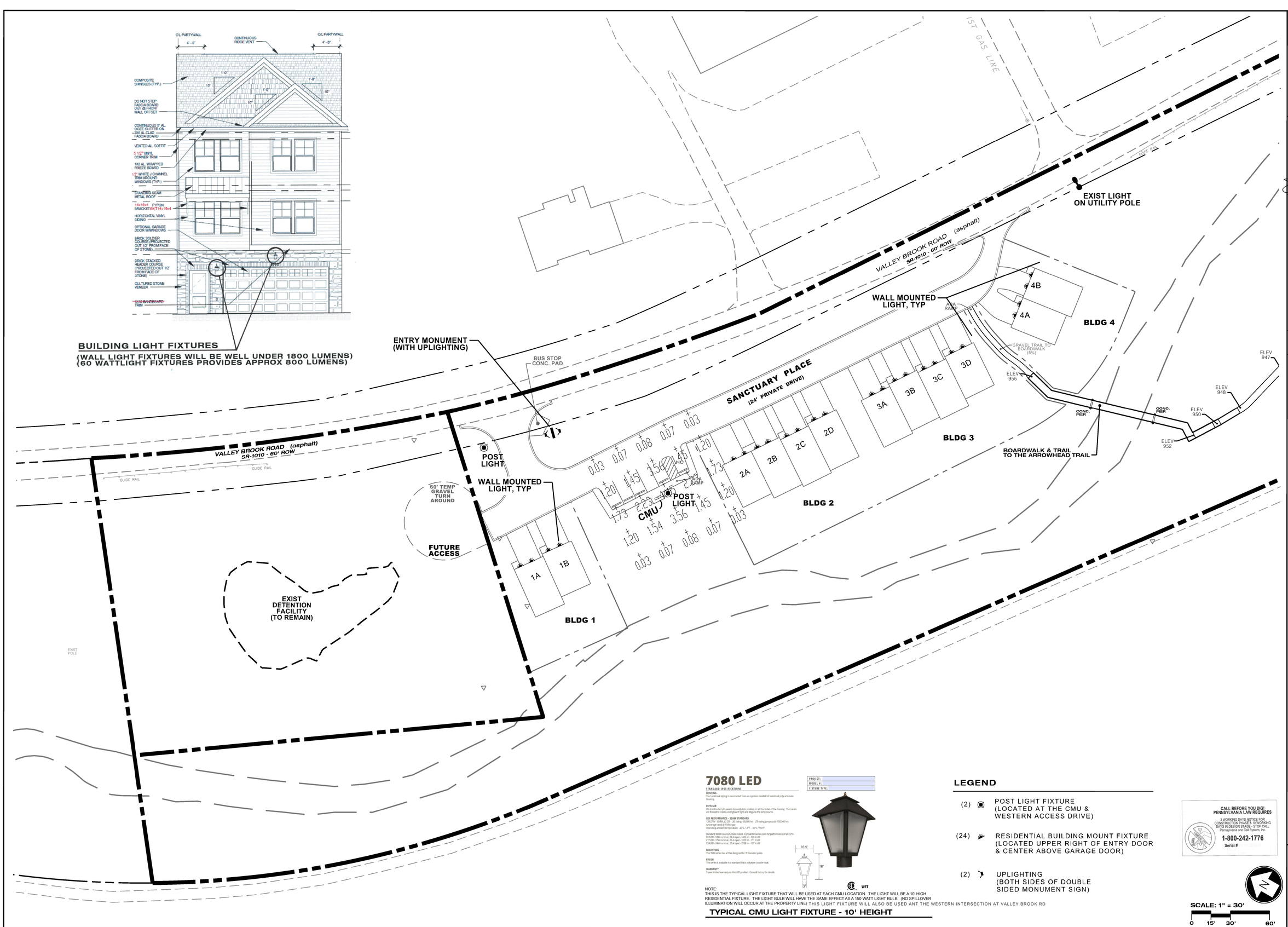
DETAIL SHEET

SHT- 15

SCALE: 1" = 30' AT 24 X 36
ISSUE DATE: DEC. 12, 2024
JOB NO. 2023-68

BUILDING LIGHT FIXTURES

(WALL LIGHT FIXTURES WILL BE WELL UNDER 1800 LUMENS)
(60 WATTLIGHT FIXTURES PROVIDES APPROX 800 LUMENS)



7080 LED

STANDARD SPECIFICATIONS

HOUSING
The traditional styling is constructed from an injection molded UV stabilized polycarbonate housing.

DIFFUSER
UV stabilized acrylic panels slip-weldy into position on all four sides of the housing. The panels are frosted to create a soft glow of light and disguise the lamp source.

LED PERFORMANCE - 3500K STANDARD
120-277V - 3500K, 82 CRI - L80 rating - 60,000 hrs - L70 rating (projected) - 100,000 hrs
Air range rated @ 1.15V input
Operating ambient temperatures: -20°C / -4°F - 40°C / 104°F

Standard 3500K source lumens noted. Consult Brownies.com for performance of all CCTs.
BOLLED - 5CRI nominal, 35A input - 1422 lm - 125 lm/W
CYLDD - 57lm nominal, 35A input - 1639 lm - 131 lm/W
CAALED - 2AM nominal, 28A input - 2058 lm - 127 lm/W

MOUNTING
The 7080 series has a filter designed for 3" diameter poles.

FINISH
This series is available in a standard black polyester powder coat.

WARRANTY
3 year limited warranty on this LED product. Consult factory for details.

PROJECT:
MODEL #:
FIXTURE TYPE:

WET

NOTE:
THIS IS THE TYPICAL LIGHT FIXTURE THAT WILL BE USED AT EACH CMU LOCATION. THE LIGHT WILL BE A 10' HIGH RESIDENTIAL FIXTURE. THE LIGHT BULB WILL HAVE THE SAME EFFECT AS A 150 WATT LIGHT BULB. (NO SPILLOVER ILLUMINATION WILL OCCUR AT THE PROPERTY LINE) THIS LIGHT FIXTURE WILL ALSO BE USED ANT THE WESTERN INTERSECTION AT VALLEY BROOK RD

TYPICAL CMU LIGHT FIXTURE - 10' HEIGHT

LEGEND

(2) POST LIGHT FIXTURE (LOCATED AT THE CMU & WESTERN ACCESS DRIVE)

(24) RESIDENTIAL BUILDING MOUNT FIXTURE (LOCATED UPPER RIGHT OF ENTRY DOOR & CENTER ABOVE GARAGE DOOR)

(2) UPLIGHTING (BOTH SIDES OF DOUBLE SIDED MONUMENT SIGN)

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE & 10 WORKING DAYS IN DESIGN STAGE - STOP CALL Pennsylvania one Call System, Inc.
1-800-242-1776
Serial #

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

REVISIONS:
1-2-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS
1-28-25 - ADDRESS TWP STAFF & TWP CONSULTANT COMMENT LETTERS

PENNSYLVANIA CHARLES STEVEN VICTOR REGISTRATION NUMBER 546-E REGISTERED LANDSCAPE ARCHITECT

Victor–Wetzel Associates
Landscape Architects
409 Broad Street
Sewickley, PA 15143
(412) 741-5599
Fax | 412-741-0606
E-mail | vwa@vwla.net

P.M.
D.B.
C.B.

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

OWNER: THOMAS A ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

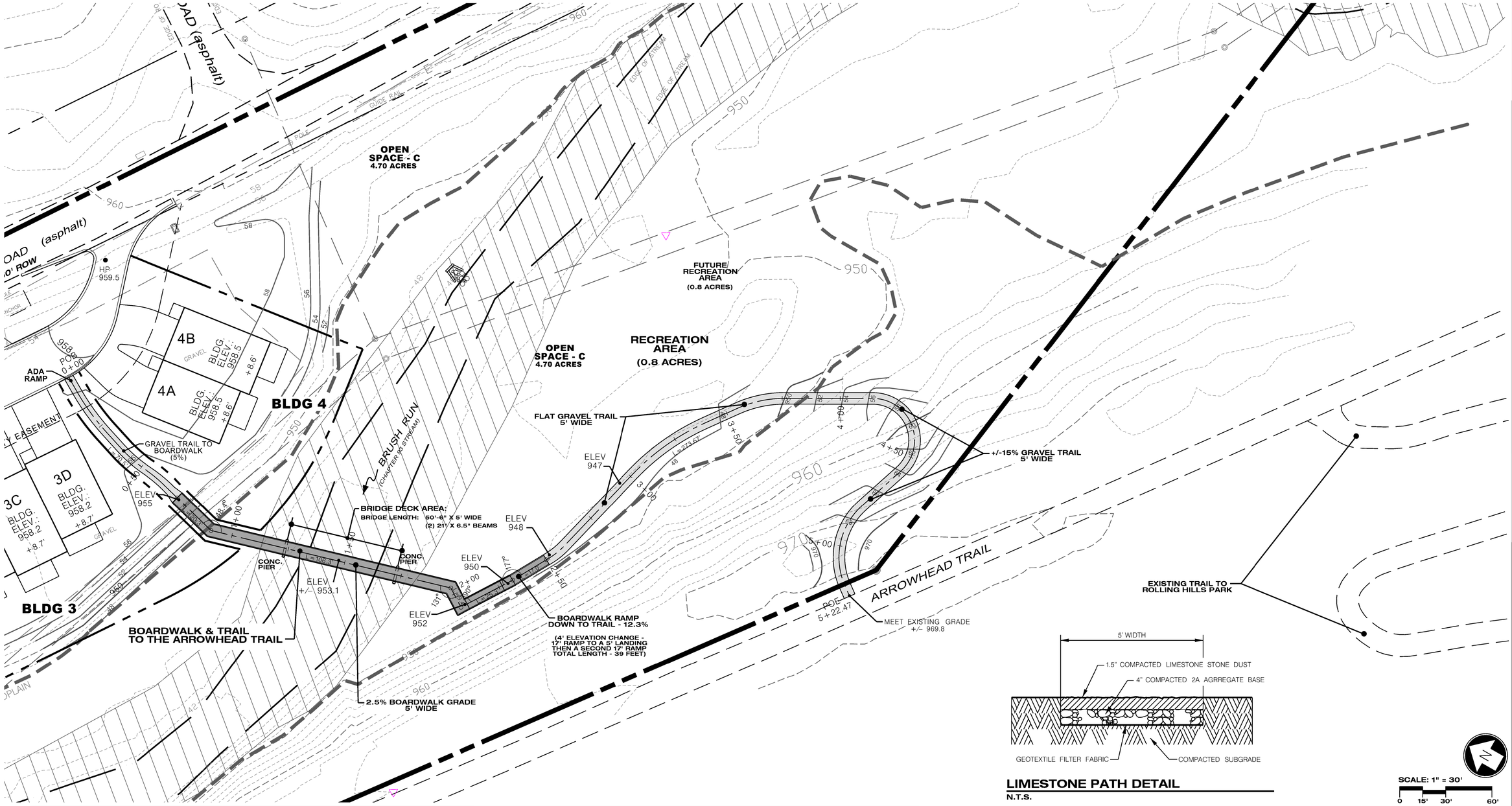
LIGHTING PLAN - DETAIL

SHT-16

SCALE: 1" = 30'
AT 24 X 36
ISSUE DATE: DEC. 12, 2024
JOB NO. 2023-88

BOARDWALK & TRAIL IMAGES

(THIS BOARDWALK IS LOCATED IN THE BROOKVIEW RESIDENTIAL NEIGHBORHOOD)



LIMESTONE PATH DETAIL

N.T.S.

REVISIONS:
1-2-25-ADDRESS STAFF & GATEWAY COMMENTS
1-28-25-ADDRESS STAFF & GATEWAY COMMENTS

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
REGISTRATION NUMBER 546-E
Steven Victor

Victor-Wetzel Associates
Landscape Architects
409 Broad Street
Sewickley, PA 15143
(Office) 412-741-0566
(Fax) 412-741-0566
(E-mail) vwa@vwla.net

P.M.
D.B.
C.B.

FINAL LAND DEVELOPMENT PLANS
COURTYARDS AT VALLEY BROOK - (PROPOSED TOWNHOUSE COMMUNITY)

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

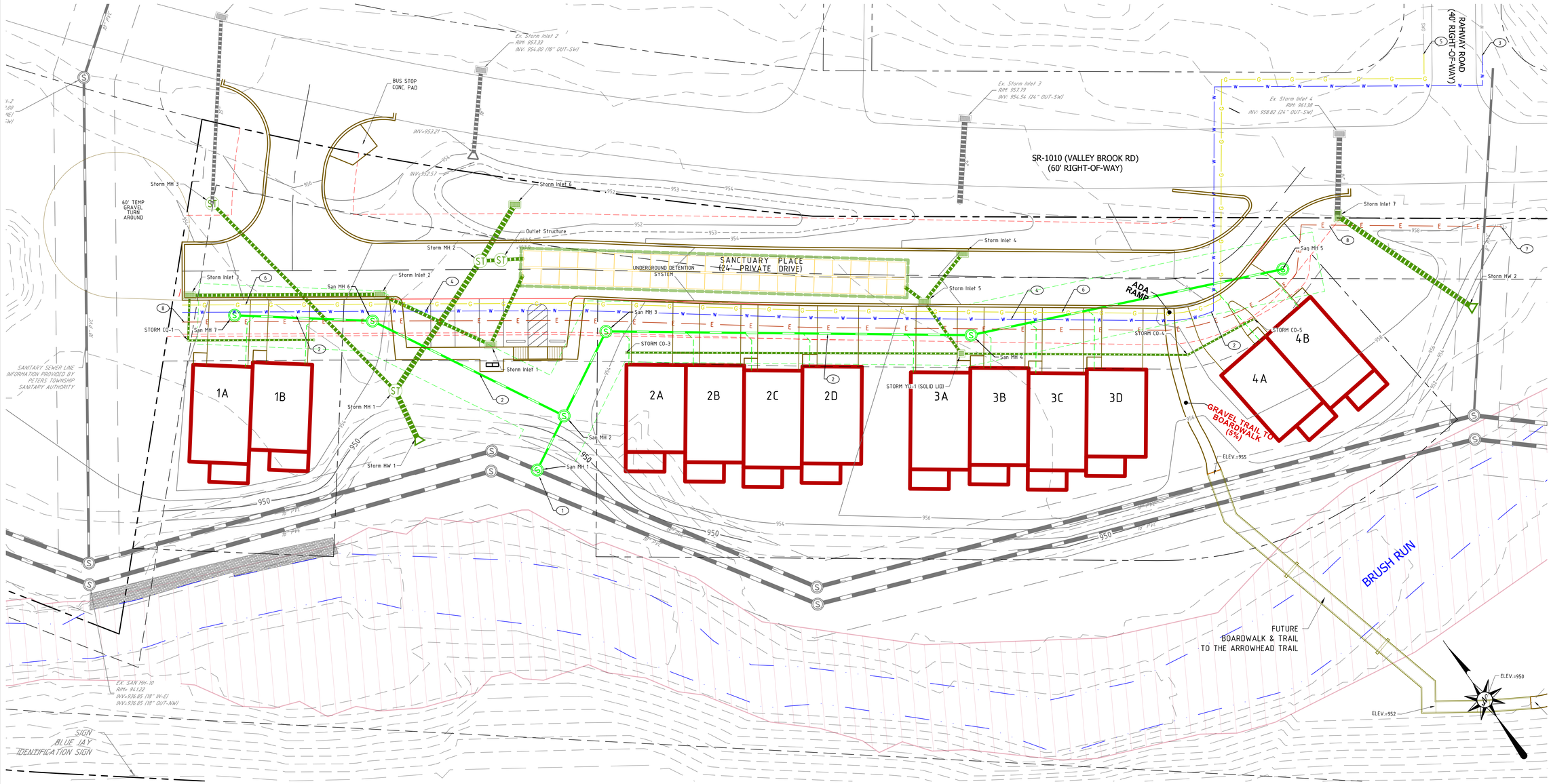
OWNER: THOMAS A ROBINSON FAMILY LP
108 FROSTY VALLEY DRIVE
CANONSBURG, PA 15317

TRAIL PLAN DETAIL

SHT- 17

SCALE: 1" = 20'
AT 24 X 36
ISSUE DATE: DEC 12, 2024
JOB NO. 2023-88

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



UTILITY NOTES:

1. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER AND THE MUNICIPALITY, THEIR AGENTS, ETC. FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION AND TESTING OF THE WORK SHOWN.
2. THE CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR SITE SAFETY.
3. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE FIELD CONDITIONS WITH DRAWINGS. CONTRACTOR TO FIELD VERIFY LOCATION, HORIZONTAL AND VERTICAL, AND SIZE OF ALL EXISTING UTILITIES BEFORE BEGINNING WORK. THE CONTRACTOR SHALL PLACES A PENNSYLVANIA ONE CALL TO NOTIFY THE UTILITIES OF HIS INTENTIONS AND TO REQUEST REQUIRED FIELD STAKING OF EXISTING UTILITIES.
4. THE CONTRACTOR SHALL CONSTRUCT ALL SANITARY SEWER FACILITIES IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND ANY OTHER LOCAL STATE OR FEDERAL CODES.
5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY SERVICE CONNECTIONS WITH THE APPROPRIATE UTILITY COMPANY/OWNER, AND TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED FOR SERVICE CONNECTIONS TO UTILITY MAINS.
6. TRENCH RESPONSIBILITY INCLUDES EXCAVATIONS, BACKFILL, COMPACTION AND MAINTENANCE OF THE TRENCH.
7. CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE CONSTRUCTION SAFETY SIGNAGE WHILE WORKING IN PUBLIC RIGHT-OF-WAY AND EASEMENTS.
8. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR. THE COST OF RESTORATION IS CONSIDERED INCIDENTAL AND SHOULD BE INCLUDED IN THE COST OF THE IMPROVEMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED-UP PRINTS SHOWING ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE OWNER.
10. ALL PIPE LENGTHS ARE MEASURED FROM INSIDE WALL OF STRUCTURE.
11. CONTRACTOR TO EXCAVATE AT ALL UTILITY CROSSINGS PRIOR TO INSTALLATION TO CONFIRM CROSSING CAN BE INSTALLED AS SHOWN.
12. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND.

UTILITY TRENCHING NOTES:

1. THE EXCAVATED MATERIAL FROM TRENCHING SHALL BE PLACED ON THE UPSLOPE SIDE OF THE TRENCH.
2. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF PIPELINE/UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACK-FILLED IN ONE WORKING DAY.
3. NO MORE THAN 50 LINEAL FEET OF OPEN TRENCH SHOULD EXIST WHEN PIPELINE/UTILITY LINE INSTALLATION CEASES AT THE END OF THE WORKDAY.
4. ANY BMP'S AFFECTED BY TRENCHING AND BACKFILLING OPERATIONS SHALL BE REPAIRED AND STABILIZED IMMEDIATELY.

UTILITY PLAN NOTES:

1. PROPOSED SANITARY SEWER CONNECTION. CONTRACTOR TO COORDINATE WITH SANITARY SEWER SERVICE PROVIDER FOR CONNECTION TO EXISTING SEWER.
2. PROPOSED SANITARY SEWER MAIN.
3. PROPOSED WATERLINE CONNECTION. CONTRACTOR TO COORDINATE WITH WATER SERVICE PROVIDER FOR CONNECTION.
4. PROPOSED WATER MAIN.
5. PROPOSED GAS LINE CONNECTION. CONTRACTOR TO COORDINATE WITH GAS SERVICE PROVIDER FOR CONNECTION.
6. PROPOSED GAS MAIN.
7. PROPOSED ELECTRIC SERVICE CONNECTION TO BE INSTALLED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE SERVICE CONNECTION
8. NEW UNDERGROUND SERVICE TO BE INSTALLED BY CONTRACTOR

0' 30' 60' 90'
GRAPHIC SCALE 1" = 30'

PERMIT SET
NOT FOR CONSTRUCTION

KDH CONSULTING ENGINEERS, INC
593 RUGH STREET
GREENSBURG, PA 15601
P: 878-295-8914 F:724-514-7047
www.kdhengineers.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:			
REV	DATE	DESCRIPTION	
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS	

CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP,
WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY: CWH

SHEET TITLE:
UTILITY PLAN

SHEET NO.
D5.0

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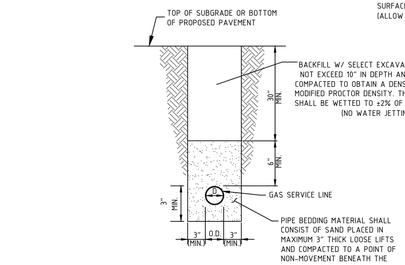
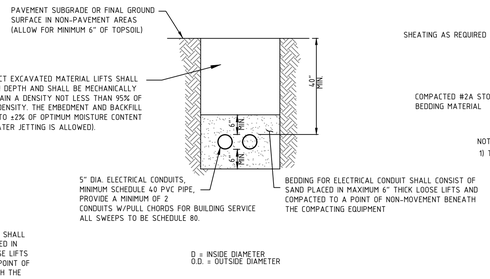
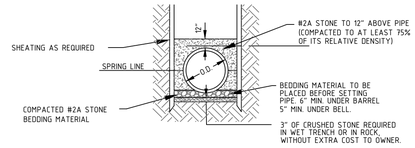


GAS SERVICE LINE



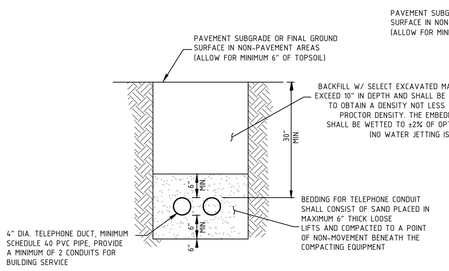
ELECTRIC SERVICE LINE



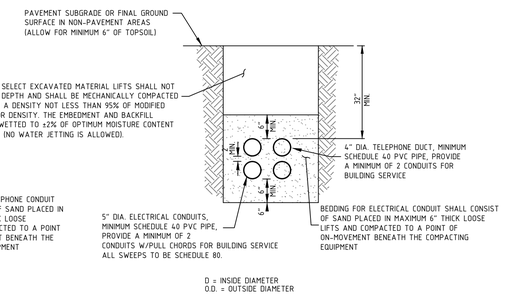
NOTE:

1) THE TRENCH WALL SHALL BE SUBSTANTIALLY VERTICAL IN THE PIPE ZONE. MAXIMUM TRENCH WIDTH SHALL BE OD + 24 INCHES AND MINIMUM TRENCH WIDTH SHALL BE OD + 16 INCHES.

