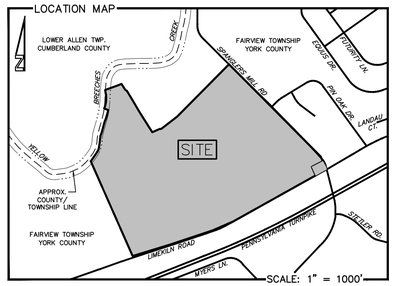
TUS A-5.1_ATTACHMENT

PRELIMINARY SUBDIVISION PLAN

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN FOR SIENNA

FAIRVIEW TOWNSHIP
YORK COUNTY, PENNSYLVANIA



INDEX OF DRAWINGS

1 • COVER SHEET
2 • OVERALL PROJECT DIAGRAM / PHASE SCHEDULE
3 • AERIAL CONTEXT PLAN
4 • OVERALL EXISTING FEATURES PLAN
5-10 • EXISTING FEATURES PLAN
11 • EXISTING LOT CONSOLIDATION DIAGRAM
12-17 • DETAILED SITE PLAN
18-23 • GRADING / UTILITY PLAN
24-29 • EASEMENT PLAN
30-35 • LANDSCAPE AND LIGHTING PLAN
36-41 • PRELIMINARY/CONCEPTUAL EROSION CONTROL PLAN
42-52 • STREET AND PRIVATE ACCESS DRIVE PROFILES
53-56 • SANITARY SEWER PROFILES
57-71 • STORM SEWER PROFILES
72-76 • SWALE PROFILES
77-78 • SANITARY SEWER FORCE MAIN PROFILE
79 • STREAM CROSSING PROFILES / DETAILS
80 • PEDESTRIAN BRIDGE DETAILS
81-89 • MISCELLANEOUS DETAILS AND NOTES

DATE :

JUNE 4, 2021

REVISED :

SEPTEMBER 21, 2021
NOVEMBER 22, 2021

WAIVER/MODIFICATION REQUESTS

THE FOLLOWING WAIVERS OR MODIFICATIONS ARE REQUESTED FROM THE FAIRVIEW TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE:

SECTION	DESCRIPTION	DATE OF REQUEST	DATE OF APPROVAL
*260-22.A.(7)	Pertaining to improvement of existing streets (no curbing is proposed)	6/4/2021	
*260-22.B.(2)	Pertaining to improvement of existing streets (no curbing is proposed)	6/4/2021	
*260-25.A.(1)	Pertaining to sidewalk location	6/4/2021	
*260-25.A.(4)	Pertaining to sidewalk construction	6/4/2021	
260-26.C.2.(b	Pertaining to the number of access drives per lot on street frontage	6/4/2021	
260-35.C.2.(b)	Pertaining to Rational Method	6/4/2021	
260-35.C.3.(b)	Pertaining to Rational Method	6/4/2021	
*260-35.C.3.(i)	Pertaining to fencing of stormwater detention basins	6/4/2021	
260-35.C.3.(j)	Pertaining to basin bottom slope	6/4/2021	
260-35.C.3.(k)	Pertaining to maximum side slope of storm basin	6/4/2021	
260-35.C.3.(l)	Pertaining to storm basin berm width	6/4/2021	
260-35.C.(3)(g)(1	Pertaining to emergency spillway depth	10/4/2021	
*260-35.D.2.(a).4	Pertaining to minimum pipe size	6/4/2021	

*Modification Only

THE FOLLOWING WAIVERS OR MODIFICATIONS ARE REQUESTED FROM THE FAIRVIEW TOWNSHIP STORMWATER MANAGEMENT ORDINANCE:

SECTION	DESCRIPTION	DATE OF REQUEST	DATE OF APPROVAL
*252-10.L	Pertaining to stormwater facility setback	6/4/2021	
*252-17.C.(1).(b)	Pertaining to storm basin top width	6/4/2021	
*252-17.C.(1).(c)	Pertaining to storm basin side slopes	6/4/2021	
252-17.C.(1).(e	Pertaining to basin outlet control perforations	10/4/2021	
*252-19.D	Pertaining to rate and volume calcs. during erosion control phase	10/4/2021	