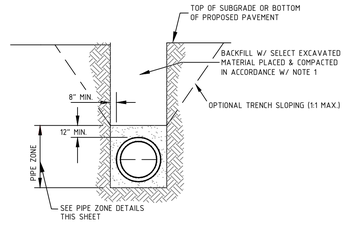
PIPE ZONE FOR STORM SEWER



TELEPHONE SERVICE LINE



COMBINED ELECTRIC AND TELEPHONE SERVICE LINE



STORM SEWER TRENCH SECTION

1. LIFTS SHALL NOT EXCEED 10" IN DEPTH AND SHALL BE MECHANICALLY COMPACTED TO OBTAIN A DENSITY NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY. THE EMBEDMENT AND BACKFILL SHALL BE WETTED TO ±2% OF OPTIMUM MOISTURE CONTENT (NO WATER JETTING IS ALLOWED).
2. THE TRENCH WALL SHALL BE SUBSTANTIALLY VERTICAL IN THE PIPE ZONE. MAXIMUM TRENCH WIDTH (W) SHALL BE O.D. + 24" AND MINIMUM TRENCH SHALL BE O.D. + 16".
3. NO ROCK WILL BE PERMITTED IN BACKFILL IN THE ZONE FROM BOTTOM OF TRENCH TO 2' ABOVE THE PIPE NOR IN THE TOP 18" OF TRENCH BACKFILL AT THE GROUND SURFACE. ROCK MAY BE PLACED ELSEWHERE IN THE BACKFILL PROVIDED THE SIZE OF PIECES IN THE LARGEST DIMENSION DOES NOT EXCEED 12".
4. SLOPING OF THE TRENCH SIDES ABOVE THE PIPE ZONE WILL BE ALLOWED.

TYPICAL UTILITY TRENCH DETAILS — 1 / D4.1
NOT TO SCALE

PERMIT SET
NOT FOR CONSTRUCTION

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REGISTERED PROFESSIONAL
CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:

REV	DATE	DESCRIPTION
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS

CLIENT: THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE: UTILITY DETAILS

SHEET NO. D5.1

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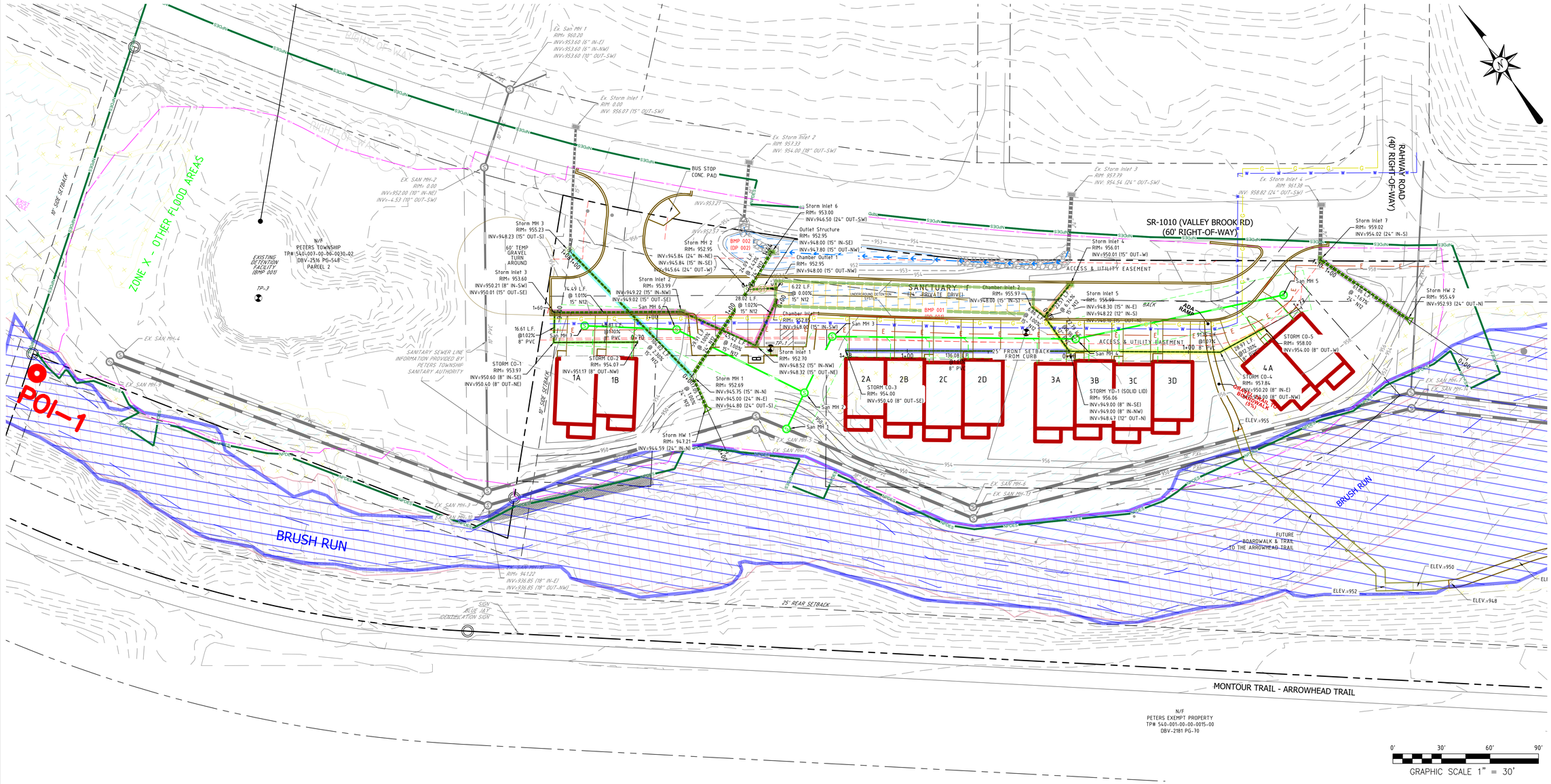

STORMWATER SYSTEM NOTES:

1. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER AND THE MUNICIPALITY, THEIR AGENTS, ETC. FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION AND TESTING OF THE WORK SHOWN.
2. THE CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR SITE SAFETY.
3. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE FIELD CONDITIONS WITH DRAWINGS. CONTRACTOR TO FIELD VERIFY LOCATION, HORIZONTAL AND VERTICAL, AND SIZE OF ALL EXISTING UTILITIES BEFORE BEGINNING WORK. THE CONTRACTOR SHALL CALL PENNSYLVANIA ONE CALL AT 1-800-242-1776 TO NOTIFY THE UTILITIES OF HIS INTENTIONS AND TO REQUEST REQUIRED FIELD STAKING OF EXISTING UTILITIES.
4. THE CONTRACTOR SHALL CONSTRUCT ALL STORM DRAINAGE FACILITIES IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND ANY OTHER LOCAL STATE OR FEDERAL CODES.
5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING PROPOSED CONNECTIONS TO EXISTING FACILITIES WITH THE APPROPRIATE AGENCY, AND TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED FOR SERVICE CONNECTIONS TO UTILITY MAINS.
6. TRENCH RESPONSIBILITY INCLUDES EXCAVATIONS, BACKFILL, COMPACTION AND MAINTENANCE OF THE TRENCH.
7. CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE CONSTRUCTION SAFETY SIGNAGE WHILE WORKING IN PUBLIC RIGHT-OF-WAY AND EASEMENTS.
8. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR. THE COST OF RESTORATION IS CONSIDERED INCIDENTAL AND SHOULD BE INCLUDED IN THE COST OF THE IMPROVEMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED-UP PRINTS SHOWING ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE OWNER.
10. ALL PIPE LENGTHS ARE MEASURED FROM INSIDE WALL OF STRUCTURE.
11. THE ORIENTATION OF THE INLETS SHALL REMAIN CONSISTENT, AS SHOWN ON THE PLANS, TO PROVIDE OPTIMUM DRAINAGE CONTROL. ANY ACCOMMODATIONS REQUIRED FOR LARGER PIPE SIZES AND/OR PIPE CONFIGURATION SHALL BE ADDRESSED BY USING MODIFIED STRUCTURES IN ACCORDANCE WITH THE RC STANDARDS.
12. SEE "PADOT STANDARDS FOR ROADWAY CONSTRUCTION" CURRENT EDITION FOR DETAILS PERTAINING TO TYPE C AND TYPE M INLETS AND STORM SEWER MANHOLES. MATERIALS AND SIZING OF STRUCTURES SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
13. CONTRACTOR TO EXCAVATE AT ALL UTILITY CROSSINGS PRIOR TO INSTALLATION TO CONFIRM CROSSING CAN BE INSTALLED AS SHOWN.

STORMWATER FACILITY OWNERSHIP & OPERATION REQUIREMENTS:

1. THE STORM WATER MANAGEMENT FACILITIES SHOWN ON THESE PLANS SHALL BE CONSTRUCTED, MAINTAINED AND OPERATED BY THE OWNER / DEVELOPER OF THE PROPERTY, EASEMENT AND/OR LAND CONTAINING SAID FACILITIES. IT IS INTENDED THAT THE OWNERSHIP AND/OR MAINTENANCE OF THE FACILITIES INCLUDE ALL ON-SITE BMPS, BE RETAINED BY THE OWNER / DEVELOPER. THE MAINTENANCE RESPONSIBILITIES SPECIFIED HEREON SHALL BE TRANSFERRED WITH ANY FUTURE CHANGE IN OWNERSHIP. ANY DEED TRANSFER OF SAID PROPERTY CONTAINING STORMWATER FACILITIES AND/OR EASEMENTS SHALL SPECIFICALLY REFERENCE THE MAINTENANCE REQUIREMENTS ASSOCIATED WITH THIS PLAN.
2. MAINTENANCE AND OPERATION REQUIREMENTS FOR EACH FACILITY ARE SPECIFIED HEREON WHERE APPROPRIATE AS PART OF THESE PLANS.

UTILITY TRENCHING NOTES:

1. THE EXCAVATED MATERIAL FROM TRENCHING SHALL BE PLACED ON THE UPSLOPE SIDE OF THE TRENCH.
2. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF PIPELINE/UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACK-FILLED IN ONE WORKING DAY.
3. NO MORE THAN 50 LINEAL FEET OF OPEN TRENCH SHOULD EXIST WHEN PIPELINE/UTILITY LINE INSTALLATION CEASES AT THE END OF THE WORKDAY.
4. ANY BMP'S AFFECTED BY TRENCHING AND BACKFILLING OPERATIONS SHALL BE REPAIRED AND STABILIZED IMMEDIATELY.

CRITICAL STAGES OF CONSTRUCTION:

THE ENGINEER MUST CERTIFY INSTALLATION OF ALL PCSM BMPs, FOR TERMINATION OF THE NPDES PERMIT. THEREFORE, THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEER PRIOR TO CONSTRUCTING:

- UNDERGROUND DETENTION SYSTEM

PERMIT SET
NOT FOR CONSTRUCTION

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REVISIONS:			
REV	DATE	DESCRIPTION	
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS	

OWNER:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
OVERALL STORM SEWER PLAN

SHEET NO.
D6.0

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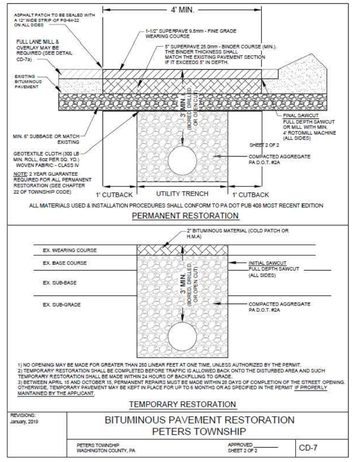
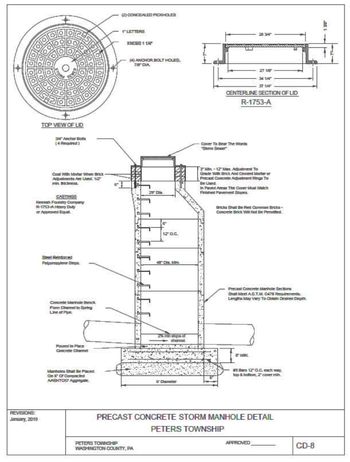
SUBDIVISION AND LAND DEVELOPMENT



REVISIONS: January, 2019 — BITUMINOUS PAVEMENT RESTORATION PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-7

385 Attachment 3:29 Supp 23, Dec 2019

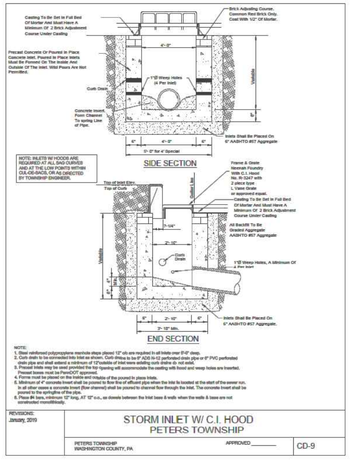
PETERS TOWNSHIP CODE



REVISIONS: January, 2019 — PRECAST CONCRETE STORM MANHOLE DETAIL PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-8

385 Attachment 3:30 Supp 23, Dec 2019

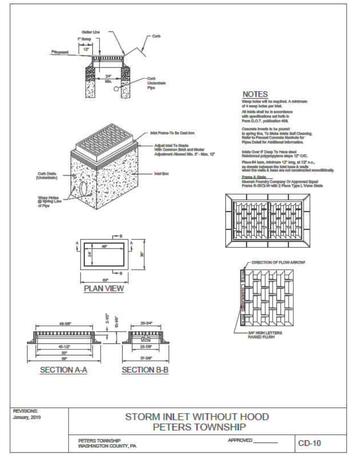
SUBDIVISION AND LAND DEVELOPMENT



REVISIONS: January, 2019 — STORM INLET W/ C.I. HOOD PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-9

385 Attachment 3:31 Supp 23, Dec 2019

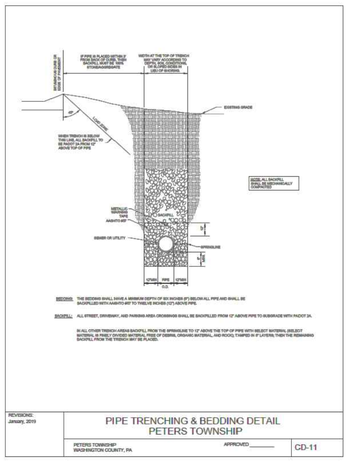
PETERS TOWNSHIP CODE



REVISIONS: January, 2019 — STORM INLET WITHOUT HOOD PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-10

385 Attachment 3:32 Supp 23, Dec 2019

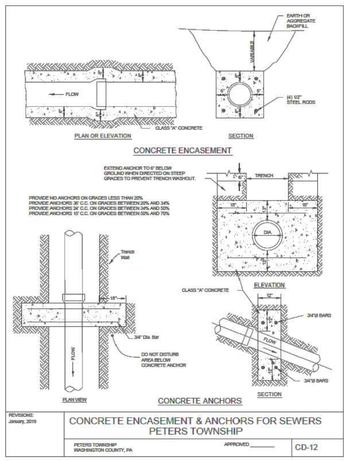
SUBDIVISION AND LAND DEVELOPMENT



REVISIONS: January, 2019 — PIPE TRENCHING & BEDDING DETAIL PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-11

385 Attachment 3:33 Supp 23, Dec 2019

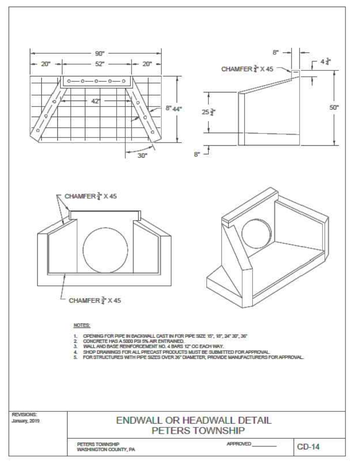
PETERS TOWNSHIP CODE



REVISIONS: January, 2019 — CONCRETE ENCASEMENT & ANCHORS FOR SEWERS PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-12

385 Attachment 3:34 Supp 23, Dec 2019

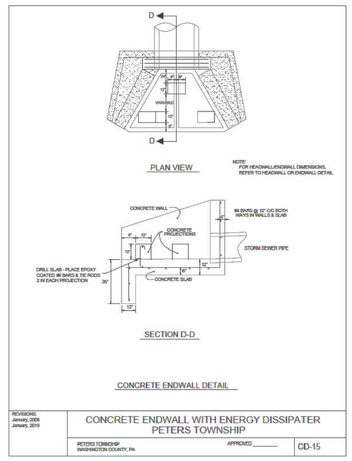
PETERS TOWNSHIP CODE



REVISIONS: January, 2019 — ENDWALL OR HEADWALL DETAIL PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-14

385 Attachment 3:36 Supp 23, Dec 2019

SUBDIVISION AND LAND DEVELOPMENT



REVISIONS: January, 2006 January, 2019 — CONCRETE ENDWALL WITH ENERGY DISSIPATER PETERS TOWNSHIP — PETERS TOWNSHIP WASHINGTON COUNTY, PA. — APPROVED _____ — CD-15

385 Attachment 3:37 Supp 23, Dec 2019

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — CHRISTOPHER W. HAMM — ENGINEER — PE-080435

REVISIONS:

REV	DATE	DESCRIPTION
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS

CLIENT: THOMAS ROBINSON FAMILY, LP

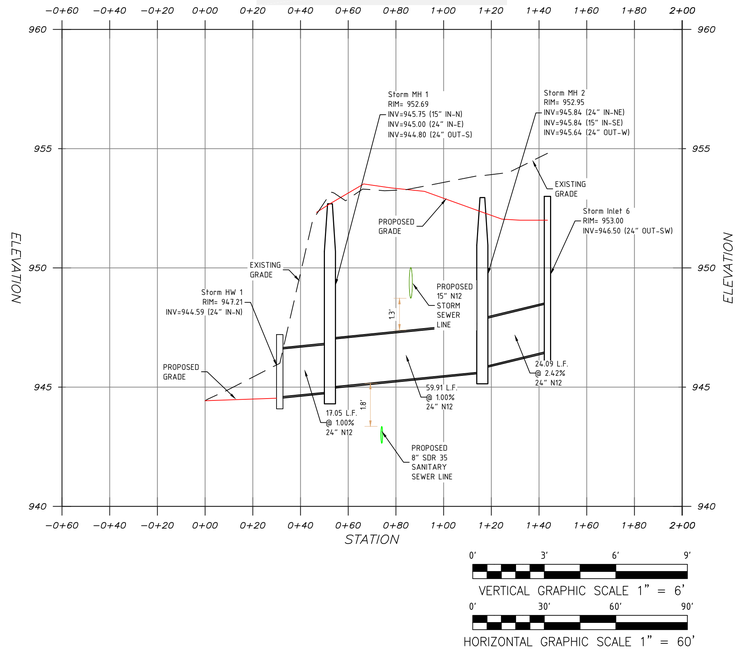
COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY: CWH