*Modification Only

GENERAL NOTES

1. The purpose of this plan is to combine several existing lots into one tract, then develop the tract as a planned community with a multiple-phase residential development of mixed housing types.
2. A portion of this site is subject to the Scenic River Corridor Overlay (SRCO) Zoning District, Section 300-27 of the Township Zoning Ordinance. The district extends 100 feet from the top of stream bank of Yellow Breeches Creek as depicted herein. No development is proposed within the overlay district with the exception of possible private paved and unpaved recreational trails.
3. A portion of this site is subject to the Floodplain Overlay (FPO) Zoning District. No development, filling or earth disturbance is proposed within the overlay district.
4. This site is subject to the Airport Overlay (APO) Zoning District. No proposed building or structure shall exceed the 75 feet in height from surrounding ground level. PennDOT Form AV-57will be filed with the Bureau of Aviation for clearance.
5. The following non-conformities exist on this property: multiple fence locations are within 5 feet of the property line.
6. All existing pasture fences internal to the site shall be removed.
7. The locations of underground utilities shown should be considered approximate, and horizontal location, vertical location and size shall be verified by the site contractor.
8. Yellow Breeches Creek and the two intermittent tributaries on this site are designated by PA DEP as cold water fisheries (CWF). These streams have no listed impairments.
9. See a Traffic Impact Study prepared by Alpha Consulting Engineers, Inc..
10. See a Carbonate Assessment report prepared by Read & Associates, LLC, for evaluation of geology on this site.
11. No covenants are proposed other than what is shown on this plan and the planned community documents associated with this project.
12. The phasing of this project is subject to change over time, subject to approval by the Fairview Township Board of Supervisors.
13. The developer and their contractor(s) must comply with section 260-35.J.(1) of the Township Subdivision and Land Development Ordinance pertaining to scheduling of inspections and Township right of entry for inspection.
14. Sienna Boulevard shall be offered for dedication to Fairview Township as a public street. Additional right-of-way along Limekiln Road and Spanglers Mill Road shall be offered for dedication to Fairview Township.
15. All proposed access drives shall be owned and maintained by the developer until ownership and maintenance is transferred to a homeowners association.
16. The proposed 10-foot wide public access easement is for pedestrian and non-motorized bicycle use only, by the public across this property, in lieu of typical sidewalks in the street right-of-way. The lot owner and/or homeowners association shall be responsible for maintenance of the path.
17. For each single family attached dwelling (townhouse) building, no more than two consecutive (2) units shall have the same front building setback, front building line, and roofline. The minimum variation of the front building setback and front building line shall be (4) feet. In addition, each single family attached dwelling unit shall be distinguished from the abutting single family attached dwelling in some appropriate manner, such as by varying unit width, use of different exterior materials, or varying arrangement of entrances or windows. Compliance shall be reviewed by the Township at the time of building permit application.
18. Proposed sanitary sewer gravity mains, force main and sewage pumping station will be offered for dedication to Pennsylvania American Water as a public sewer system.
19. Proposed water mains will be offered for dedication to Pennsylvania American Water as a public water system. Fire hydrants located within dedicated and accepted street rights-of-way shall be public hydrants owned by Pennsylvania American Water. All other fire hydrants shall be private.
20. Concrete monuments will be set where shown. All other unmarked lot corners shall be marked with iron pins, except lot corners located within Yellow Breeches Creek. Monuments and markers shall be set after recording of this plan, after public improvements have been installed, and after final grading is complete. Monuments and markers shall be set per Section 260-31 of the S.A.L.D.O.
21. A highway occupancy permit is required pursuant to Section 420 of the Act of June 1, 1945 (P.L. 1241, No. 428). No building permit will be issued for any lot or parcel which will require access to a state highway until authorized by a Pennsylvania Department of Transportation highway occupancy permit.
22. All proposed public street lights along Sienna Boulevard , Limekiln Road and Spangler Mill Road shall meet Fairview Township specifications, and shall be owned and maintained by the Township.
23. Street / access drive name signs shall be placed at all intersections and shall be visible from both directions. The type of sign and the location shall be approved by the Township Board of Supervisors, per section 260-25.C. of the subdivision and land development ordinance.
24. The developer shall pay a recreation fee per new dwelling unit, in lieu of providing park and recreation land, to be paid at the time of recording of the Final Plan for each phase. No lands or facilities are proposed for public recreation.
25. Each proposed individual detached single family unit shall have a minimum of two off-street parking spaces on in a garage, and/or in the paved driveway in front of the garage.
26. Impervious coverage for lot impervious coverage calculation and stormwater management design is based upon the proposed features shown on this plan, including the building outlines, driveways, parking lots, patios and walks. For the stormwater management calculations for this project, the following impervious assumptions are made for each individual single family detached home:
    --3,000 square feet for the house footprint;
    --100 square feet behind the house for a patio.
    --50 square feet in front of the house for walks / stoop.
    --driveways as shown on the site plan.
27. Within clear sight triangles shown at street intersections, no obstructions to vision exceeding 36" in height above the street cartway grade shall be erected or maintained, except required traffic control and street identification signs, and street lights.
28. At apartment buildings central trash and recycling collection facilities are proposed. Trash collection for the remainder of the project shall be determined by the township.
29. This site is underlain with carbonate rock (limestone or dolomites). There is potential for sinkhole development, therefore, special construction procedures may apply. A professional geotechnical engineer / hydro-geologist should be retained to oversee sinkhole repairs in the event that a sinkhole materializes. Perspective home buyers should investigate the purchase of sinkhole insurance.
30. Nothing shall be built, placed, planted, set or put within the area of an easement that would adversely affect the function of the easement. No person, firm, corporation, or other entity shall block, impede the flow of, alter, construct any structure, or place any other improvement in a sanitary sewer or drainage easement other than what is depicted on this plan or otherwise approved by Fairview Township.
31. The developer or subsequent homeowners association may restrict vehicular parking at their discretion, to one side of a private access drive, which would be restricted with 'no parking this side' signage. The Township shall not be responsible for enforcement of parking restrictions on private access drives.
32. Any landscaping within islands located within a street or access drive shall be owned and maintained by the developer until maintenance responsibility is transferred to a homeowners association. Fairview Township shall not be responsible for any damage to the plantings for any reason. The Township may trim or remove plantings if deemed necessary for visibility and public safety.
33. No basements or exposed lower floor levels are guaranteed to have gravity sewer service.
34. Any construction and earthmoving within the Enterprise / Sinclair pipeline right-of-way must be approved by the pipeline company.
35. Mail delivery, and location of common mailbox areas, shall be determined by the United States Postal Service.
36. All proposed stormwater management facilities not located in an accepted public street right-of-way shall be maintained by a homeowners association for the development; see the Operation and Maintenance Program. All stormwater management facilities located in an accepted Township street right-of-way shall be owned and maintained by Fairview Township.
37. An easement is hereby granted to Fairview Township to access and modify basin outlet control devices at the expense of the developer so as to function within design parameters. Fairview Township representatives shall have the right to access via drainage easements and private access drives any stormwater management BMPs proposed on this plan, at reasonable times and upon presentation of proper credentials.
38. No person shall modify, fill, damage, impair/impede, landscape, alter, or affect proper functioning of any stormwater management BMPs, facilities, areas or structures without written approval of Fairview Township, with the exception of routine and necessary maintenance of vegetation such as mowing, and erosion control or other necessary maintenance activity outlined in the operation and maintenance program for BMPs. No person, firm, corporation or other entity shall block, impede the flow of, alter, construct any structure, or place any other improvement in any drainage easement, except as approved by Fairview Township.
39. Erosion and Sedimentation Control Plan approval is required prior to the commencement of any earth disturbance activities associated with this project. A General NPDES permit is required. A detailed erosion control plan will be prepared with the Final Plan for each phase, addressing the earthmoving associated with that phase; such plans must be approved by the York County Conservation District. The erosion control design shown on this plan is schematic only.
40. The proposed sanitary sewer design and water supply design shown hereon is preliminary, and shall be superseded by the final design approved by PA American Water.
41. All spot elevations are referenced to the finished ground surface unless otherwise noted. All elevations shown are referenced to a benchmark and shall be verified by the contractor at groundbreaking.
42. The contractor shall reference detailed building plans for exact building dimensions, elevations, and utility service points, which may differ from what is depicted herein.
43. It is the responsibility of the contractor to bid and perform all utility work in compliance to all applicable local and state codes and regulations.
44. The contractor shall be responsible for all fees associated with the installation, inspecting, testing and final acceptance of all proposed utilities construction.
45. Contractor shall coordinate with the appropriate utility company on the addition, removal and/or relocation of utilities and utility poles and the extension of all proposed utilities.
46. All utilities shall be installed in accordance with the specifications of the respective utility company. It is the responsibility of the contractor to ensure all utilities are installed correctly to meet project requirements whether performed by the contractor or not. Contractor to contact utility companies and coordinate utility connections, including electric and gas.
47. All storm sewer piping, underground roof drains, and connections to be watertight, unless otherwise indicated.
48. The removal of any sub-surface disposal systems and/or well abandonment shall comply with all local, State and Federal regulations. The developer or contractor is responsible for obtaining necessary permits for this work.
49. Crosswalks shall be applied to the final pavement wearing course and shall be white thermoplastic in accordance with Penndot TC standards.
50. All ADA accessible ramps, parking spaces shall meet applicable ADA standards. The contractor shall verify ADA compliance before placement of asphalt or concrete.
51. All fill areas for proposed structures, streets, parking lots, access drives and public utilities shall be constructed and compacted in accordance with the latest international building code, and shall be tested and confirmed by a qualified soils expert, professional engineer, geo-technical engineer or soils scientist approved by the Owner prior to installation of improvements on or in the fill. The contractor shall verify that the subgrade is prepared in accordance with the geotechnical engineer's recommendations. All unsuitable material within structural fill areas must be removed and replaced with suitable material to a depth directed by the Owner's geotechnical consultant.
52. The contractor and home builder are responsible for maintaining positive drainage away from all buildings. The finish grade around each building foundation must be a minimum of eight (8) inches below the finish floor elevation, or provide the minimum vertical separation distance required by the local building code. All finish grade pervious surfaces shall be graded away from the building at a minimum of five (5) percent for the first ten (10) feet, or as required by the local building code. All finish grade impervious surfaces shall be graded away from the building at a minimum of two (2) percent for the first ten (10) feet, or as required by the local building code. The contractor and/or home builder shall set the final building elevation accordingly. Floor elevations shown herein are approximate.
53. All finish floor elevations must be set a minimum of 1.5 feet above the calculated 100-year water surface elevation of any adjacent stormwater retention or detention facility.
54. All public improvements construction shall conform to the requirements of Fairview Township, unless specific waivers are granted.
55. Any non-public or non-regulated improvements shown on this plan, such as recreation and community center features, but not specifically detailed shall be selected and coordinated by the developer or their representative.
56. Limekiln Road and Spanglers Mill Road are classified as collector streets by the Fairview Township Comprehensive Plan as found on Map 5, dated June, 2010.
57. No building permit will be issued until the Township Engineer has verified the sight distance and roadway access safety.
58. No direct vehicular motorized access to Spangler Mill Road or Limekiln Road shall be permitted other than what is shown on this plan.
59. The island within Sienna Boulevard shall be owned and maintained by the developer until transferred to a homeowners association. It shall be used only for project signage and landscape amenities. It shall not be a building lot.
60. The receiving streams, the Yellow Breeches and the two unnamed tributaries to it within this site, are designated as cold water fisheries (CWF) by Chapter 93.
61. All development on this site shall comply with the performance standards for all uses, as listed and described in zoning ordinance section 300-46, for issues including vibration, noise, air pollution, odors, water pollution, heat, public nuisances, and outdoor lighting.
62. All proposed signs on this site must comply with Article IX of the zoning ordinance.
63. As-built plans are required as described in section 260-35.F. of the Township subdivision and land development ordinance upon completion of all required improvements and prior to release of the performance bond.
64 . All storm sewer construction shall be in accordance with the latest editions of PennDOT Publications 408 and 72, as applicable.
65. Patios, terraces, decks and other similar uncovered (at any point) structures, provided the structure elevation shall not be more than three feet above grade, may extend into any required rear or side yard and/or side setback and rear setback not more than five feet , as long as there is a minimum of five feet remaining between the structure and the lot line.