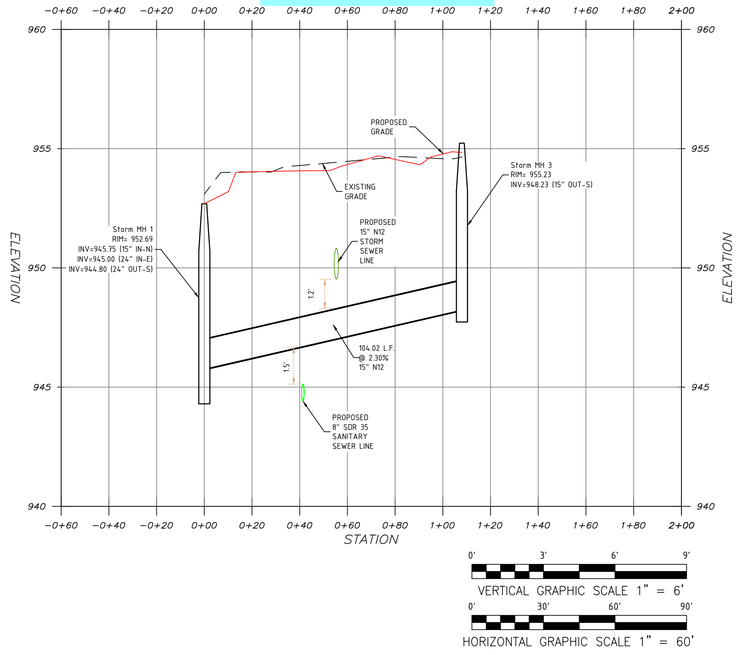
SHEET TITLE: STORM SEWER DETAILS

SHEET NO. D6.1

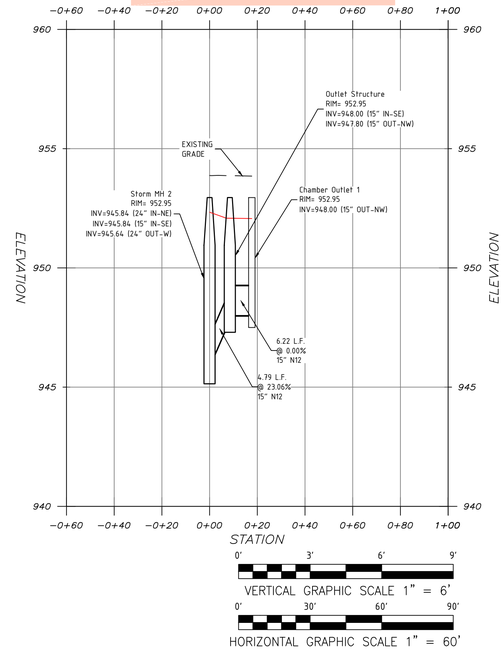
Storm HW 1 to Storm Inlet 6



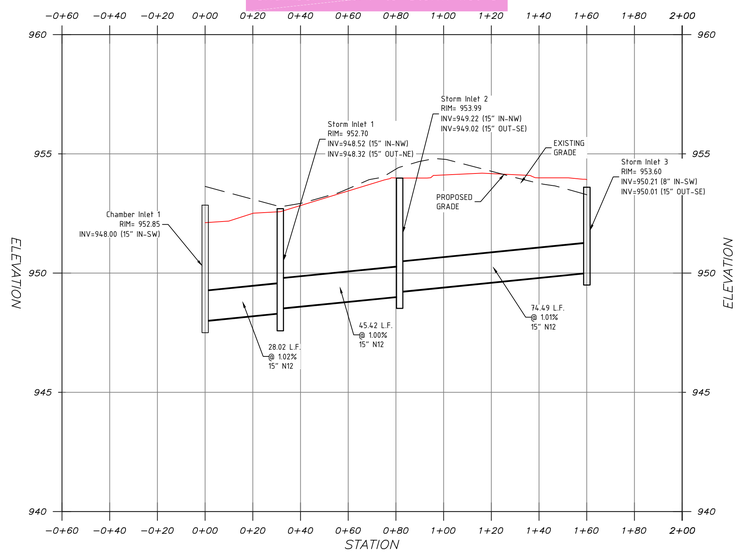
Storm MH 1 to Storm MH 3



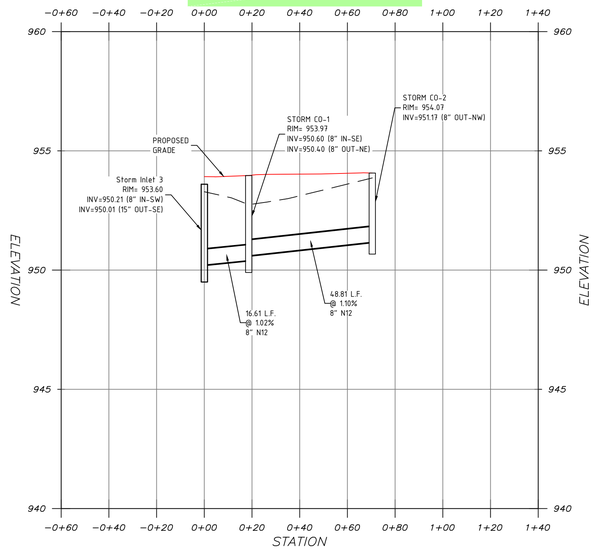
Storm MH 2 to Chamber Outlet 1



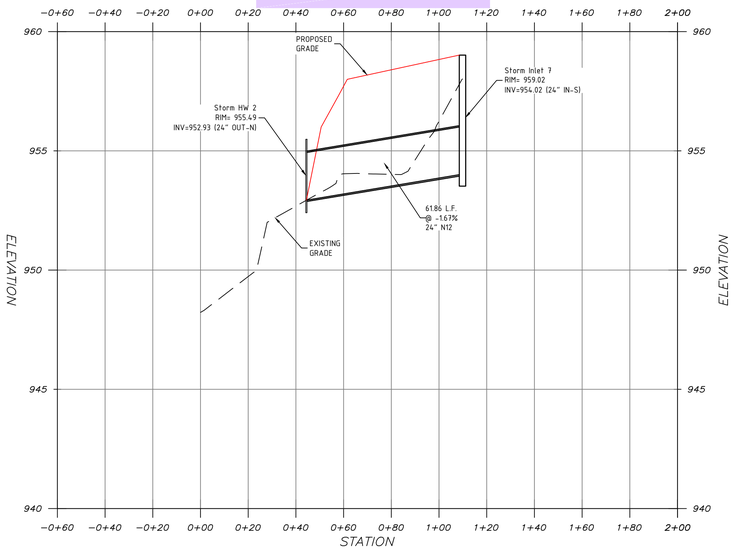
Chamber Inlet 1 to Storm Inlet 3



Storm Inlet 3 to Storm CO-2



Storm HW 2 to Storm Inlet 7



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PE-080435

REVISIONS:

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CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP,
WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
STORM SEWER PROFILES

SHEET NO.
D6.2

PERMIT SET
NOT FOR CONSTRUCTION

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Storm Inlet 4 to Chamber Inlet 2

0' 3' 6' 9'
VERTICAL GRAPHIC SCALE 1" = 6'
0' 30' 60' 90'
HORIZONTAL GRAPHIC SCALE 1" = 60'

Storm Inlet 5 to Storm CO-5

0' 3' 6' 9'
VERTICAL GRAPHIC SCALE 1" = 6'
0' 30' 60' 90'
HORIZONTAL GRAPHIC SCALE 1" = 60'

Storm YD 1 to Storm CO-3

0' 3' 6' 9'
VERTICAL GRAPHIC SCALE 1" = 6'
0' 30' 60' 90'
HORIZONTAL GRAPHIC SCALE 1" = 60'

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ENGINEER
PE-080430

REVISIONS:

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CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
STORM SEWER PROFILES

SHEET NO.
D6.3

PERMIT SET
NOT FOR CONSTRUCTION

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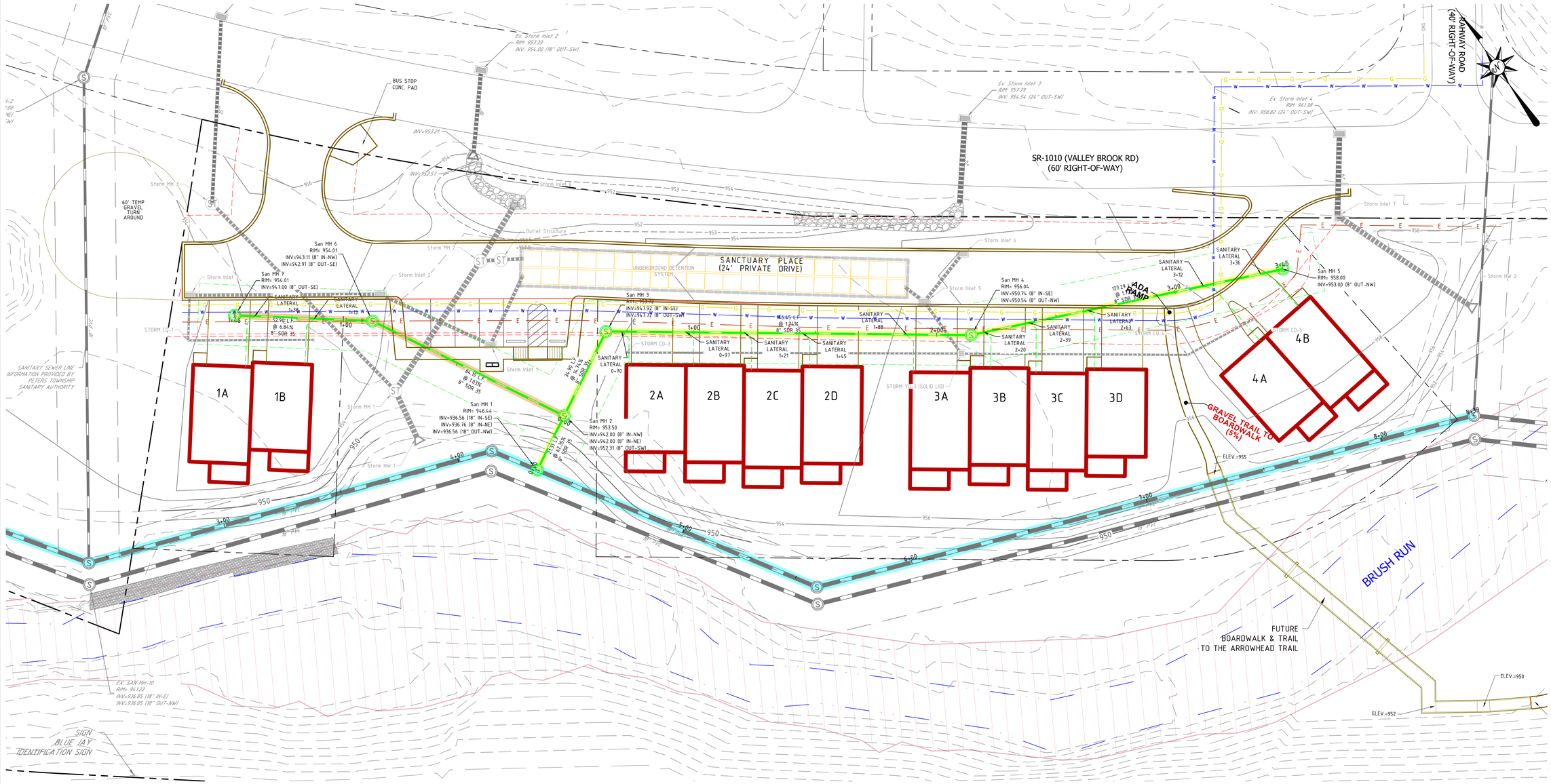

UTILITY NOTES:

1. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER AND THE MUNICIPALITY, THEIR AGENTS, ETC. FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION AND TESTING OF THE WORK SHOWN.
2. THE CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR SITE SAFETY.
3. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE FIELD CONDITIONS WITH DRAWINGS. CONTRACTOR TO FIELD VERIFY LOCATION, HORIZONTAL AND VERTICAL, AND SIZE OF ALL EXISTING UTILITIES BEFORE BEGINNING WORK. THE CONTRACTOR SHALL CALL PENNSYLVANIA ONE CALL AT 1-800-242-1776 TO NOTIFY THE UTILITIES OF HIS INTENTIONS AND TO REQUEST REQUIRED FIELD STAKING OF EXISTING UTILITIES.
4. THE CONTRACTOR SHALL CONSTRUCT ALL SANITARY SEWER FACILITIES IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND ANY OTHER LOCAL STATE OR FEDERAL CODES.
5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY SERVICE CONNECTIONS WITH THE APPROPRIATE UTILITY COMPANY/OWNER, AND TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED FOR SERVICE CONNECTIONS TO UTILITY MAINS.
6. TRENCH RESPONSIBILITY INCLUDES EXCAVATIONS, BACKFILL, COMPACTION AND MAINTENANCE OF THE TRENCH.
7. CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE CONSTRUCTION SAFETY SIGNAGE WHILE WORKING IN PUBLIC RIGHT-OF-WAY AND EASEMENTS.
8. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR. THE COST OF RESTORATION IS CONSIDERED INCIDENTAL AND SHOULD BE INCLUDED IN THE COST OF THE IMPROVEMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED-UP PRINTS SHOWING ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE OWNER.
10. ALL PIPE LENGTHS ARE MEASURED FROM INSIDE WALL OF STRUCTURE.
11. CONTRACTOR TO EXCAVATE AT ALL UTILITY CROSSINGS PRIOR TO INSTALLATION TO CONFIRM CROSSING CAN BE INSTALLED AS SHOWN.
12. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND.

UTILITY TRENCHING NOTES:

1. THE EXCAVATED MATERIAL FROM TRENCHING SHALL BE PLACED ON THE UPSLOPE SIDE OF THE TRENCH.
2. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF PIPELINE/UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACK-FILLED IN ONE WORKING DAY.
3. NO MORE THAN 50 LINEAL FEET OF OPEN TRENCH SHOULD EXIST WHEN PIPELINE/UTILITY LINE INSTALLATION CEASES AT THE END OF THE WORKDAY.
4. ANY BMP'S AFFECTED BY TRENCHING AND BACKFILLING OPERATIONS SHALL BE REPAIRED AND STABILIZED IMMEDIATELY.

SANITARY SEWER NOTES:

1. DUE TO THE PROXIMITY TO THE STREAM SAN MH 26 AND SAN MH 4 SHALL HAVE WATERTIGHT LIDS.
2. ALL TERMINAL MANHOLES SHALL HAVE VENTED MANHOLE LIDS.
3. IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE, SECTION 715, WHERE THE FLOOD LEVEL OF RIMS OF PLUMBING DRAINAGE FIXTURES (DENOTED BY LOWEST FINISHED FLOOR ELEVATION) ARE BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE, BACKWATER VALVES ARE REQUIRED.
4. UPON APPROVAL OF THE SUBDIVISION PLANS AND PRIOR TO CONSTRUCTION, THE DEVELOPER SHALL PROVIDE THE PTSA WITH ALL REQUIRED SHOP DRAWING SUBMITTALS.
5. THE INVERTS OF EXISTING MANHOLES THAT DO NOT ADEQUATELY ACCOMMODATE THE PROPOSED SEWER EXTENSIONS SHALL BE REMOVED AND REFORMED IN ACCORDANCE WITH PTSA REQUIREMENTS TO ACCOMMODATE THE NEW SEWERS EXTENDING FROM THE EXISTING MANHOLES.
6. IN UNIMPROVED AREAS, MANHOLE LIDS SHALL BE SET TO AN ELEVATION ONE (1) FOOT ABOVE THE FINAL GROUND SURFACE. THIS IS TO INCLUDE, BUT NOT LIMITED TO SAN. MH. 2, 3, 4, 5, AND 26.

ELECTRICAL PEDESTALS:

1. ALL ELECTRICAL PEDESTALS MUST BE INSTALLED WITH A MINIMUM 3' SEPARATION FOR SANITARY SEWER LINES AND MANHOLES.

CONSTRUCTION SEQUENCING IN FILL AREAS:

1. FILL SHALL BE PLACED IN STRICT ACCORDANCE WITH GEOTECHNICAL ENGINEERING REPORT'S RECOMMENDATIONS.
2. FILL SHALL BE PLACED A MINIMUM OF FOUR (4) FEET ABOVE PROPOSED SEWER INVERTS PRIOR TO INSTALLATION OF FACILITIES.
3. PROVIDE COMPACTION TESTING RESULTS OF FILLING ALONG PROPOSED SEWER ALIGNMENTS TO PTSA AND HRG.
4. ONCE COMPACTION TESTING RESULTS ARE APPROVED BY HRG/PTSA, SANITARY SEWER INSTALLATION MAY COMMENCE.

GEOTECHNICAL COMPACTION REQUIREMENTS:

1. THE FIRST LIFT OF MATERIAL SHOULD BE ONLY APPROXIMATELY FOUR (4) INCHES THICK IN THE LOOSE STATE. EACH LIFT OF SOIL THEREAFTER SHOULD BE PLACED IN MAXIMUM EIGHT (8) INCH LOOSE THICKNESS AND SHOULD BE WITHIN PLUS OR MINUS TWO (2) PERCENT OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557)
2. ALL FILL SHOULD BE COMPACTED TO A MINIMUM DENSITY OF 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557).
3. DURING FILL CONSTRUCTION AND/OR SUBGRADE PREPARATION, THE CONTRACTOR SHOULD BE MAINTAIN GOOD SITE DRAINAGE. EXPOSED SURFACES SHOULD BE POSITIVELY SLOPED TO CAUSE RUNOFF TO FLOW AWAY FROM THE SITE. IF WATER DOES POND IN ANY SECTORS, THOSE AREA SHOULD BE DRAINED AND ALL MUD ZONES OR SOFTENED SOILS SHOULD BE AERATED AND RECOMPACTED BEFORE FURTHER CONSTRUCTION PHASE.
4. ALL CUT AND FILLS SHALL BE COMPLETED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER.

UTILITY NOTES:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY OF OBSERVED EVIDENCE ONLY. THE PLANS MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE PLANS FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

NOTES:

1. THE DRAWING IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM OF 1983, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).

0' 30' 60' 90'

GRAPHIC SCALE 1" = 30'

PERMIT SET
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COMMONWEALTH OF PENNSYLVANIA
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CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:			
REV	DATE	DESCRIPTION	
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS	

CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP,
WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
OVERALL SANITARY SEWER PLAN

SHEET NO.
D7.0

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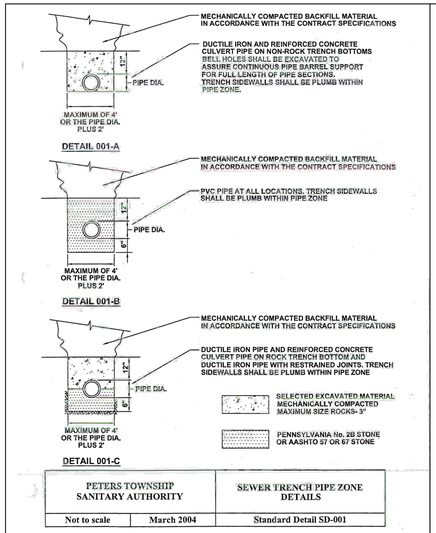
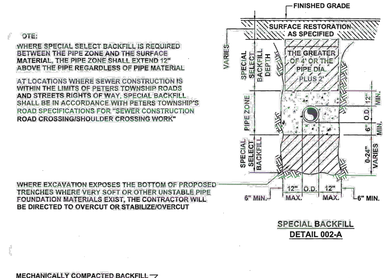
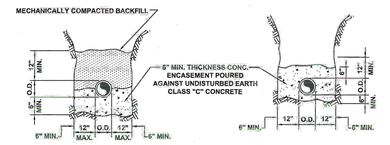


PETERS TOWNSHIP SANITARY AUTHORITY		SEWER TRENCH PIPE ZONE DETAILS
Not to scale	March 2004	Standard Detail SD-001



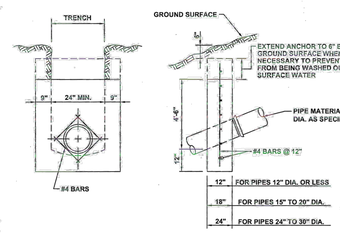
SPECIAL BACKFILL
DETAIL 002-A



TYPICAL CONCRETE CRADLE
DETAIL 002-B

TYPICAL CONCRETE ENCASEMENT
DETAIL 002-C

PETERS TOWNSHIP SANITARY AUTHORITY		TRENCH DETAILS
Not to scale	March 2004	Standard Detail SD-002



CONCRETE ANCHORS FOR PIPES ON STEEP GRADES

PROVIDE NO ANCHORS ON GRADES LESS THAN 20% UNLESS NOTED
PROVIDE ANCHORS MAXIMUM 36" C-C ON GRADES BETWEEN 20% AND 34%
PROVIDE ANCHORS MAXIMUM 24" C-C ON GRADES BETWEEN 34% AND 50%
PROVIDE ANCHORS MAXIMUM 16" C-C ON GRADES BETWEEN 50% AND 70%
WITH APPROVAL FROM P.T.S.A.

FOR CONDITIONS OTHER THAN SHOWN HEREON ANCHORS SHALL BE PROVIDED AS REQUIRED BY THE CONTRACT PLANS OR ORDERED IN THE FIELD BY THE OWNER'S REPRESENTATIVE.

ANCHOR SPACING SHALL POSITION EACH ANCHOR DOWNSTREAM OF A PIPE BELL

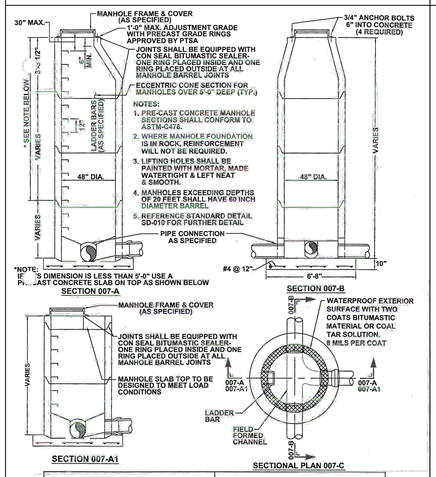
PETERS TOWNSHIP SANITARY AUTHORITY		CONCRETE ANCHORS FOR PIPELINES
Not to scale	March 2004	Standard Detail SD-005

SANITARY SEWER CONNECTION CONSTRUCTION SEQUENCE:

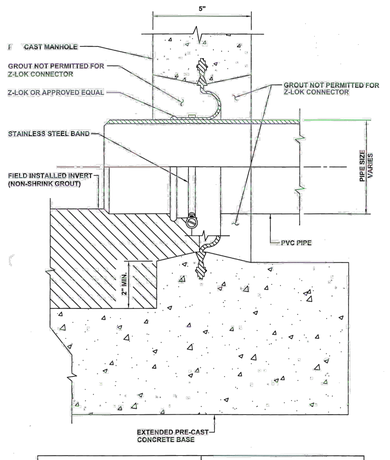
1. WHEN BYPASS PUMPING IS REQUIRED, THE PUMPING SHALL BE FROM THE MANHOLE UPSTREAM OF THE CONSTRUCTION AREA TO THE MANHOLE BELOW THE CONSTRUCTION AREA.
2. THE CONTRACTOR SHALL CONTACT THE PTSA TO COORDINATE THE CONSTRUCTION ACTIVITY, SIZE OF PUMP(S) REQUIRED, PIPE SIZES AND THE START OF WORK.
3. ONCE, PTSA HAS BEEN NOTIFIED AND GIVEN NOTE TO PROCEED. THE CONTRACTOR WILL MOBILIZE ON SITE.
4. AFTER MOBILIZATION, THE CONTRACTOR WILL DETERMINE THE PROPER SIZE, LOCATION, AND TYPE OF PLUG TO BE USED ON THE UPSTREAM MANHOLE OUTFLOW PIPE.
5. ONCE THE PROPER PLUG IS DETERMINED AND THE PUMP(S) AND BYPASS LINE IS IN PLACE, THE CONTRACTOR MAY START THE BYPASS PUMPING.
6. AFTER THE PUMPING HAS STARTED, THE PLUG SHALL BE INSTALLED IN THE UPSTREAM MANHOLE OUTLET. THEN THE CONSTRUCTION AREA SHALL BE FLUSHED AND ALLOWED TO DRAIN TO REMOVE ANY EXISTING FLOW IN THE PIPE.
7. AFTER THE PIPE IS FLUSHED, THE DOWNSTREAM MANHOLE INLET SHALL BE PLUGGED TO INSURE NO BYPASS FLOW ENTERS THE CONSTRUCTION AREA PIPE.
8. THE CONTRACTOR MAY START THE INSTALLATION OF THE NEW SANITARY SEWER CONNECTIONS. THE CONTRACTOR MAY BYPASS THE EXISTING SYSTEM TO ALLOW THE INSTALLATION OF ALL SERVICE MAIN CONNECTIONS.

CONNECTIONS OF SANITARY MAINS INTO EXISTING MANHOLES:

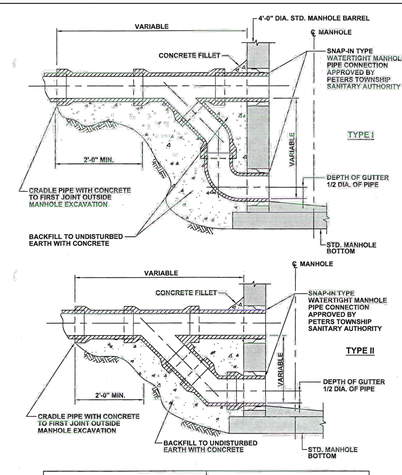
1. WITH THE BYPASS IN PLACE AND WORKING PROPERLY, THE CONTRACTOR MAY START THE EXCAVATION TO EXPOSE THE EXISTING SANITARY SEWER MANHOLE AT THE PROPER INVERT ELEVATION OF THE NEW CONNECTION.
2. ONCE THE EXCAVATION HAS EXPOSED THE EXISTING MANHOLE, THE CONTRACTOR WILL HAVE TO CORE DRILL THE EXISTING MANHOLE TO ALLOW FOR THE NEW CONNECTION.
3. ONCE THE NEW SANITARY LINE IS CONNECTED TO THE EXISTING MANHOLE, THE PIPE WILL HAVE TO BE PROPERLY SEALED ACCORDING TO PTSA SPECIFICATIONS.
4. AFTER THE PIPE IS INSTALLED, THE CONTRACTOR MUST CREATE NEW FLOW CHANNELS FOR THE CONNECTION IN THE MANHOLE.
5. THE NEW CHANNELS NEEDED BUILT UP CAN BE CREATED BY PLACING CONCRETE IN THE BOTTOM AS NEEDED. IF, THE FLOW CHANNELS NEED TO BE RECESSED INTO THE EXISTING MANHOLE BOTTOM, THE BOTTOM SHALL BE SAW CUT AND REBUILT AS NEEDED TO ENSURE PROPER FLOW IN AND OUT OF THE EXISTING MANHOLE.



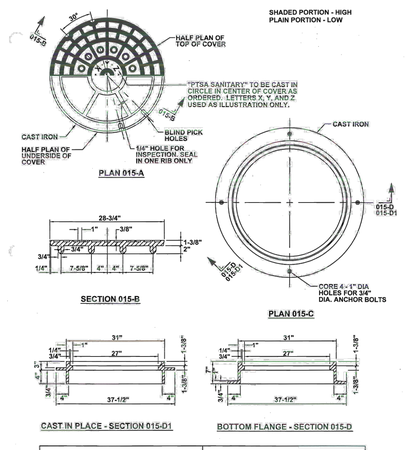
PETERS TOWNSHIP SANITARY AUTHORITY		PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" TO 18"
Not to scale	March 2004	Standard Detail SD-007



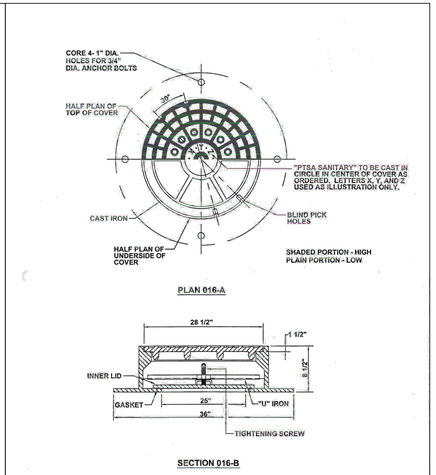
PETERS TOWNSHIP SANITARY AUTHORITY		MANHOLE CONNECTION FOR PVC PIPE (PRE-CAST BASE)
Not to scale	March 2004	Standard Detail SD-012



PETERS TOWNSHIP SANITARY AUTHORITY		OUTSIDE MANHOLE DROP CONNECTION
Not to scale	March 2004	Standard Detail SD-014

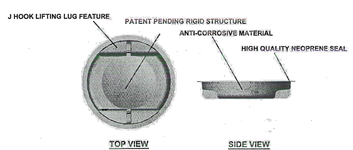


PETERS TOWNSHIP SANITARY AUTHORITY		STANDARD CAST IRON MANHOLE FRAME AND COVER
Not to scale	March 2004	Standard Detail SD-015



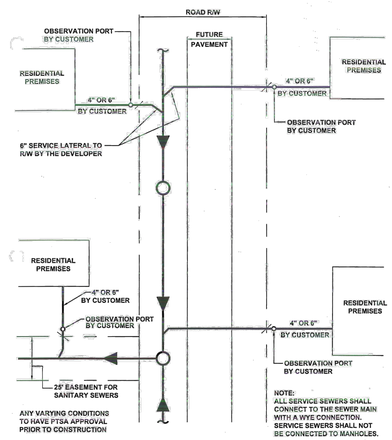
SECTION 016-B

PETERS TOWNSHIP SANITARY AUTHORITY		WATERTIGHT MANHOLE (WT) FRAME AND COVER
Not to scale	March 2004	Standard Detail SD-016

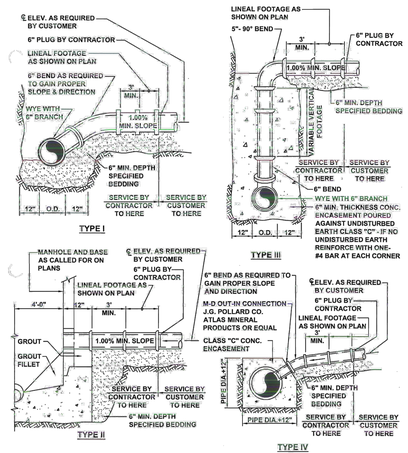


INFLOW PROTECTOR SHALL BE MAN-PAN OR APPROVED EQUAL AND SHALL BE INSTALLED WITH ALL NON-WATER TIGHT MANHOLE COVERS

PETERS TOWNSHIP SANITARY AUTHORITY		MANHOLE INFLOW PROTECTOR
Not to scale	March 2004	Standard Detail SD-017



PETERS TOWNSHIP SANITARY AUTHORITY		SERVICE LINE CONNECTIONS
Not to scale	March 2004	Standard Detail SD-019



PETERS TOWNSHIP SANITARY AUTHORITY		SERVICE CONNECTIONS
Not to scale	March 2004	Standard Detail SD-021

GENERAL NOTES:

1. PROVIDE 0.2' DROP ACROSS MANHOLE UNLESS OTHERWISE SPECIFIED.
2. INSTALL PIPE STUBS AT MANHOLES FOR FUTURE EXTENSIONS A MINIMUM OF 4 FEET LONG. DO NOT GROUT EXTENSION STUB PIPE INSIDE OR OUTSIDE THE MANHOLE.
3. PROVIDE VENT HOLE IN CENTER OF LID OF END-OF-LINE MANHOLES.
4. ALL PVC PIPES SHALL BE ASTM-D3034 SDR 35 UNLESS OTHERWISE SPECIFIED.
5. FLAT TOP MANHOLES ARE NOT PERMITTED UNLESS OTHERWISE SPECIFIED.
6. EXISTING MANHOLES THAT DO NOT ADEQUATELY ACCOMMODATE THE PROPOSED SEWER EXTENSIONS SHALL BE REQUIRED TO BE CLEANLY CORE DRILLED AND A FLEXIBLE BOOT INSTALLED AS WELL AS ANY REQUIRED MODIFICATIONS OF THE INVERT OR FLOW CHANNEL TO ENSURE A SMOOTH TRANSITION AND TO THE AUTHORITY'S SATISFACTION.
7. MAXIMUM DISTANCE BETWEEN MANHOLES SHALL BE 400 FEET.
8. CONCRETE ANCHORS SHALL BE PROVIDED WHEN PIPE SLOPES EXCEED 20%. THE REQUIRED NUMBER AND SPACING OF THE ANCHORS SHALL BE COMMENSURATE WITH THE PREVAILING PADEP PUBLISHED REQUIREMENTS.
9. THE DETAIL SHEET IDENTIFIES THE MOST COMMONLY USED DETAILS, HOWEVER, THE FULL SPECIFICATIONS AND OTHER STANDARD DETAILS CONTAINED IN APPENDIX A OF THE AUTHORITY'S MOST CURRENT RULES AND REGULATIONS APPLY.

PERMIT SET
NOT FOR CONSTRUCTION

KDH CONSULTING ENGINEERS, INC
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COMMONWEALTH OF PENNSYLVANIA
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CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:			
REV	DATE	DESCRIPTION	
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS	

CLIENT: THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY: CWH

SHEET TITLE: SANITARY SEWER DETAILS

SHEET NO. D7.1

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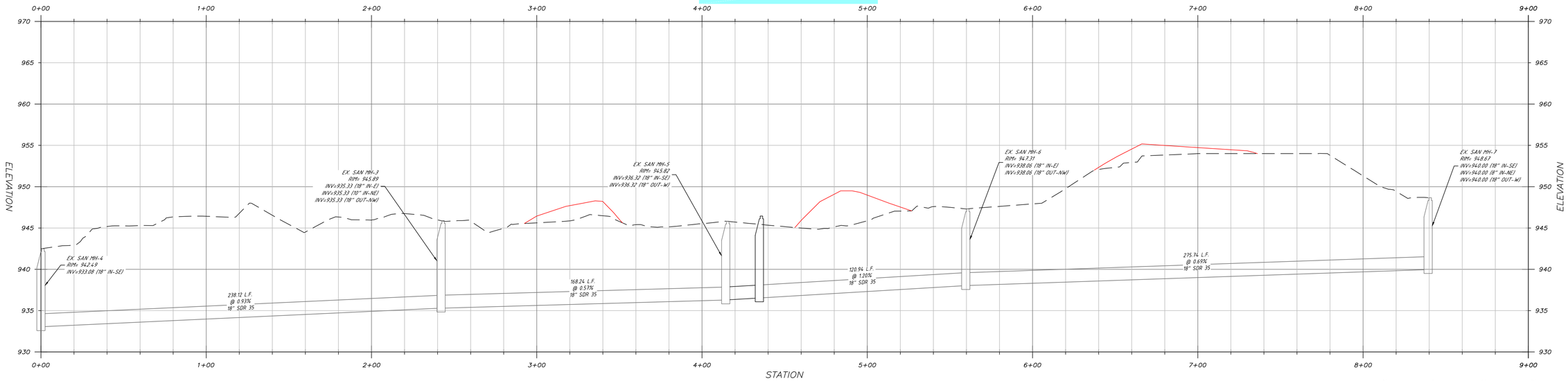
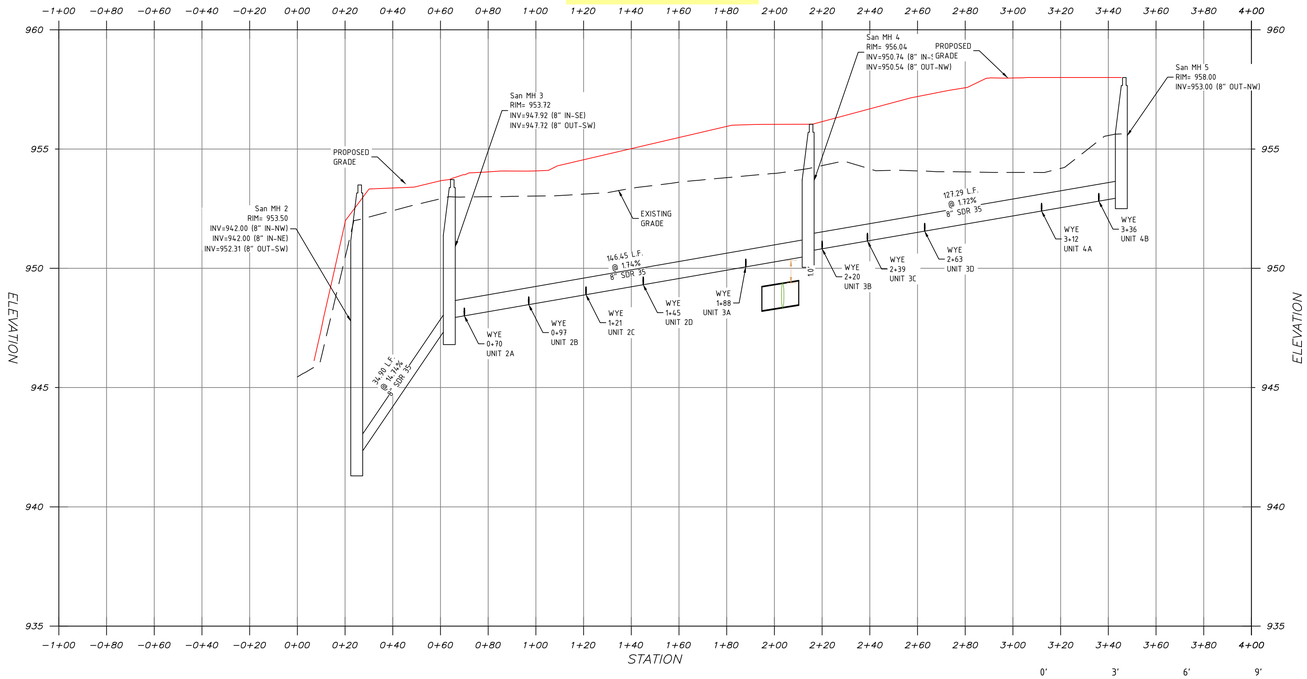
Ex. San MH 4 to Ex. San MH 7



0' 3' 6' 9'
VERTICAL GRAPHIC SCALE 1" = 6'
0' 30' 60' 90'
HORIZONTAL GRAPHIC SCALE 1" = 60'

San MH 7 to San MH 1



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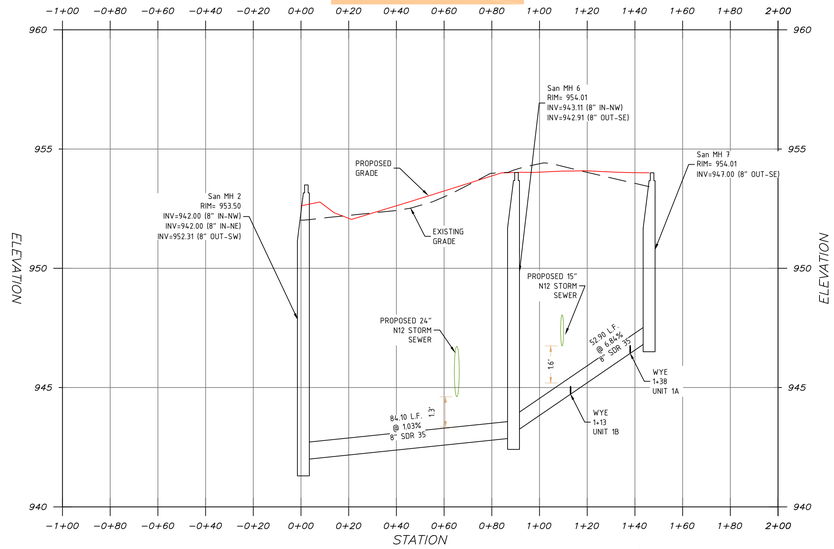
VERTICAL GRAPHIC SCALE 1" = 6'
0' 30' 60' 90'
HORIZONTAL GRAPHIC SCALE 1" = 60'

San MH 4 to San MH 6



0' 3' 6' 9'
VERTICAL GRAPHIC SCALE 1" = 6'
0' 30' 60' 90'
HORIZONTAL GRAPHIC SCALE 1" = 60'

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. HAHN
ENGINEER
PE-084439

REVISIONS:			
REV	DATE	DESCRIPTION	
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS	

CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP,
WASHINGTON COUNTY, PA

PROJ NO:	211-008-23
DATE:	12/12/2024
DRAWN BY:	RAM
CHECKED BY:	CWH

SHEET TITLE:
SANITARY SEWER PROFILES

SHEET NO.
D7.2

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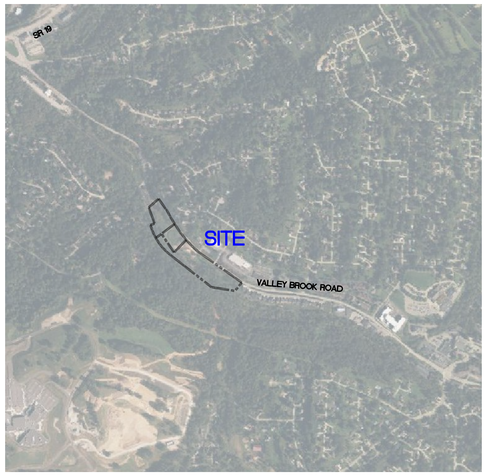
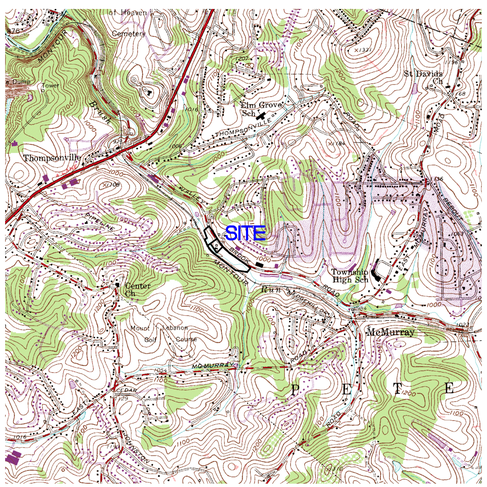
POST CONSTRUCTION STORMWATER MANAGEMENT
COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY
PENNSYLVANIA

PREPARED FOR:

THOMAS ROBINSON FAMILY, LP



VICINITY MAP
SCALE: 1"=500'



USGS MAP
SCALE: 1"=2000'

NOTE
THE MERIDIAN OF THE PROJECT IS THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NAD 1983.

NOTES:

1. ALL PROPOSED GRADES, ELEVATIONS, AND SLOPES, AS WELL AS ALL ASSOCIATED ENGINEERING ASSUMPTIONS, ARE BASED SOLELY AND EXCLUSIVELY UPON LOCAL AND NATIVE SOIL CONDITIONS FOUND ARE FOR THE SPECIFIC PROJECT LOCATION, AND SUPPORTING INFORMATION FROM THE SOIL SURVEY PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, AS WELL AS ADDITIONAL INFORMATION FROM THE NRCS'S WEB SOIL SURVEY WEBSITE.

2. ANY AND ALL CONSTRUCTION WORK RELATED TO EARTH MOVING OR OTHER EXCAVATION SHALL ONLY BE PERFORMED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER, OR OTHER APPROVED PROFESSIONAL REPRESENTATIVE, WITH EXTENSIVE KNOWLEDGE AND EXPERIENCE IN THE INTERPRETATION OF ALL ISSUES RELATED TO GEOTECHNICAL ENGINEERING AND CONSTRICTION ACTIVITIES.

3. IN ADDITION, INFILTRATION CAPACITY OF NATIVE SOILS HAVE BEEN ASSUMED AND EVALUATED (BY OTHERS) BASED UPON THE ABOVE REFERENCED SOURCES. DUE TO THE NATURE OF STRUCTURAL BMP'S DESIGNED FOR INSTALLATION AND UTILIZATION ON THE PROJECT SITE EXTENSIVELY MINIMAL INFILTRATION IS ANTICIPATED. THE CONTRACTOR SHALL TAKE EXTREME CAUTION AND CARE WHEN PERFORMING CONSTRUCTION ACTIVITIES IN THE AREAS OF STRUCTURAL BMP IMPLEMENTATION, AND SHALL ADHERE TO THE RECOMMENDED CONSTRUCTION PROCEDURES AND AVOIDANCE MEASURES CONTAINED WITHIN THE APPROVED CONSTRUCTION DOCUMENTS.

4. ALL STORM DRAIN/CATCH BASIN/INLET STRUCTURES TO BE CONSTRUCTED AND FITTED WITH BICYCLE SAFE FRAME AND GRATING, UNLESS NOTED OTHERWISE.

5. THE DRAWING IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM OF 1983, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAND NAD).

STORMWATER MANAGEMENT NOTES:

NO PERSON, INCLUDING THE LANDOWNER, SHALL ALTER OR REMOVE THE STORMWATER MANAGEMENT FIXTURES WITHOUT PRIOR WRITTEN APPROVAL BY NORTH STRABANE TOWNSHIP.

THE OPERATION AND MAINTENANCE (O&M) AGREEMENT FOR THE STORMWATER MANAGEMENT CONTROLS IS PART OF THE STORMWATER MANAGEMENT PLAN.

RECORD DRAWINGS AND DOCUMENTATION WILL BE PROVIDED FOR ALL STORMWATER MANAGEMENT FACILITIES PRIOR TO THE RELEASE OF THE SURETY BOND AND AN ISSUANCE OF AN OCCUPANCY PERMIT.

PCSM DESIGN NOTE:

THIS PLAN HAS BEEN PREPARED BY KDH ENGINEERS, WHO'S EMPLOYEES HAVE DECADES OF COMBINED EXPERIENCE PREPARING AND DESIGNING POST CONSTRUCTION STORMWATER MANAGEMENT PLANS IN PENNSYLVANIA AND SURROUNDING STATES.