OVERALL SITE DATA

NOTE: THIS IS OVERALL SITE DATA; MORE SPECIFIC DATA CAN BE FOUND ON SHEET #2.

1. Applicant / Developer--
   Burkentine Real Estate Group
   1454 Baltimore Street, Suite A
   Hanover, PA 17331
   Phone: (717) 633-5163
2. Total Site area:
   Gross (includes Spanglers Mill Road and Limekiln Road right-of-way): 4,955,613 square feet, or 113.77 acres.
   Net (excludes existing and proposed Spanglers Mill Road and Limekiln Road street right-of-way): 4,786,780.16 square feet, or 109.89 acres.
3. The entire site is zoned RMU: Residential Mixed-Use Zoning District. This site is in the Airport Hazard Zoning District - Airport Surface Zone.
4. This site is identified by the York County Tax Assessment Office as parcels 27-000-RE-003E, 27-000-RE-0029C, 27-000-RE-0029D, 27-000-RE-0029B, 27-000-RE-0029A, and 27-000-RE-0021E.
5. Existing number of lots: 6 (all to be removed)
6. Proposed number of lots: 1
7. Proposed number of dwelling units by use type:
   --134 single family detached dwellings
   --209 single family attached (townhouse) dwellings
   --312 multifamily (apartment) units
   --655 Total number of units
8. Proposed total number of proposed dwelling units for the entire tract: 655
9. Proposed density for the entire tract: 5.96 dwelling units per net tract acre.
10. Proposed water supply for all lots: public (PA American Water)
11. Proposed sewage disposal for all proposed lots: public (PA American Water)

ZONING REQUIREMENTS
The site is zoned RMU: Residential Mixed-Use Zoning District.

A. For single family detached dwellings with public water and public sewer
1. Maximum density: 6 units per lot area
2. Minimum net lot area: 6,600 square feet
3. Minimum lot width at lot frontage: 60 feet; 75 feet for a corner lot
4. Minimum front setback: 30 feet
5. Minimum side setback: 10 feet
6. Minimum rear setback: 25 feet
7. Maximum impervious lot coverage: 50%
8. Minimum vegetative coverage: 20%
9. Maximum building height: 35 feet, however, the height of any principal structure may exceed the maximum permitted height requirement by one additional foot for every one additional foot that the width of each yard exceeds the required yard and setback regulations for principal structures.
10. Minimum number of off-street parking spaces: 2 per dwelling unit

B. For single family attached dwellings (townhouses) with public water and public sewer
1. Maximum density: 6 units per lot area
2. Minimum net lot area: 2,400 square feet
3. Minimum lot width at interior lot frontage: 24 feet; 39 feet for a corner lot
4. Minimum front setback: 30 feet
5. Minimum side setback: 10 feet; 0 feet at a shared lot line constructed with a common party wall
6. Minimum rear setback: 25 feet
7. Maximum impervious lot coverage: 60%
8. Minimum vegetative coverage: 20%
9. Maximum building height: 35 feet, however, the height of any principal structure may exceed the maximum permitted height requirement by one additional foot for every one additional foot that the width of each yard exceeds the required yard and setback regulations for principal structures.
10. Maximum number of abutting units in a row: 6
11. No more than 2 abutting units shall have the same front building setbacks, front building lines and rooflines. The minimum variation of the front building setback and front building line between units is 4 feet.
12. Minimum number of off-street parking spaces: 2 per dwelling unit, plus 0.5 space per unit in a common visitor compound.

C. For multifamily dwellings (apartments) with public water and public sewer
1. Maximum density: 6 units per lot area
2. Minimum lot area per dwelling unit: 2,000 square feet
3. Minimum lot width for interior lots: 85 feet; 100 feet for a corner lot
4. Minimum front setback: 30 feet
5. Minimum side setback: 10 feet
6. Minimum rear setback: 25 feet
7. Maximum impervious lot coverage: 50%
8. Minimum vegetative coverage: 20%
9. Maximum building height: 35 feet, however, the height of any principal structure may exceed the maximum permitted height requirement by one additional foot for every one additional foot that the width of each yard exceeds the required yard and setback regulations for principal structures.
10. Minimum building separation when located on the same lot:
--front to front, or rear to rear parallel buildings: 45 feet, but if the front or rear faces are obliquely aligned, the above distances may be decreased by as much as 10 feet at one end if increased by similar or greater distance at the other end.
--end wall to end wall: 25 feet, but if the buildings are at right angles to each other, the distance between the corners of the end walls may be reduced to 15 feet.
--end wall to front or rear face of building: 25 feet.
11. Minimum multifamily dwelling building setback from interior access drive or parking facility: 15 feet
12. Minimum number of off-street parking spaces: 2 per dwelling unit, plus 0.5 space per unit in a common visitor compound.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF _____

ON THIS, _____ DAY OF _____, 20__ BEFORE ME THE UNDERSIGNED, PERSONALLY APPEARED, WHO BEING DULY SWORN ACCORDING TO LAW, DISPOSES AND SAYS THAT THEY ARE THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN AND THAT THEY ACKNOWLEDGE THE SAME TO BE THEIR ACT AND DEED AND DESIRE THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

_____
OWNER

WITNESS MY HAND AND NOTARIAL SEAL THE DAY AND DATE ABOVE WRITTEN.