THE PCSM BMP'S WILL BE INSTALLED TO PRESERVE THE INTEGRITY OF DOWNSTREAM STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAMS.

MINIMIZE IMPERVIOUS AREAS

KDH WORKED CLOSELY WITH THE OWNER TO MINIMIZE THE IMPERVIOUS AREA, TO THE MAXIMUM EXTENT PRACTICAL, WHILE STILL MEETING THE REQUIREMENTS OF THE PROJECT.

MINIMIZE THE EXTENT AND DURATION OF THE EARTH DISTURBANCE.

TO MINIMIZE THE EXTENT AND DURATION OF THE EARTH DISTURBANCE THE CONSTRUCTION SEQUENCE REQUIRES IMMEDIATE INSTALLATION OF THE PAVEMENT SUB BASE UPON REACHING FINAL GRADE, TO STABILIZATION THE SITE QUICKLY.

THE CONSTRUCTION SEQUENCE STATES THAT " UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY FOR 4-DAYS THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED."

MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION.

VEGETATION WILL ONLY BE REMOVED FROM AREAS WHICH ARE INSIDE THE LIMIT OF DISTURBANCE. PROTECTION OF THE EXISTING DRAINAGE FEATURES WILL BE PERFORMED THROUGH E&S BMP PERIMETER CONTROLS, SUCH AS SILT SOCKS.

MINIMIZE SOIL COMPACTION.

THE LOCATION OF THE PCSM INFILTRATION AREAS, WHICH WILL BE USED AS PCSM INFILTRATION DEVICE(S), IS SHOWN ON THE PLAN. THE LOCATION IS MARKED AS "AREA TO BE PROTECTED FROM EXCESSIVE COMPACTION."

SHEET NO.	SHEET TITLE
D8.0	PCSM PLAN COVER SHEET
D6.0	OVERALL STORM SEWER PLAN
D6.1	STORM SEWER DETAILS
D6.2	STORM SEWER PROFILES
D6.3	STORM SEWER PROFILES
D8.1	OVERALL PCSM PLAN
D8.2	UNDERGROUND STORAGE PLAN & DETAILS
D8.3	BMP 002 PLAN & DETAILS

DEVELOPER:
THOMAS ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
MCMURRAY, PA 15317

LANDSCAPE ARCHITECT:
VICTOR-WETZEL ASSOCIATES
409 BROAD STREET, SUITE 270
SEWICKLEY, PA 15143

PROJECT ENGINEER:
KDH CONSULTING ENGINEERS, INC.
593 RUGH STREET, LOWER LEVEL
GREENSBURG, PA 15601
(878) 295-8914
CONTACT: CHRISTOPHER W. HAMM, P.E.

PERMIT SET
NOT FOR CONSTRUCTION

KDH CONSULTING ENGINEERS, INC
593 RUGH STREET
GREENSBURG, PA 15601
P: 878.295.8914 F:724.514.7047
www.kdhengineers.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:

REV	DATE	DESCRIPTION
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS

CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
PCSM COVER SHEET

SHEET NO.
D8.0

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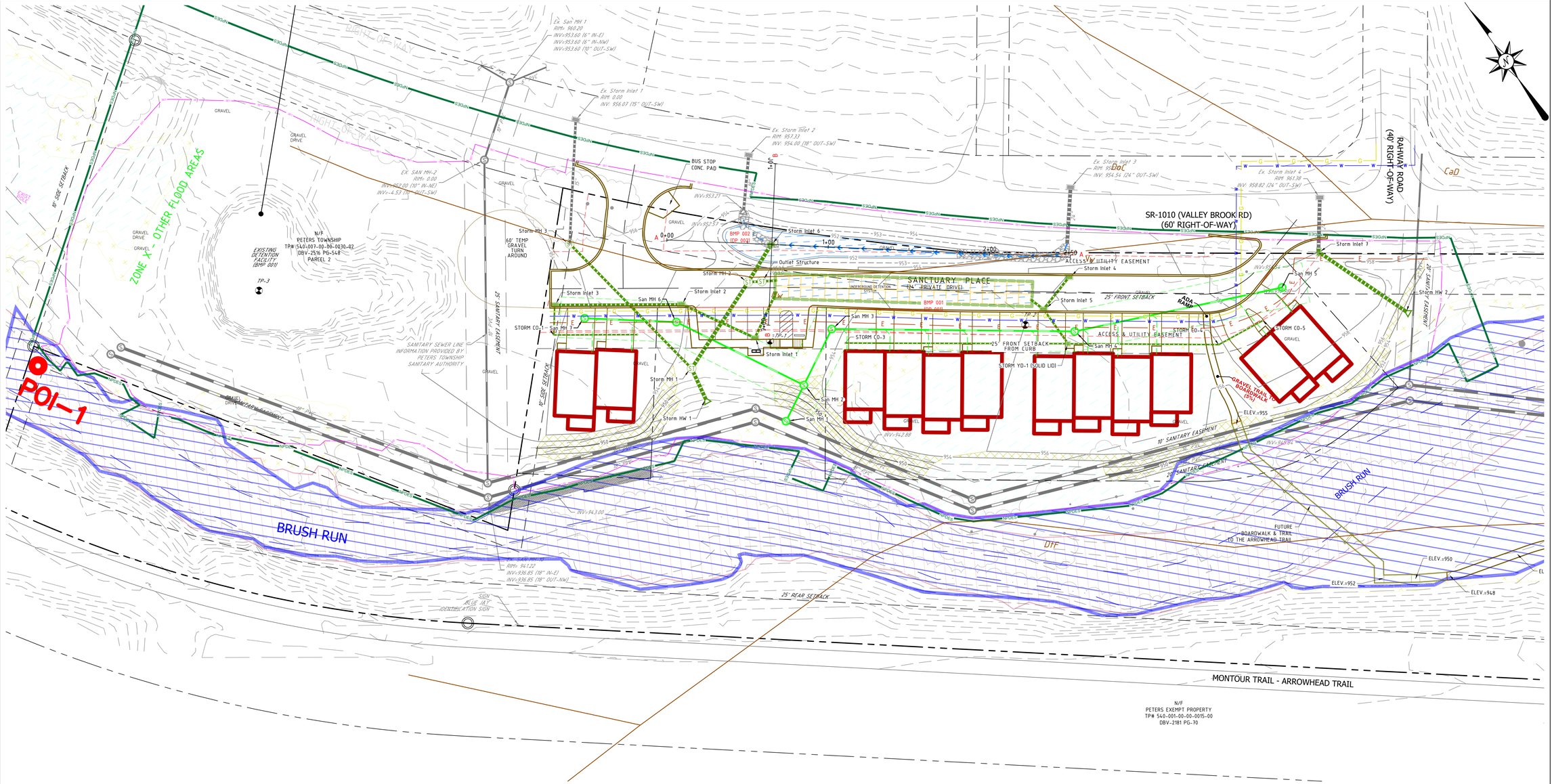

NOTE:
THIS PLAN IS FOR POST CONSTRUCTION STORMWATER MANAGEMENT PURPOSES ONLY. THE CONTRACTOR SHALL REFER TO THE APPROPRIATE UTILITY PLAN FOR FINAL LOCATION AND DETAILS.

1. ALL PROPOSED GRADES, ELEVATIONS, AND SLOPES, AS WELL AS ALL ASSOCIATED ENGINEERING ASSUMPTIONS, ARE BASED SOLELY AND EXCLUSIVELY UPON LOCAL AND NATIVE SOIL CONDITIONS FOUND ARE FOR THE SPECIFIC PROJECT LOCATION, AND SUPPORTING INFORMATION FROM THE SOIL SURVEY PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, AS WELL AS ADDITIONAL INFORMATION FROM THE NRCS'S WEB SOIL SURVEY WEBSITE.

2. ANY AND ALL CONSTRUCTION WORK RELATED TO EARTH MOVING OR OTHER EXCAVATION SHALL ONLY BE PERFORMED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER, OR OTHER APPROVED PROFESSIONAL REPRESENTATIVE, WITH EXTENSIVE KNOWLEDGE AND EXPERIENCE IN THE INTERPRETATION OF ALL ISSUES RELATED TO GEOTECHNICAL ENGINEERING AND CONSTRICTION ACTIVITIES.

3. IN ADDITION, INFILTRATION CAPACITY OF NATIVE SOILS HAVE BEEN ASSUMED AND EVALUATED (BY OTHERS) BASED UPON THE ABOVE REFERENCED SOURCES. DUE TO THE NATURE OF STRUCTURAL BMP'S DESIGNED FOR INSTALLATION AND UTILIZATION ON THE PROJECT SITE EXTENSIVELY MINIMAL INFILTRATION IS ANTICIPATED. THE CONTRACTOR SHALL TAKE EXTREME CAUTION AND CARE WHEN PERFORMING CONSTRUCTION ACTIVITIES IN THE AREAS OF STRUCTURAL BMP IMPLEMENTATION, AND SHALL ADHERE TO THE RECOMMENDED CONSTRUCTION PROCEDURES AND AVOIDANCE MEASURES CONTAINED WITHIN THE APPROVED CONSTRUCTION DOCUMENTS.

4. ALL STORM DRAIN/CATCH BASIN/INLET STRUCTURES TO BE CONSTRUCTED AND FITTED WITH BICYCLE SAFE FRAME AND GRATING, UNLESS NOTED OTHERWISE.

LEGEND

- LIMITS OF DISTURBANCE
- NPDES PERMIT BOUNDARY
- INFILTRATION AREA: AREA TO BE PROTECTED FROM EXCESSIVE SOIL COMPACTION

0' 30' 60' 90'
GRAPHIC SCALE 1" = 30'

PERMIT SET
NOT FOR CONSTRUCTION

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www.kdhengineers.com

COMMONWEALTH OF PENNSYLVANIA
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REVISIONS:

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CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
OVERALL PCSM PLAN

SHEET NO.
D8.1

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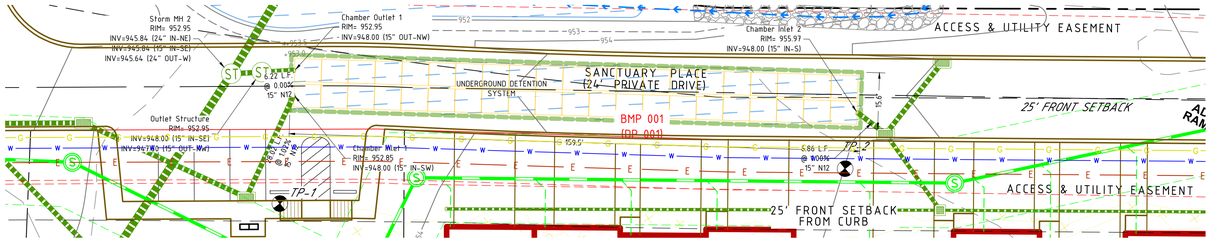
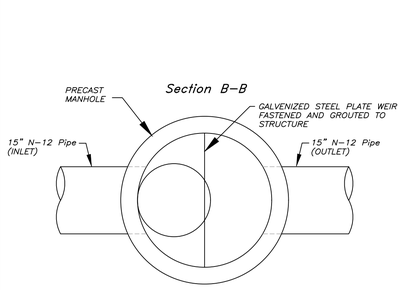
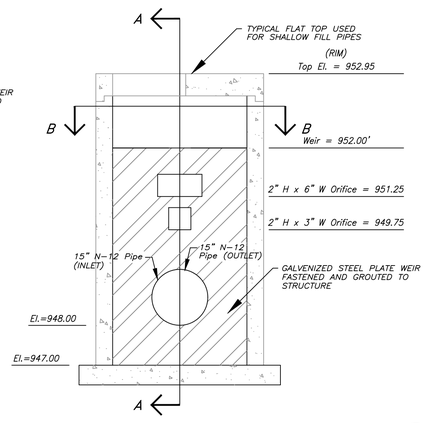


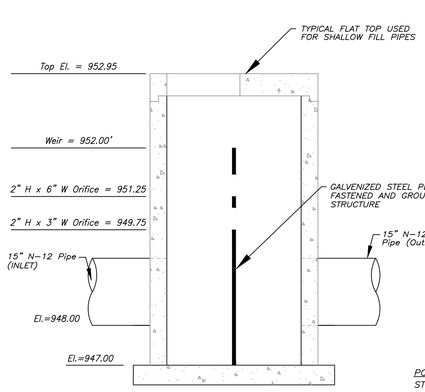
UNDERGROUND STORAGE BMP 001 (DP 001)

SCALE : 1" = 20'

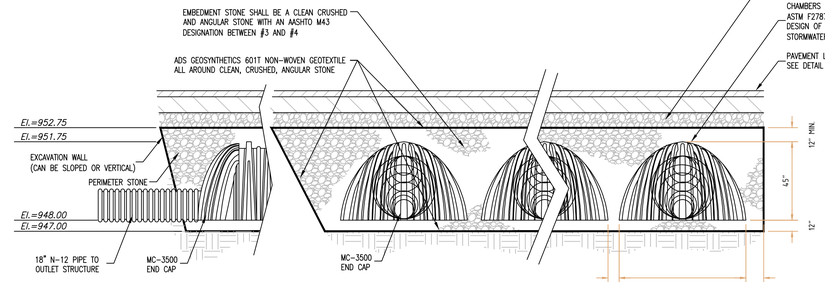




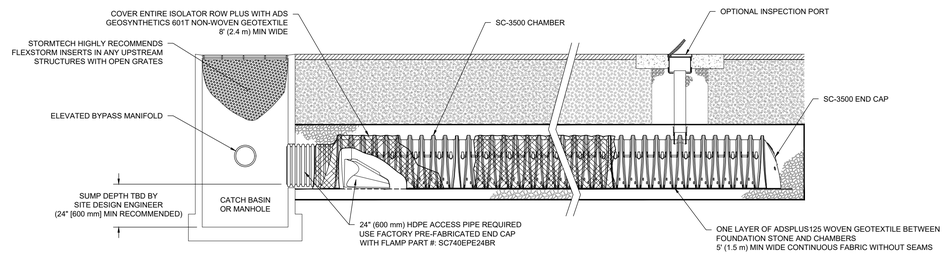
OUTLET STRUCTURE
NOT TO SCALE — 1 / D8.2



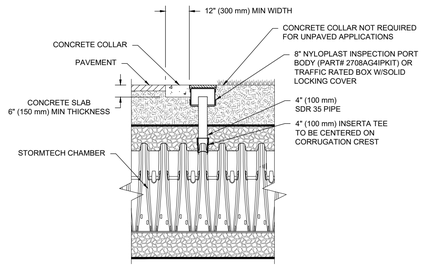
POND UNDERGROUND STORAGE
STORMTECH MC-3500 CHAMBER



CROSS SECTION
NOT TO SCALE — 2 / D8.2

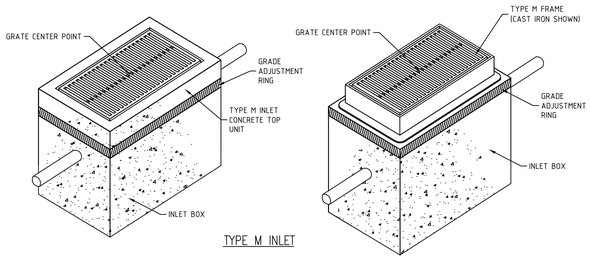


SC-3500 ISOLATOR ROW PLUS DETAIL
NOT TO SCALE — 3 / D8.2



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4" PVC INSPECTION PORT DETAIL
NOT TO SCALE — 4 / D8.2



TYPE M INLET

NOTE

ALL STORM DRAINS INLETS SHALL HAVE PERMANENTLY BE MARKED "DUMP NO WASTE. DRAINS TO STREAM."

TYPE M INLETS
NOT TO SCALE — 5 / D8.2

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.

PERMIT SET
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:			
REV	DATE	DESCRIPTION	
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS	

CLIENT:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
UNDERGROUND STORAGE PLAN & DETAILS

SHEET NO.
D8.2

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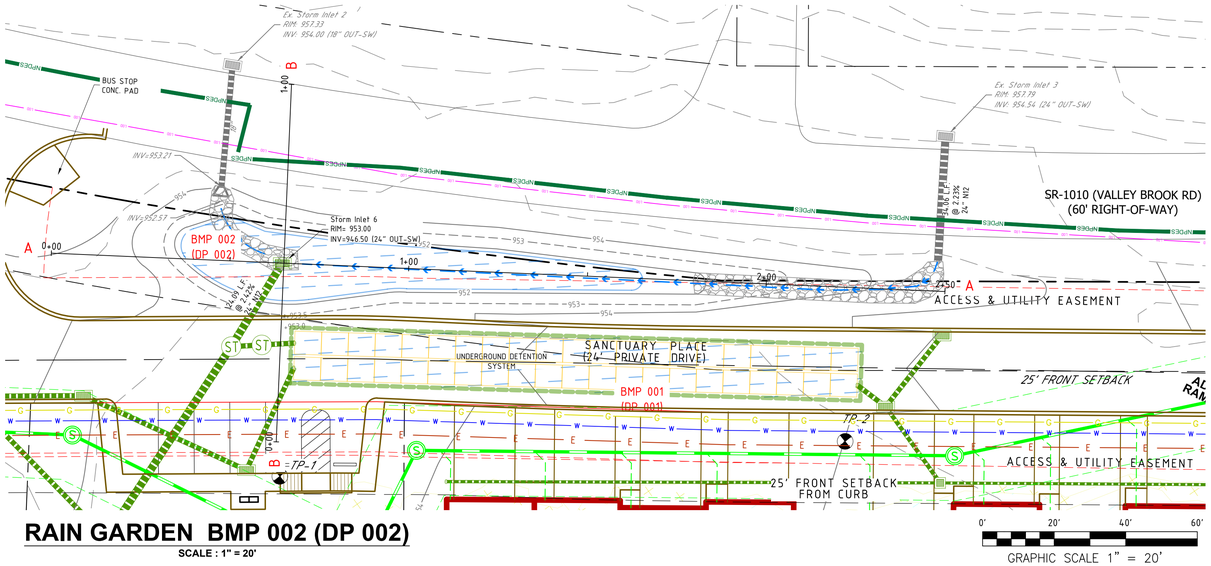


RAIN GARDEN BMP 002 (DP 002)

SCALE : 1" = 20'

ERNEST 180 RAIN GARDEN MIX

Mix Composition

33.4% Schizachyrium scoparium, 'Itasca', MN Ecotype (Little Bluestem, 'Itasca', MN Ecotype)
20.0% Elymus virginicus, 'Madison' (Virginia Wildrye, 'Madison')
7.0% Carex vulpinoidea, PA Ecotype (Fox Sedge, PA Ecotype)
5.6% Chasmanthium latifolium. WV Ecotype (River Oats, WV Ecotype)
5.5% Echinacea purpurea (Purple Coneflower)
3.0% Chamaecrista fasciculata, PA Ecotype (Partridge Pea, PA Ecotype)
3.0% Coreopsis lanceolata (Lanceleaf Coreopsis)
3.0% Panicum clandestinum, Tioga (Deertongue, Tioga)
3.0% Panicum rigidulum, PA Ecotype (Redtop Panicgrass, PA Ecotype)
3.0% Rudbeckia hirta (Blackeyed Syusan)
3.0% Verbena hastat, PA Ecotype (Blue Vervain, PA Ecotype)
2.0% Heliopsis helianthoides, PA Ecotype (Oxeye Sunflower, PA Ecotype)
1.8% Asclepias incarnate, PA Ecotype (Swamp Milkweed, PA Ecotype)
1.0% Carex scoparia, PA Ecotype (Blunt Broom Sedge, PA Ecotype)
1.0% Senna hebecarpa, VA & WV Wcotype (Wild Senna, VA & WV Ecotype)
0.7% Pycnanthemum tenuifolium (Narrowleaf Mountainmint)
0.5% Aster novae-angliae, PA Ecotype (New England Aster, PA Ecotype)
0.5% Aster prenanthoides, PA Ecotype (Zigzag Aster, PA Ecotype)
0.5% Baptisia australis, Southern WV Ecotype (Blue False Indigo, Southern WV Ecotype)
0.5% Zizia aurea (Golden Alexanders)
0.4% Monarda fitulosa, Fort Indiantown Gap-PA Ecotype (Wild Bergamot, Fort Indiantown Gap-PA Ecotype)
0.3% Helenium autumnale, PA Ecotype (Common Sneezeweed, PA Ecotype)
0.3% Juncus tenuis, PA Ecotype (Path Rush, PA Ecotype)
0.2% Eupatorium perfoliatum, PA Ecotype (Boneset, PA Ecotype)
0.2% Juncus effusus (Soft Rush)
0.2% Oenothera fruticosa var, fruticose (Sundrops)
0.2% Solidago nemoralis, PA Ecotype (Gray Goldenrod, PA Ecotype)
0.2% Solidago rugosa, PA Ecotype (Wrinkleeaf Goldenrod, PA Ecotype)

General Product Information:
The native perennial forbs and grasses provide food and cover for rain garden biodiversity. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Item Number: ERNMX-180
Height: 0.3 - 5.0 Feet
Seeding Rate: 20 lb per acre with a cover crop of grain rye at 30 lb per acre

Ernest Conservation Seeds, Inc. | 8884 Mercer Pike, Meadville PA 16335

CONSTRUCTION SEQUENCE

1. INSTALL TEMPORARY SEDIMENT CONTROL BMPS AS SHOWN ON THE PLANS.
2. COMPLETE SITE GRADING. CONSTRUCT STORMWATER INFLOW ENTRANCES BUT PROVIDE PROTECTION SO THAT DRAINAGE IS PROHIBITED FROM LETTING SEDIMENTATION TO ENTER THE THE CONSTRUCTION AREA.
3. STABILIZE GRADING WITHIN THE LIMIT OF DISTURBANCE EXCEPT WITHIN THE RAIN GARDEN AREA. RAIN GARDEN BED ARES MAY BE USED AS TEMPORARY SEDIMENT TRAPS PROVIDED THAT THE PROPOSED FINISH ELEVATION OF THE BED IS 12 INCHES LOWER THAN THE BOTTOM ELEVATION OF THE SEDIMENT TRAP.
4. EXCAVATE RAIN GARDEN TO PROPOSED INVERT DEPTH AND SCARIFY THE EXISTING SOIL SURFACES. DON NOT COMPACT IN-SITU SOILS.
5. BACKFILL RAIN GARDEN WITH AMENDED SOIL AS SHOWN ON THE PLANS AND SPECIFICATIONS. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY.
6. PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT.
7. COMPLETE FINAL GRADING TO ACHIEVE PROPOSED DESIGN ELEVATIONS, LEAVING SPACE FOR UPPER LAYER OF COMPOST, MULCH OR TOPSOIL AS SPECIFIED ON PLANS.
8. PLANT VEGETATION ACCORDING TO PLANTING PLAN.
9. MULCH AND INSTALL EROSION PROTECTION AT SURFACE FLOW ENTRANCES WHERE NECESSARY.

MAINTENANCE ISSUES

1. CATCH BASINS AND INLETS (UPGRADIENT OF RAIN GARDEN) SHOULD BE INSPECTED AND CLEANED AT LEAST FOUR TIMES PER YEAR AND AFTER RUNOFF EVENTS.
2. VEHICLES SHOULD NOT BE PARKED OR DRIVEN ON AN RAIN GARDEN, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
3. INSPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 24 -72 HOURS. MOSQUITOES SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
4. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
5. DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
6. MULCH SHOULD BE RE-SPREAD WHEN EROSION IS EVIDENT AND BE REPLENISHED AS NEEDED. ONCE VERY 2 TO 3 YEARS THE ENTIRE AREA MAY REQUIRE MULCH REPLACEMENT.
7. BIORETEMTION AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
8. DURING PERIODS OF EXTENDED DROUGHT, BIORETENTION AREAS MAY REQUIRE WATERING.
9. TREES AND SHRUBS SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATED HEALTH.

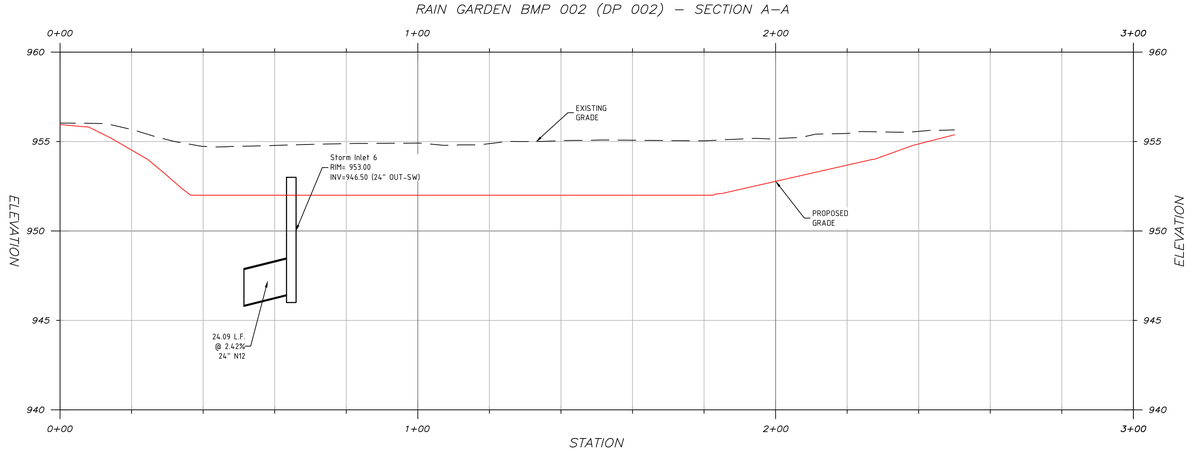
DEWATERING ISSUES

1. INSPECT THE RAIN GARDEN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 24 - 72 HOURS. MOSQUITO'S SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
2. IF THE RAIN GARDEN HAS NOT DRAINED DOWN COMPLETELY WITHIN THE 72-96 HOURS AFTER THE RUNOFF EVENT ENDS. THE VALVE ON THE UNDERDRAIN SHALL BE OPENED TO ALLOW FOR THE UNDERDRAIN TO RELEASE THE REMAINING VOLUME OF WATER IN THE BASIN.
3. ONCE THE BASIN HAS DRAINED, THE VALVE ON THE UNDERDRAIN SHALL BE CLOSED.
4. BASIN SHALL BE MONITORED DURING FUTURE RUNOFF EVENTS TO ENSURE DEWATERING ISSUES DO NOT CONTINUE.

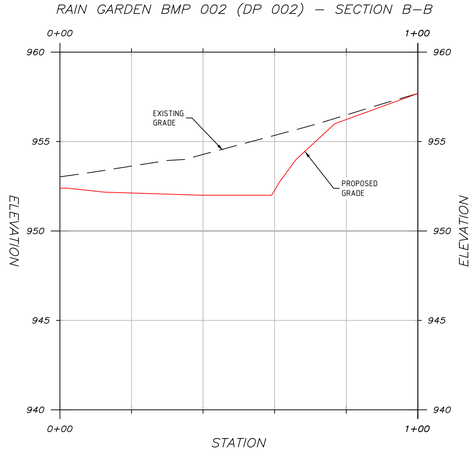
NOTES:

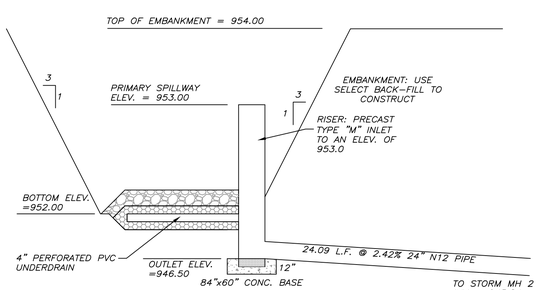
1. THE DRAWING IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM OF 1983, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).

RAIN GARDEN BMP 002 (DP 002) - SECTION A-A

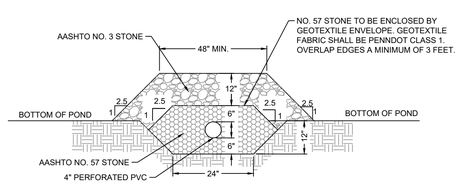


RAIN GARDEN BMP 002 (DP 002) - SECTION B-B

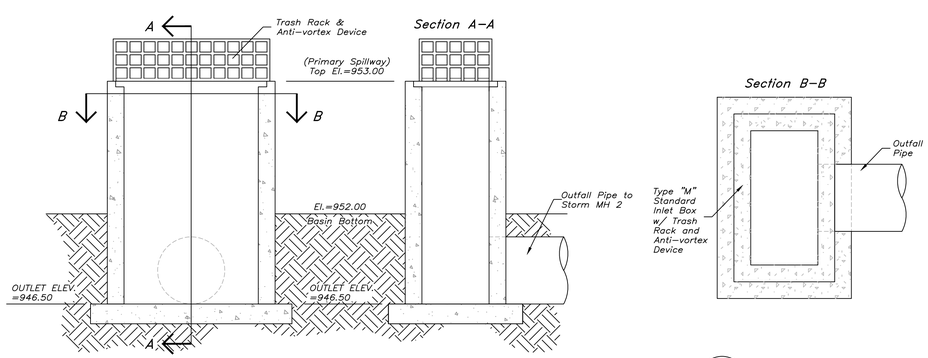




TYPICAL POND SECTION (1 / D8.2)
NOT TO SCALE



UNDERDRAIN DETAIL (2 / D8.2)
NOT TO SCALE



OUTLET STRUCTURE (3 / D8.2)
NOT TO SCALE

Basin	
Top Elev.	954.00
Btm. Elev.	952.00
Embankment Slope	3:1
Outlet Structure	
Top Primary Spillway	953.00
Outfall Pipe	
Inv. Elev.	946.50
Length	24.09
Slope	2.42%
Diameter/Type	24" N12

PERMIT SET
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:

REV	DATE	DESCRIPTION
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS

OWNER:
THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
BMP 002
PLAN & DETAILS

SHEET NO.
D8.3

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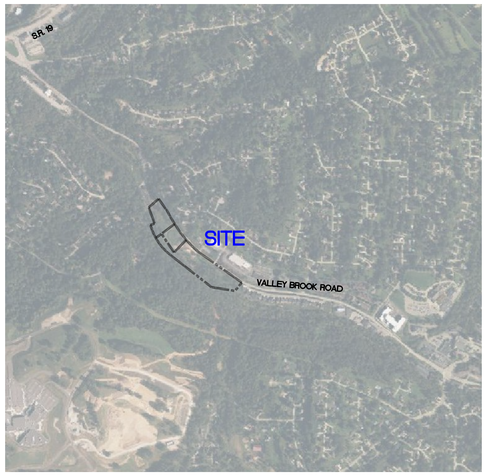
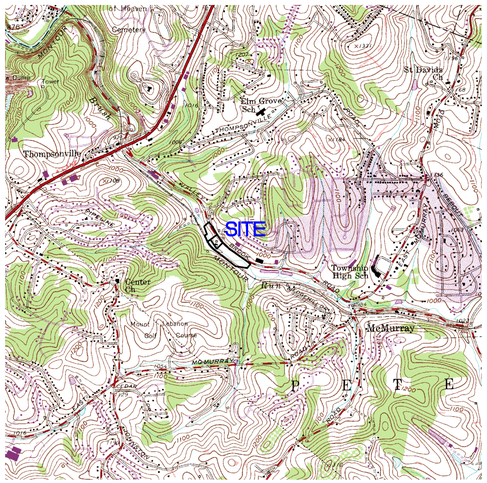
EROSION & SEDIMENTATION CONTROL PLANS
COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY
PENNSYLVANIA

PREPARED FOR:

THOMAS ROBINSON FAMILY, LP



VICINITY MAP
SCALE: 1"=500'



USGS MAP
SCALE: 1"=2000'

NOTE
THE MERIDIAN OF THE PROJECT IS THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, NAD 1983.

FILL MATERIAL NOTICE:
THE CONSTRUCTION OF THIS SITE MAY REQUIRE EXCESS FILL MATERIAL FROM AN OFFSITE FACILITY. ANY FILL MATERIAL SHALL BE FROM A SITE WITH AN APPROVED SEDIMENT AND EROSION CONTROL PLAN APPROVED AND ON FILE AT THE COUNTY CONSERVATION DISTRICT.

1. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.).

2. ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.

3. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF CLEAN FILL."

EROSION & SEDIMENT CONTROL MAINTENANCE & INSPECTION SCHEDULE:

1. THE SPECIFIC INSPECTION AND MAINTENANCE REQUIREMENTS FOR EACH BMP IS LISTED WITH EACH DETAIL.
2. THE SOIL EROSION FACILITIES SHOWN ON THESE PLANS SHALL BE CONSTRUCTED AND MAINTAINED BY THE OWNER, HIS HEIRS OR ASSIGNS.
3. ADDITIONAL MAINTENANCE REQUIREMENTS ARE LOCATED WITH PLAN DETAILS AS APPLICABLE.
4. THE OWNER, THE CONTRACTOR OR ASSIGNS SHALL BE RESPONSIBLE FOR CONTINUING MAINTENANCE OF THE FACILITIES WHICH SHALL INCLUDE SUCH ITEMS AS MOWING, CLEANING AND REMOVING SEDIMENT AND/OR DEBRIS. ALL SEDIMENTS SHALL BE STOCKPILED AND SEEDED AND WILL BE USED IN FINAL GRADING. ALL DEBRIS SHALL BE RECYCLED OR DISPOSED OF IN A LANDFILL.
5. THE OWNER, CONTRACTOR OR ASSIGNS SHALL INSPECT AND/OR REPAIR THE FACILITIES WEEKLY AND AFTER EACH STORM EVENT. THE OWNER, CONTRACTOR OR ASSIGNS SHALL ALSO BE RESPONSIBLE FOR REPARATION OF ANY STRUCTURAL DAMAGES OR FAILURE WHICH MAY OCCUR AS A RESULT OF NEGLIGENCE, ACCIDENT OR MISUSE. IN THE EVENT OF STRUCTURAL DAMAGE, THE OWNER SHALL BE RESPONSIBLE TO MAKE THE NECESSARY REPAIRS AS QUICKLY AS POSSIBLE, BUT IN ANY CASE WITHIN 5 DAYS.
6. A WRITTEN REPORT MUST BE KEPT BY THE CONTRACTOR DOCUMENTING INSPECTIONS AND REPAIRS TO ALL BMPS. THE CONTRACTOR SHALL INSPECT AND LOG ALL ACTIVITIES ONTO DEP FORM 3150-FM-BWEW0083 (DATED 2/2012) AND KEPT ON SITE AT ALL TIMES.

RECYCLING AND DISPOSAL METHODS:
ALL BUILDING AND CONSTRUCTION WASTE MATERIALS MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. NO BUILDING MATERIALS, WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE. BUILDING AND CONSTRUCTION WASTE INCLUDES, BUT IS NOT LIMITED TO: EXCESS SOIL AND ROCK, MISC. BUILDING MATERIALS, CONCRETE AND CONCRETE WASH WATER, SANITARY WASTE AND ANY OTHER MATERIAL THAT COULD HAVE ADVERSE AFFECTS.

UTILITY TRENCHING NOTES:

1. THE EXCAVATED MATERIAL FROM TRENCHING SHALL BE PLACED ON THE UPSLOPE SIDE OF THE TRENCH.
2. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF PIPELINE/UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACK-FILLED IN ONE WORKING DAY.
3. NO MORE THAN 50 LINEAL FEET OF OPEN TRENCH SHOULD EXIST WHEN PIPELINE/UTILITY LINE INSTALLATION CEASES AT THE END OF THE WORKDAY.
4. ANY BMP'S AFFECTED BY TRENCHING AND BACKFILLING OPERATIONS SHALL BE REPAIRED AND STABILIZED IMMEDIATELY.

GENERAL E&S PLAN NOTES:

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY ONTO THE ROADWAY, EXCEPT FOR THE LOCATION OF THE ROCK CONSTRUCTION ENTRANCE.
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
18. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES -- & TO 12 INCHES ON COMPACTED SOILS -- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
29. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
33. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
34. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
35. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

SHEET NO.	SHEET TITLE
D9.0	E&S COVER SHEET
D9.1	OVERALL E&S PLAN
D9.2	E&S DETAILS/NOTES
D9.3	E&S DETAILS/NOTES
D9.4	E&S DETAILS/NOTES

DEVELOPER:
THOMAS ROBINSON FAMILY, LP
108 FROSTY VALLEY DRIVE
MCMURRAY, PA 15317

LANDSCAPE ARCHITECT:
VICTOR-WETZEL ASSOCIATES
409 BROAD STREET, SUITE 270
SEWICKLEY, PA 15143

PROJECT ENGINEER:
KDH CONSULTING ENGINEERS, INC.
593 RUGH STREET, LOWER LEVEL
GREENSBURG, PA 15601
(878) 295-8914
CONTACT: CHRISTOPHER W. HAMM, P.E.

PERMIT SET
NOT FOR CONSTRUCTION

KDH CONSULTING ENGINEERS, INC
593 RUGH STREET
GREENSBURG, PA 15601
P: 878.295.8914 F:724.514.7047
www.kdhengineers.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. HAMM
ENGINEER
PE-080435

REVISIONS:

REV	DATE	DESCRIPTION
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS

CLIENT: THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
E&S COVER SHEET

SHEET NO.
D9.0

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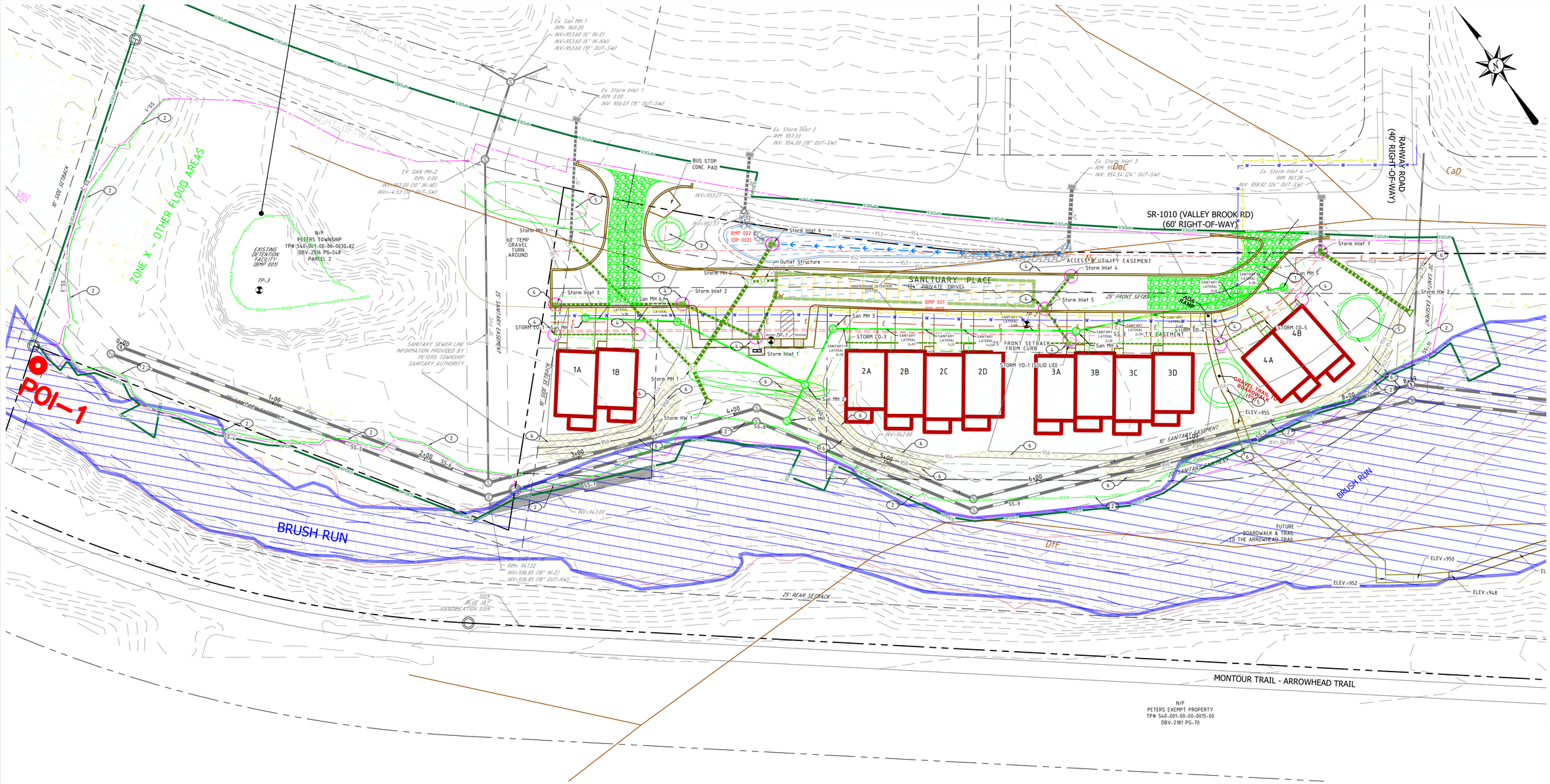
BUS STOP
CONC. PAD
Ex. San MH 1
RIM= 960.20
INV=953.60 (6" IN-E)
INV=953.60 (6" IN-NW)
INV=953.60 (8" OUT-SW)
Ex. Storm Inlet 1
RIM= 0.00
INV= 956.07 (15" OUT-SW)
Ex. Storm Inlet 2
RIM= 957.33
INV= 954.00 (18" OUT-SW)
Ex. Storm Inlet 3
RIM= 959.00
INV= 954.54 (24" OUT-SW)
Ex. Storm Inlet 4
RIM= 961.38
INV= 958.83 (24" OUT-SW)
EX. SAN MH-2
RIM= 0.00
INV=953.08 (18" IN-NE)
INV=+-4.53 TBL (OUT-SW)
N/F
PETERS TOWNSHIP
TP# 540-001-00-00-0030-02
DBV-2516 PG-548
PARCEL 2
EXISTING DETENTION FACILITY (BMP 001)
TP-3
ZONE X - OTHER FLOOD AREAS
80' SETBACK
75' SETBACK
60' TEMP GRAVEL TURN AROUND
Storm MH 3
Storm Inlet 6
Storm MH 2
Outlet Structure
BMP 002
(DP 002)
Storm Inlet 3
Storm Inlet 2
San MH 6
STORM CO-1
San MH 7
Storm Inlet 1
TP-2
TP-1
SANCTUARY PLACE
(24' PRIVATE DRIVE)
UNDERGROUND DETENTION SYSTEM
BMP 001
(DP 001)
Storm Inlet 4
ACCESS & UTILITY EASEMENT
Storm Inlet 5
25' FRONT SETBACK
San MH 5
Storm Inlet 7
Storm HW 2
STORM CO-5
4B
4A
STORM CO-4
STORM CO-3
San MH 3
San MH 4
FRONT SETBACK FROM CURB
STORM YD-1 (SOLID LID)
1A
1B
2A
2B
2C
2D
3A
3B
3C
3D
Storm MH 1
San MH 2
Storm HW 1
San MH 1
SR-1010 (VALLEY BROOK RD)
(60' RIGHT-OF-WAY)
RAHWAY ROAD
(40' RIGHT-OF-WAY)
35' SANITARY EASEMENT
SANITARY SEWER LINE INFORMATION PROVIDED BY PETERS TOWNSHIP SANITARY AUTHORITY
SANITARY LATERAL 6+70
SANITARY LATERAL 5+91
SANITARY LATERAL 5+21
SANITARY LATERAL 4+62
SANITARY LATERAL 3+20
SANITARY LATERAL 1+38
SANITARY LATERAL 2+00
SANITARY LATERAL 1+21
SANITARY LATERAL 0+00
SS-1
SS-2
SS-3
SS-4
SS-5
SS-6
SS-7
SS-8
SS-9
SS-10
SS-11
0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
9+00
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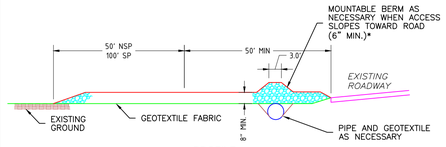
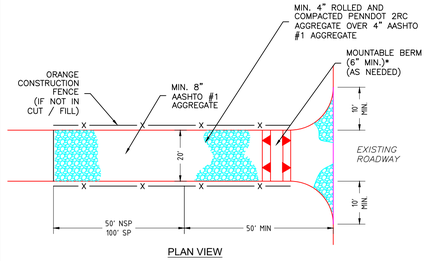
INV=954.04
INV=954.04



PROFILE



PLAN VIEW

*MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NSP – NON SPECIAL PROTECTION WATERSHED
SP – SPECIAL PROTECTION WATERSHED

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.

ALTERNATIVE METHOD LANGUAGE

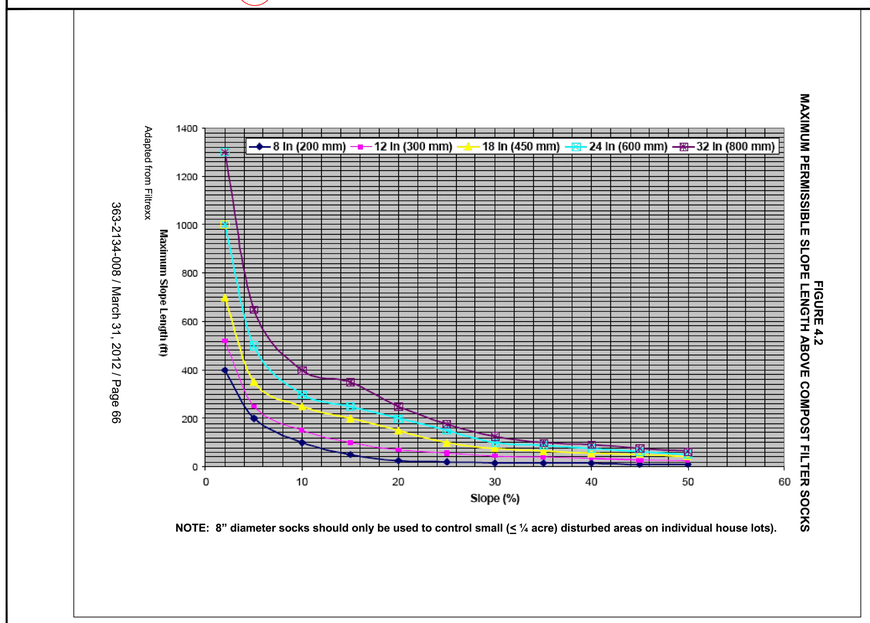
REASONABLE METHODS WHICH ARE SANCTIONED BY THE PADEP AS ALTERNATIVES TO INSTALLATION OF TIRE WASH STATIONS ON PUBLIC ROAD ACCESS POINTS FOR PROJECTS IN EV/HQ WATERSHEDS INCLUDE:

1. *FOR PAVED SURFACE PUBLIC ROADS: USE OF A VACUUM TRUCK SWEEPER OR SWEEPER WITH A CATCH BIN ATTACHMENT.*
2. *FOR DIRT OR GAVEL SURFACE PUBLIC ROADS: RIGOROUS MANUAL REMOVAL OF MUD/DIRT FROM VEHICLE/EQUIPMENT TIRES PRIOR TO EXITING CONSTRUCTION SITE, SUPPLEMENTED BY IMMEDIATE RECOVERY, BY MANUAL OR MECHANICAL MEANS, OF SOIL WHICH MAY BECOME DISCHARGED ONTO PUBLIC ROADWAYS. DUST CONTROL AND/OR COMPACTION VIA ROLLING OF THE DIRT PUBLIC ROAD SURFACE WILL BE IMPLEMENTED AS NEEDED.*

A PREDICATE FOR UTILIZING ALTERNATIVE 1 AND 2 ABOVE IS THAT THE ROCK PAD CONSTRUCTION ENTRANCE MUST BE EXTENDED TO A MINIMUM TOTAL LENGTH OF 100 FEET AND MUST BE CONSTANTLY MAINTAINED INCLUDING STRUCTURE THICKNESS TO INSURE ITS EFFECTIVENESS REMAINS INTACT AT ALL TIMES.

FREQUENCY OF MECHANICAL AND /OR MANUAL CONTROLS WILL BE DEPENDENT UPON CONSTRUCTION TRAFFIC INTENSITY, WEATHER AND SOIL MOISTURE CONDITIONS. THE CONSTRUCTION ENTRANCE SHALL HAVE CONTINUAL MAINTENANCE AND IMMEDIATE REMOVAL OF SEDIMENT TRACKED ONTO THE ROADWAY. THE VACUUM TRUCK SWEEPER OR SWEEPER WITH A CATCH BIN ATTACHMENT SHALL CLEAN THE ROAD WAY. THE REQUIREMENT IS TO NOT INTRODUCE SEDIMENT LOAD FROM CONSTRUCTION TRAFFIC ONTO PUBLIC ROAD SURFACES AND INTO ROAD DITCHES WHICH WILL FLOW INTO THE EV/HQ WATER RESOURCES WHICH ARE THE SUBJECT OF THE INCREASED PROTECTION MEASURES.

3–1 ALTERNATE ROCK CONSTRUCTION ENTRANCE (HQ)



Adapted from Filtrexx

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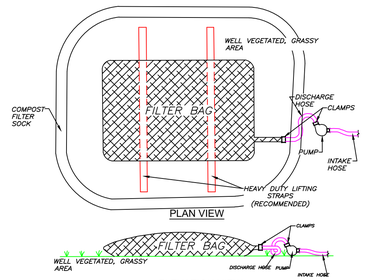
MAXIMUM PERMISSIBLE SLOPE LENGTH ABOVE COMPOST FILTER SOCKS

FIGURE 4.2

NOTE: 8" diameter socks should only be used to control small (≤ ¼ acre) disturbed areas on individual house lots).

FIGURE 4.2 – SLOPE LENGTH CHART



PLAN VIEW

ELEVATION VIEW

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 ½ 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.

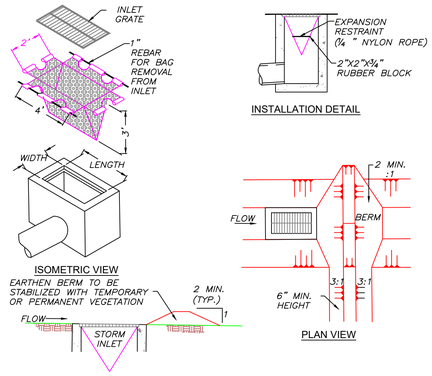
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

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 ½ 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.

3–16 PUMPED WATER FILTER BAG (HQ) (N.T.S.)



MAXIMUM DRAINAGE AREA = ½ ACRE.

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

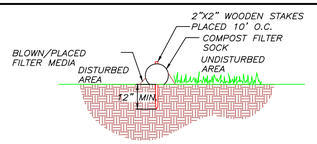
ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

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.

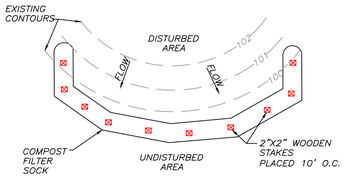
INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED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

4–16 FILTER BAG INLET PROTECTION – TYPE M INLET (N.T.S.)



SECTION VIEW
NTS



PLAN VIEW
NTS

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED MAXIMUM PERMISSIBLE SLOPE LENGTH ABOVE COMPOST FILTER SOCKS. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

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.

BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

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.

4–1 COMPOST FILTER SOCK (N.T.S.)

TABLE 4.1

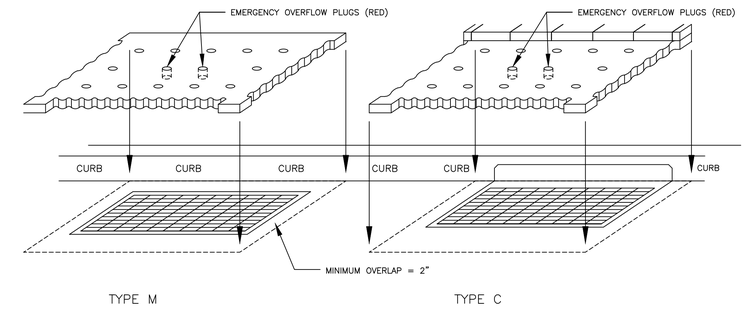
Compost Sock Fabric Minimum Specifications

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"	12"	12"	12"	12"
	18"	18"	18"	18"	18"
		24"	24"	24"	24"
		32"	32"	32"	32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 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 months or less.					

TABLE 4.2

Compost Standards

Organic Matter Content	80% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	98% pass through 1" screen
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum



TYPE M TYPE C

NOTES:

–PRIOR TO INSTALLATION, INLET GRATE SURFACE AND SURROUNDING AREA SHALL BE CLEANED AND CLEARED OF DEBRIS. INLET FILTER MAT SHALL BE INSTALLED WITH A MINIMUM 2" OVERLAP FROM EDGE OF GRATE TO EDGE OF MAT WITH STRAIGHT EDGE FLUSH TO CURB FACE. ADJUST MAT BY HAND UNTIL PLACEMENT ALLOWS FOR OPTIMAL MAGNETIC ADHESION TO GRATE SURFACE.

– PREINSTALLED RED EMERGENCY OVERFLOW PLUGS CAN BE REMOVED IN THE EVENT OF FLOODING TO ALLOW FOR RAPID DEWATERING. AFTER DEWATERING, THE INLET FILTER MAT SHALL BE LIFTED AND THOROUGHLY CLEANED OR REPLACED AND THE AND THE EMERGENCY OVERFLOW PLUGS SHALL BE REINSTALLED. IF GRATE IS AT LOWEST POINT OF STREET, REMOVAL OF ONE PLUG WILL ALLOW FOR EXPECTED DEWATERING AT ALL TIMES.

–INLET FILTER MATS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. AS NEEDED, INLET FILTER MATS SHALL BE LIFTED AND RINSED OR REPLACED. WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET OR THE INLET FILTER MAT BECOMES COMPRESSED DUE TO HEAVY TRAFFIC, REPLACEMENT IS REQUIRED.

–A SUPPLY OF SPARE INLET FILTER MATS SHALL BE MAINTAINED ON SITE. ALL NECESSARY REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED MATS ACCORDING TO THE PLAN NOTES.

BLACKHAWK INLET FILTER SYSTEM (N.T.S.)

KDH CONSULTING ENGINEERS, INC
593 RUGH STREET
GREENSBURG, PA 15601
P: 878-295-8914 F:724-514-7047
www.kdhengineers.com

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHRISTOPHER W. HAHN ENGINEER PE-084435

REVISIONS:			
REV	DATE	DESCRIPTION	
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS	

CLIENT: THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211–008–23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY: CWH

SHEET TITLE: E&S DETAILS/NOTES

SHEET NO. D9.2

PERMIT SET
NOT FOR CONSTRUCTION

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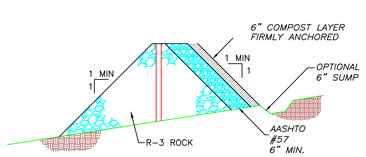
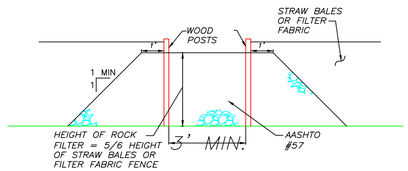


OUTLET CROSS-SECTION

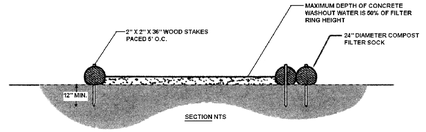


UP-SLOPE FACE

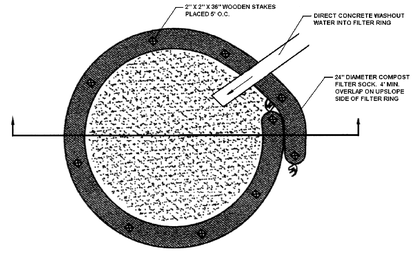
A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

4-6 ROCK FILTER OUTLET (HQ) (N.T.S.)

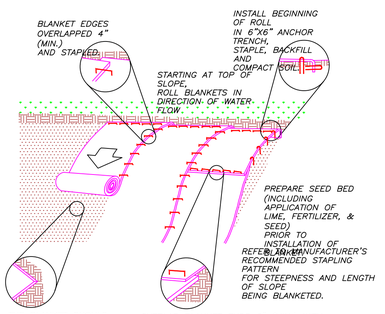


NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 16" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.



A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

TYPICAL COMPOST SOCK WASHOUT INSTALLATION (N.T.S.)



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.

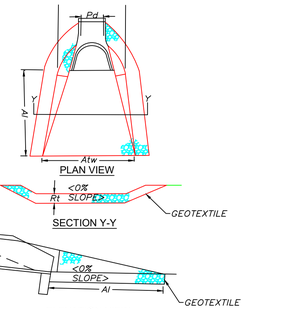
SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

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.

11-1 EROSION CONTROL BLANKET INSTALLATION (N.T.S.)

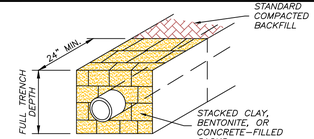


OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE (R-___)	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
Storm HW 1	18	R-4	18	8.0	4.5	12.5
Storm HW 2	24	R-4	18	12.0	6.0	18.0
Storm HW 3	18	R-4	18	8.0	4.5	12.5
Storm HW 4	18	R-4	18	8.0	4.5	12.5
Storm HW 5	24	R-4	18	12.0	6.0	18.0
Storm HW 6	15	R-4	18	8.0	3.75	11.75
DA #1 (BMP-003)	4	R-3	9	6.0	1.0	7.0
DA #1 (BMP-004)	4	R-3	9	6.0	1.0	7.0
DA #1 (BMP-005)	4	R-3	9	6.0	1.0	7.0

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.

9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL (N.T.S.)



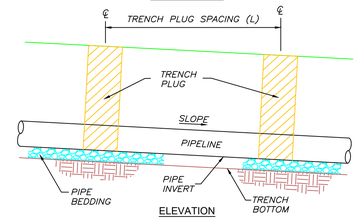


TABLE 13.1
Maximum Spacing and Materials for Trench Plugs

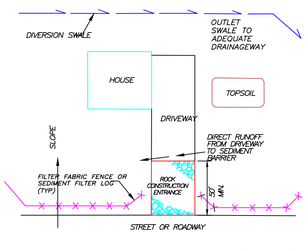
Trench Slope (%)	Spacing L (FT)	Plug Material
< 5	1,000	* Clay, Bentonite, or Concrete Filled Sacks
5 - 15	500	* Clay, Bentonite, or Concrete Filled Sacks
15 - 25	300	* Clay, Bentonite, or Concrete Filled Sacks
25 - 35	200	* Clay, Bentonite, or Concrete Filled Sacks
35 - 100	100	* Clay, Bentonite, or Concrete Filled Sacks
> 100	50	Cement Filled Bags (Wetted) or Mortared Stone

*TOPSOIL MAY NOT BE USED TO FILL SACKS.

IMPERVIOUS TRENCH PLUGS ARE REQUIRED FOR ALL STREAM, RIVER, WETLAND OR OTHER WATER BODY CROSSINGS.

13-4 TYPICAL TRENCH PLUG INSTALLATION (N.T.S.)

WHEREVER A LOT IS SLOPING TOWARD THE ROADWAY, A LAYOUT AS SHOWN BELOW SHOULD BE USED.

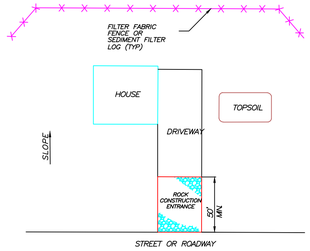


NTS

THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FROM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER MUST EXPERIENCE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING THE DISCHARGE POINT FOR THIS CHANNEL.

10-1 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY (N.T.S.)

WHEREVER A LOT IS SLOPING TOWARD THE ROADWAY, A LAYOUT AS SHOWN BELOW SHOULD BE USED.

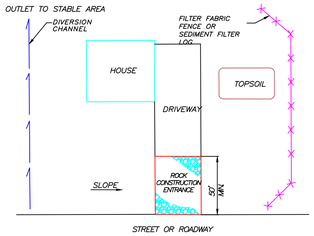


NTS

THE AREA DOWNSLOPE FROM THE FILTER FABRIC FENCE MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

10-2 TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY (N.T.S.)

WHEREVER A LOT IS SLOPING TOWARD THE ROADWAY, A LAYOUT AS SHOWN BELOW SHOULD BE USED.



NTS

THE AREA DOWNSLOPE FROM THE FILTER FABRIC FENCE MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER RUNOFF FROM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING.

IN AREAS WHERE SLOPE IS AT AN OBLIQUE ANGLE TO THE ROADWAY, BMPs SHALL BE ADJUSTED ACCORDINGLY.

DIVERSION CHANNEL MAY OUTLET TO ROADSIDE DITCH OR STORM SEWER SYSTEM, BUT NOT ONTO STREET OR ROADWAY

10-3 TYPICAL ON-LOT BMPs FOR LOT ALONG ASCENDING OR DESCENDING ROADWAY (N.T.S.)

KDH CONSULTING ENGINEERS, INC
593 RUGH STREET
GREENSBURG, PA 15601
P: 878-295-8914 F:724-514-7047
www.kdhengineers.com

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHRISTOPHER W. HAMM ENGINEER PE-080435

REVISIONS:

REV	DATE	DESCRIPTION
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS

OWNER: THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK
PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211-008-23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE: E&S DETAILS/NOTES

SHEET NO. D9.3

PERMIT SET
NOT FOR CONSTRUCTION

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TABLE 11.2
Soil Amendment Application Rate Equivalents
Per DEP "Erosion and Sediment Pollution Control Program Manual", revised March 2012

Soil Amendment	Permanent Seeding Application Rate			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Agricultural Lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultural fields
10-20-20 fertilizer	1,000 lb.	25 lb.	210 lb.	Or as per soil test; may not be required in agricultural fields
Temporary Seeding Application Rate				
Agricultural Lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil stockpiles

Adapted from Penn State. "Erosion Control and Conservation Plantings on Noncropland"

Note: A compost blanket which meets the standards of Erosion and Sediment Pollution Control Program Manual", revised March 2012 Chapter 11 may be substituted for the soil amendments shown in Table 11.2.

Mulching – Cellulose Fiber Mulch; Degradable green dyed wood cellulose fiber or 100% recycled long fiber pulp, free from weeds or other foreign matter toxic to seed germination and suitable to hydra mulching.

Place mulch, of the kind indicated, immediately after seeding or within 48 hours after seeding is completed. Use mulch blanket rate of 2-1/2 tons per acre. Mulching should conform to specifications in table below.

TABLE 11.3
PLANT TOLERANCES OF SOIL LIMITATION FACTORS

Species	Growth Habit[1]	Tolerates				Minimum Seed Specifications[3]				
		Wet Soil	Dry Site	Low Fertility	Acid Soil (pH 5-5.5)[2]	Purity (%)	Ready Germ (%)	Hard Seed (%)	Total Germ (%)	Seeds/lb (1,000s)
Warm-Season Grasses										
Deertongue	bunch	yes	yes	yes	yes	95	75		75	250
Weeping lovegrass	bunch	no	yes	yes	yes	97	75		75	1,500
Switchgrass	bunch	yes	yes	yes	yes		(60 PLS)			390
Big bluestem	bunch	no	yes	yes	yes		(60 PLS)			150
Cool-Season Grasses										
Fine fescues	sod	no	no	yes	no	95	80		80	400
Perennial ryegrass	bunch	yes	no	no	no	95	85		85	227
Annual ryegrass	bunch	yes	no	yes	no	95	85		85	227
Kentucky bluegrass	sod	no	no	no	no	85	75		75	2,200
Timothy	bunch	yes	no	yes	yes	95	80		80	1,230
Smooth bromegrass	sod	no	yes	yes	no	95	80		80	136
Legumes[5]										
Flatpea	sod	no	no	yes	yes	98	55	20	75	10
Sericia lespedeza	bunch	no	yes	yes	yes	98	60	20	80	335
Cereals										
Winter wheat	bunch	no	no	no	no	98	85		85	15
Winter rye	bunch	no	no	no	yes	98	85		85	18
Spring oats	bunch	no	no	no	no	98	85		85	13
Sundangrass	bunch	no	yes	no	no	98	85		85	55
Japanese millet	bunch	yes	no	yes	yes	98	80		80	155

[1] Growth habit refers to the ability of the species to either form a dense sod by vegetative means (stolons, rhizomes, or roots) or remain in a bunch or single plant form. If seeded heavily enough, even bunch formers can produce a very dense stand. This is sometimes called a sod, but not in the sense of a sod formed by vegetative means.

[2] Once established, plants may grow at a somewhat lower pH, but cover generally is only adequate at pH 6.0 or above.

[3] *Minimum seed lots are truly minimum, and seed lots to be used for revegetation purposes should equal or exceed these standards.* Thus, deertongue grass should germinate 75% or better. Crownvetch should have at least 40% readily germinable seed and 30% hard seed. Commonly, seed lots are available that equal or exceed minimum specifications. Remember that disturbed sites are adverse for plant establishment. Ready germination refers to seed that germinates during the period of the germination test and that would be expected, if conditions are favorable, to germinate rapidly when planted. The opposite of ready germination is dormant seed, of which hard seed is one type.

[4] Switchgrass seed is sold only on the basis of PLS.

[5] Need specific legume inoculant. Inoculant suitable for garden peas and sweetpeas usually is satisfactory for flatpea.

Penn State, "Erosion Control and Conservation Plantings on Noncropland,"

TABLE 11.4
Recommended Seed Mixtures
Per DEP "Erosion and Sediment Pollution Control Program Manual", revised March 2012

Mixture Number	Species	Seeding Rate-Pure Live Seed[1]	
		Most Sites	Adverse Sites
1[1]	Spring oats (spring), or	64	96
	Annual ryegrass (spring or fall), or	10	15
	Winter wheat (fall), or	90	120
	Winter rye (fall)	56	112
11	Deertongue, plus	15	20
	Birdsfoot trefoil	6	10
12[2]	Switchgrass, or	15	20
	Big Bluestem, plus	15	20
	Birdsfoot trefoil	6	10
13	Orchardgrass, or	20	30
	Smooth bromegrass, plus	25	35
	Birdsfoot trefoil	6	10

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushels per acre.
2. Do not mow shorter than 9 to 10 inches.

TABLE 11.5
Recommended Seed Mixtures for Stabilizing Disturbed Areas
Per DEP "Erosion and Sediment Pollution Control Program Manual", revised March 2012

Site Condition	Nurse Crop	Seed Mixture (Select One Mixture)
Slopes and Banks (not mowed)		
Well-drained	1 plus	12[1]
Slopes and banks (grazed / hay)		
Well-drained	1 plus	2,3, or 13
Gullies and Eroded Areas		
Erosion Control Facilities (BMPs)		
For hay or silage on diversion channels and Occasional water flow areas	1 plus	13
Utility Right-of-Way		
Well-drained	1 plus	12[1]
Well-drained areas for grazing/hay	1 plus	13

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop.

TABLE 11.6
Mulch Application Rates
Per DEP "Erosion and Sediment Pollution Control Program Manual", revised March 2012

Mulch Type	Application Rate(min.)			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Straw	3 tons	140 lb	1,240 lb.	Either wheat or oat straw, free of weeds, not chopped or finely broken
Hay	3 tons	140 lb.	1,240 lb.	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4 – 6 tons	185 – 275 lb.	1,650 – 2,500 lb.	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb.	415	See limitations below[1]

Notes:

Straw and hay mulch should be anchored or tackified immediately after application to prevent being windblown. A tractor-drawn implement may be used to "crimp" the straw or hay into the soil — about 3 inches. This method should be limited to slopes no steeper than 3H:1V. The machinery should be operated on the contour. Note: Crimping of hay or straw by running over it with tracked machinery is not recommended.

Polymeric and gum tackifiers mixed and applied according to manufacturer's recommendations may be used to tack mulch. Avoid application during rain and on windy days. A 24-hour curing period and a soil temperature higher than 45o F are typically required. Application should generally be heaviest at edges of seeded areas and at crests of ridges and banks to prevent loss by wind. The remainder of the area should have binder applied uniformly. Binders may be applied after mulch is spread or sprayed into the mulch as it is being blown onto the soil. Applying straw and binder together is generally more effective.

Synthetic binders, or chemical binders, may be used as recommended by the manufacturer to anchor mulch provided sufficient documentation is provided to show they are non-toxic to native plant and animal species.

Mulch on slopes of 8% or steeper should be held in place with netting. Lightweight plastic, fiber, or paper nets may be stapled over the mulch according to manufacturer's recommendations.

Shredded paper hydromulch should not be used on slopes steeper than 5%. Wood fiber hydromulch may be applied on steeper slopes provided a tackifier is used. The application rate for any hydromulch should be 2,000 lb/acre at a minimum.

NOTE:

CONTRACTOR SHALL SELECT APPROPRIATE FERTILIZATION AND SEED MIXTURE BASED UPON SOIL CONDITIONS AND SEASON.

4 – 6

ONSITE SEDIMENT CONTROL PLAN MAINTENANCE SCHEDULE

CONTROL MEASURE	INSPECT	PROBLEMS	POSSIBLE REMEDIES (TO BE PERFORMED WITHIN 24 HOURS OR AS SOON AS NOTED.)
VEGETATION	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	SEDIMENT AT TOE OF SLOPE	CHECK FOR TOE OF SLOPE DIVERSION AND INSTALL IF NEEDED
		RILL & GULLIES FORMING	FILL RILLS AND REGRADE GULLIED SLOPES
		BARE SOIL PATCHES	RESEED, FERTILIZE AND MULCH BARE AREAS
COMPOST FILTER SOCK	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	RUNOFF ESCAPING AROUND BARRIER	SECURELY ANCHOR WITH PROPER STAPLES. EXTEND BARRIER AS NEEDED.
		SEDIMENT LEVEL BUILDUP	REMOVE SEDIMENT WHEN LEVEL REACHES HALF (1/2) OR MORE THE HEIGHT OF THE BARRIER.
INLET PROTECTION	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	SEDIMENT BUILD-UP-REDUCE LOW CAP	REMOVE ACCUMULATED SEDIMENT WHEN LEVEL REACHES 1/2" OR MORE THE HEIGHT OF THE BMP. REPLACE INLET PROTECTION.
		MISSING MATERIAL	REPAIR OR REPLACE PROTECTION MATERIALS AS NEEDED.
		FLOODING AROUND OR BELOW INLET	REMOVE ACCUMULATED SEDIMENT; OR CONVERT SEDIMENT BARRIER TO AN EXCAVATED SEDIMENT TRAP; OR REROUTE RUNOFF TO A MORE SUITABLE OUTLET SUCH AS A SEDIMENT TRAP.
PUMPED WATER FILTER BAG	DAILY AND AFTER EACH USE	BAG IS HALF FULL	REPLACE BAG.
		BAG IS CLOGGED OR FLOW IS REDUCED	REPLACE BAG.
ROCK CONSTRUCTION ENTRANCE	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	LOST AND/OR DISLODGED STONES	REPLACE MISSING STONES SO AS TO MAINTAIN SPECIFIED DIMENSIONS.
		SEDIMENT DEPOSITED IN PAVED ROADWAYS	AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE RETURNED TO THE CONSTRUCTION SITE.
CONCRETE WASHOUT	DAILY	MATERIAL BUILDUP	MATERIAL SHOULD BE REMOVED WHEN THEY REACH 75% CAPACITY
		LINERS FAIL	LINERS SHOULD BE REPLACED WITH EACH CLEANING OR WHEN DAMAGE HAS OCCURRED
TRASH RACK	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	DAMAGE	SHALL BE REPLACED IMMEDIATELY
		CLOGGED	SHALL BE CLEANED IMMEDIATELY
WATERBARS	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	DAMAGED OR ERODED WATERBARS	SHALL BE RESTORED TO ORIGINAL DIMENSIONS
EROSION CONTROL BLANKETING	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	DAMAGED OR DISPLACED BLANKETS	SHALL BE RESTORED OR REPLACED WITHIN 4 DAYS
RIPRAP APRONS	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	DISPLACED RIPRAP	SHALL BE REPLACED IMMEDIATELY
SEDIMENT BASINS	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	SEDIMENT LEVEL BUILDUP	SEDIMENT SHALL BE REMOVED
		ANY VISIBLE DAMAGE (EROSION, PIPING, SETTLEMENT)	SHALL BE REPAIRED IMMEDIATELY
SEDIMENT TRAPS	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	SEDIMENT LEVEL BUILDUP	SEDIMENT SHALL BE REMOVED
		ANY VISIBLE DAMAGE (EROSION, PIPING, SETTLEMENT)	SHALL BE REPAIRED IMMEDIATELY
BAFFLES	ONCE A WEEK AND AFTER EVERY RUNOFF EVENT	DAMAGED OR WARPED BAFFLES	SHALL BE REPLACED WITHIN 7 DAYS

E&S CONTROL FACILITIES PROPOSED FOR THE PROJECT ARE SHOWN ON THE E&S CONTROL PLANS. CONTROL MEASURES SHOWN ON THIS PLAN ARE MINIMUM CONTROLS TO PROTECT OFFSITE AREAS FROM SEDIMENT–LADEN RUNOFF. ADDITIONAL CONTROLS MAY BE REQUIRED DEPENDING ON THE PROGRESS OF CONSTRUCTION AND VARYING CONDITIONS ENCOUNTERED.

ROCK CONSTRUCTION ENTRANCE:
A ROCK CONSTRUCTION ENTRANCE WILL BE INSTALLED TO PROVIDE A BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING IT ONTO PUBLIC ROADS, TO CONTROL EROSION FROM SURFACE RUNOFF, AND TO HELP CONTROL DUST AT THE LOCATIONS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE STANDARD DETAIL.

INSTALLATION: TO CONSTRUCT THE PAD, PLACE A LAYER OF 6 INCHES OF STONE ACROSS THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA. THE STONE PAD SHOULD BE AT LEAST 100 FEET IN LENGTH, 25 FEET IN WIDTH, AND 6 INCHES THICK.

MAINTENANCE: ADDITIONAL STONE MAY HAVE TO BE ADDED PERIODICALLY TO MAINTAIN THE PROPER FUNCTIONING OF THE PAD.

COMPOST FILTER SOCK:
COMPOST FILTER SOCKS ARE A TYPE OF CONTAINED COMPOST FILTER BERM. THEY CONSIST OF A BIODEGRADABLE OR PHOTODEGRADABLE MESH TUBE FILLED (TYPICALLY USING A PNEUMATIC BLOWER) WITH A COARSE COMPOST FILTER MEDIA THAT MEETS CERTAIN PERFORMANCE CRITERIA AS SPECIFIED ON THE DETAIL DRAWINGS.

INSTALLATION: COMPOST SOCKS SHALL BE PLACED ON A LEVEL CONTOUR WITH BOTH ENDS OF THE SOCK EXTENDING AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. FILTER SOCKS ARE FLEXIBLE AND CAN BE FILLED IN PLACE OR FILLED AND MOVED INTO POSITION. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

MAINTENANCE: ACCUMULATED SEDIMENTS WILL BE REMOVED AS REQUIRED TO KEEP THE SOCK FUNCTIONAL. IN ALL CASES, REMOVE DEPOSITS WHERE THE SEDIMENT ACCUMULATION HAS REACHED ½ THE ABOVE GROUND HEIGHT OF THE SOCK. ADHERE TO ANY MANUFACTURER'S RECOMMENDATIONS FOR REPLACING SOCK DUE TO WEATHERING.

DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION. BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. 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.

EROSION CONTROL BLANKET:
EROSION CONTROL BLANKETS SHOULD BE USED ON ALL SLOPES THAT ARE 3H:1V OR STEEPER AND WHERE POTENTIAL EXISTS FOR SEDIMENT POLLUTION TO RECEIVING SURFACE WATERS. SINCE ROCK SLOPES POSE LITTLE, IF ANY, POTENTIAL FOR EROSION, CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILL SLOPES NEED NOT BE BLANKETED. EROSION CONTROL BLANKETS SHOULD BE USED FOR ALL SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER –– 100 FEET OF A SPECIAL PROTECTION WATER –– REGARDLESS OF SLOPE.

INSTALLATION: 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.

MAINTENANCE: 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.

TRENCH PLUGS:
TRENCH PLUGS SHOULD BE INSTALLED ON BOTH SIDES OF ALL CROSSINGS TO PREVENT DRAINING STREAMS OR WETLANDS, AND TO PREVENT CHANGES TO THEIR HYDROLOGY. TRENCH PLUGS SHOULD ALSO BE INSTALLED PER THE SPACING TABLE SHOWN IN THE DETAILS.

INSTALLATION: TRENCH PLUGS SHALL BE INSTALLED PER THE DETAIL SHOWN WITHIN THE PLANS.

MAINTENANCE: TRENCH PLUGS SHALL BE INSPECTED REGULARLY TO ENSURE THEY ARE FUNCTIONING PROPERLY. IF A MALFUNCTION IS NOTICE, THE PLUG SHALL BE EXCAVATED AND REPLACED.

TEMPORARY VEGETATIVE STABILIZATION:
TEMPORARY VEGETATIVE STABILIZATION SHALL BE PLACED IN THE LOCATIONS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE SEEDING SPECIFICATIONS PROVIDED TO TEMPORARILY COVER DISTURBED AREAS THAT WILL BE EXPOSED FOR A PERIOD OF MORE THAN FOUR WORKING DAYS. THE TEMPORARY VEGETATION WILL REDUCE PROBLEMS OF MUD AND DUST PRODUCTION FROM BARE SOIL SURFACES DURING CONSTRUCTION.

INSTALLATION: FERTILIZING, SEEDING, AND MULCHING WILL BE USED AS A TEMPORARY E&S CONTROL MEASURE ON ALL NON–PAVED DISTURBED AREAS. EXPOSED SOILS, NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL NOT REMAIN UNSEEDED OR COVERED BY MULCH FOR MORE THAN FOUR DAYS, INCLUDING STOCKPILED SOIL MATERIALS. WITH REGARD TO THE TEMPORARY SEED MIX, REFER TO THE SEEDING MIXTURE TABLE PROVIDED ON THE E&S CONTROL PLAN DETAIL SHEET.
SOIL PREPARATION AND SEEDING PROCEDURES, TO BE APPLIED IN THE ORDER PRESENTED, ARE AS FOLLOWS:
UNLESS APPROVED SOIL TEST RESULTS INDICATE OTHERWISE, EVENLY APPLY THE FOLLOWING SOIL AMENDMENTS:
• 560 POUNDS PER ACRE 18–46–0 DIAMMONIUM PHOSPHATE;
• 335 POUNDS PER ACRE 0–0–60 MURIATE OF POTASH;
• 6 TONS PER ACRE PULVERIZED AGRICULTURAL LIMESTONE; AND
• 4 POUNDS PER ACRE "BIO–PAK" MICROBIAL INOCULANT.*

WHERE SLOPES PERMIT, PROMPTLY DISK ALL AMENDMENTS UNDER TO A 3 TO 6–INCH DEPTH. WHERE SLOPES DO NOT PERMIT TILLAGE, TRACK SLOPE WITH A DOZER AS DESCRIBED UNDER SEEDBED PREPARATION. ON EXTREMELY STEEP SLOPES, AMENDMENTS MAY BE APPLIED WITH THE SEED AND MULCH USING A HYDRO SEEDER AS LONG AS SEED AND INOCULANT IS NOT IN A SLURRY WITH FERTILIZERS FOR MORE THAN ONE HOUR.

PREPARE SEEDBED BY CULTIPACKING OR TRACKING WITH A DOZER USING EQUIPMENT (SUCH AS A LIGHT TRACTOR) AND TECHNIQUE THAT MINIMIZES RUTTING OF THE SURFACE. IF TRACKING IS DONE, RUN DOZER SO TRACK MARKS ARE PARALLEL TO SITE CONTOURS. IF A BRILLION SEEDER IS USED, THIS STEP MAY BE SKIPPED.

JUST BEFORE SEEDING, INOCULATE BIRDSFOOT TREFOIL SEED (WHERE APPLICABLE) WITH LEGUME INOCULANT APPROPRIATE FOR BIRDSFOOT TREFOIL USING AT LEAST FIVE TIMES THE MANUFACTURER'S MINIMUM INOCULANT APPLICATION RATES, THEN EVENLY APPLY THE APPROPRIATE SEED MIXTURE (REFER TO TABLES 1–3 ON DETAILS SHEETS).

LIGHTLY CULTIPACK TO PRESS SEED INTO SEEDBED USING EQUIPMENT (SUCH AS A LIGHT TRACTOR) AND TECHNIQUE THAT MINIMIZES RUTTING OF THE SURFACE. IF A BRILLION SEEDER IS USED, THIS STEP MAY BE CONSIDERED COMPLETE. IF SLOPES ARE TOO STEEP TO PERMIT SEED PREPARATION AND PLACEMENT, USE HYDROSEEDING TECHNIQUES.

PROMPTLY AND EVENLY APPLY STRAW (NOT HAY) MULCH AT A RATE OF 3 TONS PER ACRE USING A BALE–BUSTER OR USING WOOD CELLULOSE FIBER (NOT PAPER PULP) HYDROMULCH AT A RATE OF 2,500 POUNDS PER ACRE. PROMPTLY TACK STRAW INTO PLACE USING ONE OF THE FOLLOWING METHODS: 1) APPLY 800 TO 1,000 POUNDS PER ACRE APPLICATION OF WOOD CELLULOSE FIBER MULCH WITH A HYDROSEEDER OVER THE STRAW; OR, 2) USE A CRIMPER DISK (A SPECIALLY DESIGNED HEAVY DISK WITH NO OFFSET TO THE DIRECTION OF TRAVEL). MAKE MULTIPLE PASSES WITH THE CRIMPER AS NECESSARY TO SECURE THE STRAW.

**NOTE:BIOPAK INOCULANT IS NOT NEEDED FOR TEMPORARY SEEDING. BIOPAK WATER SOLUBLE POWDER IS A MIXTURE OF BENEFICIAL NITROGEN–FIXING AND PHOSPHORUS–SOLUBILIZING BACTERIA (180 BILLION CFU PER POUND) COMBINED WITH BIOCATALYST INGREDIENTS, AS MANUFACTURED BY PLANT HEALTH CARE, INC., 440 WILLIAM PITT WAY, PITTSBURGH, PENNSYLVANIA 15238; 1–800–421–9051.*

CONSTRUCTION WASTE RECYCLING/DISPOSAL:
CONSTRUCTION WASTES AND REFUSE MATERIALS GENERATED DURING THE COURSE OF CONSTRUCTION AND INCLUDE, BUT ARE NOT LIMITED TO, PAPER, PLASTIC, WOOD, FOOD, TEXTILE, AND METAL PRODUCTS.

INSTALLATION: THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING WASTE RECYCLING/DISPOSAL AREAS ON THE EROSION AND SEDIMENT CONTROL PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL WASTE RECYCLING/DISPOSAL PERMITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

MAINTENANCE: ALL CONSTRUCTION WASTE SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF AT A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. THE BURNING OF WASTE MATERIALS SHALL NOT BE PERMITTED.

CONCRETE WASHOUT:
FOR ANY PROJECT ON WHICH CONCRETE WILL BE POURED OR OTHERWISE FORMED ON SITE, A SUITABLE WASHOUT FACILITY MUST BE PROVIDED FOR THE CLEANING OF CHUTES, MIXERS, AND HOPPERS OF THE DELIVERY VEHICLES UNLESS SUCH A FACILITY WILL BE USED AT THE SOURCE OF THE CONCRETE. UNDER NO CIRCUMSTANCES MAY WASH WATER FROM THESE VEHICLES BE ALLOWED TO ENTER ANY SURFACE WATERS. MAKE SURE THAT PROPER SIGNAGE IS PROVIDED TO DRIVERS SO THAT THEY ARE AWARE OF THE PRESENCE OF WASHOUT FACILITIES.

INSTALLATION: WASHOUT FACILITIES SHOULD NOT BE PLACED WITHIN 50 FEET OF STORM DRAINS, OPEN DITCHES OR SURFACE WATERS. THEY SHOULD BE IN A CONVENIENT LOCATION FOR THE TRUCKS, PREFERABLY NEAR THE PLACE WHERE THE CONCRETE IS BEING POURED, BUT FAR ENOUGH FROM OTHER VEHICULAR TRAFFIC TO MINIMIZE THE POTENTIAL FOR ACCIDENTAL DAMAGE OR SPILLS. WHEREVER POSSIBLE, THEY SHOULD BE LOCATED ON SLOPES NOT EXCEEDING A 2% GRADE.
IF COMPOST FILTER SOCKS ARE USED, COMPOST SOCKS SHOULD BE STAKED IN THE MANNER RECOMMENDED BY THE MANUFACTURER AROUND PERIMETER OF THE GEOMEMBRANE SO AS TO FORM A RING WITH THE ENDS OF THE SOCK LOCATED AT THE UPSLOPE CORNER. CARE SHOULD BE TAKEN TO ENSURE CONTINUOUS CONTACT OF THE SOCK WITH THE GEOMEMBRANE AT ALL LOCATIONS. WHERE NECESSARY, SOCKS MAY BE STACKED AND STAKED SO AS TO FORM A TRIANGULAR CROSS–SECTION.

MAINTENANCE: ONCE MATERIAL REACHES 50% OF THE HEIGHT OF THE WASHOUT IT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH THE CONSTRUCTION WASTE RECYCLING/DISPOSAL METHODS SPELLED OUT IN THE REPORT.

PUMPED WATER FILTER BAG:
FILTER BAGS MAY BE USED TO FILTER WATER PUMPED FROM DISTURBED AREAS PRIOR TO DISCHARGING TO SURFACE WATERS. THEY MAY ALSO BE USED TO FILTER WATER PUMPED FROM TRENCHES AND OTHER LOW SPOTS COLLECTING WATER.

INSTALLATION: 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.

MAINTENANCE: FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED. THIS MAY INCLUDE REPLACEMENT OF THE BAG OR REPOSITIONING OF THE BAG.

PERMIT SET
NOT FOR CONSTRUCTION

KDH CONSULTING ENGINEERS, INC
593 RUGH STREET
GREENSBURG, PA 15601
P: 878-295-8914 F:724-514-7047
www.kdhengineers.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER W. HAMM
ENGINEER
PE–080435

REVISIONS:

REV	DATE	DESCRIPTION
1	1/6/25	ADDRESS TWP. ENGINEER COMMENTS

CLIENT: THOMAS ROBINSON FAMILY, LP

COURTYARDS AT VALLEY BROOK

PETERS TOWNSHIP, WASHINGTON COUNTY, PA

PROJ NO: 211–008–23
DATE: 12/12/2024
DRAWN BY: RAM
CHECKED BY:CWH

SHEET TITLE:
E&S DETAILS/NOTES

SHEET NO.
D9.4

C: \USERS\RMONGELL\DOCUMENTS\211–008–23–BASE–250106.DWG