MY COMMISSION EXPIRES _____, 20__ _____
NOTARY PUBLIC

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF _____

ON THIS, _____ DAY OF _____, 20__ BEFORE ME THE UNDERSIGNED, PERSONALLY APPEARED, WHO BEING DULY SWORN ACCORDING TO LAW, DISPOSES AND SAYS THAT THEY ARE THE EQUITABLE OWNER OF THE PROPERTY SHOWN ON THIS PLAN AND THAT THEY ACKNOWLEDGE THE SAME TO BE THEIR ACT AND DEED AND DESIRE THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW AND THEY ARE AWARE OF, AND WILL BE RESPONSIBLE FOR, OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES, AND THEY ARE TO BE A PERMANENT FIXTURE THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE TOWNSHIP, AND THAT A EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO THE YORK COUNTY CONSERVATION DISTRICT FOR A DETERMINATION OF ADEQUACY.

_____ BURKENTINE REAL ESTATE GROUP
EQUITABLE OWNER

WITNESS MY HAND AND NOTARIAL SEAL THE DAY AND DATE ABOVE WRITTEN.

MY COMMISSION EXPIRES _____, 20__ _____
NOTARY PUBLIC

THIS PLAN REVIEWED BY THE YORK COUNTY PLANNING COMMISSION THIS _____ DAY OF _____, 20__.

CHAIRMAN _____

SECRETARY _____

AT A MEETING ON THE _____ DAY OF _____, 20__, THE FAIRVIEW TOWNSHIP PLANNING COMMISSION REVIEWED THIS PLAN ACCORDING TO THE REQUIREMENTS OF THE FAIRVIEW TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. THIS CERTIFICATE DOES NOT INDICATE APPROVAL OR DISAPPROVAL BY THE FAIRVIEW TOWNSHIP BOARD OF SUPERVISORS.

CHAIRMAN _____

VICE CHAIRMAN _____

THIS PLAN APPROVED BY THE BOARD OF SUPERVISORS OF FAIRVIEW TOWNSHIP THIS _____ DAY OF _____, 20__.

CHAIRMAN _____

SECRETARY _____

THIS PLAN REVIEWED BY THE TOWNSHIP ENGINEER OF FAIRVIEW THIS _____ DAY OF _____, 20__, AND I HAVE REVIEWED AND HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF TOWNSHIP ORDINANCE NO. 2012-5.

TOWNSHIP ENGINEER _____

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE FAIRVIEW TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

_____ _____
JOHN K. MURPHY, P.E., P.L.S.. DATE

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE PLAN INFORMATION HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE FAIRVIEW TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE STORM DRAINAGE FACILITIES SHOWN AND DESCRIBED HEREON ARE DESIGNED IN CONFORMANCE WITH ARTICLE VII, DRAINAGE AND STORMWATER MANAGEMENT, OF THE FAIRVIEW TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

_____ _____
JOHN K. MURPHY, P.E., P.L.S. DATE

UTILITY LISTING FOR FAIRVIEW TOWNSHIP

- WATER SERVICE — PENNSYLVANIA AMERICAN WATER, 852 WESLEY DRIVE, MECHANICSBURG, PA 17055, CONTACT: JEFF HORTON, EMAIL: Jeff.Horton@amwater.com
- SANITARY SEWER — PENNSYLVANIA AMERICAN WATER, 852 WESLEY DRIVE, MECHANICSBURG, PA 17055, CONTACT: JEFF HORTON, EMAIL: Jeff.Horton@amwater.com
- TELEPHONE — VERIZON PENNSYLVANIA LLC, 1026 HAY STREET, PITTSBURGH, PA 15221, CONTACT: DEBORAH BARUM, EMAIL: deborah.d.della@verizon.com
- PETRO GAS — BUCKEYE PARTNERS, FIVE TEK PARK, 9999 HAMILTON BOULEVARD, BREINIGSVILLE, PA 18031, CONTACT: DAVE JONES, EMAIL: dajones@buckeye.com
- PETRO GAS — ENTERPRISE PRODUCTS, 9420 W. SAM HOUSTON PARKWAY N, HOUSTON, TX 77064, CONTACT: RIKI PARKS, EMAIL: rparks@eprod.com
- ELECTRIC — FIRSTENERGY CORP, 76 S. MAIN STREET, AKRON, OH 44308, CONTACT: OFFICE PERSONNEL
- ELECTRIC — PPL ELECTRIC UTILITIES CORPORATION, 503 NEW MARKET STREET, WILKES BARRE, PA 18702, CONTACT: MARK SANTAYANA, EMAIL: mcsantayana@pplweb.com
- CABLE — COMCAST, 4601 SMITH STREET, HARRISBURG, PA 17109, CONTACT: MICHAEL SWEIGARD, EMAIL: mike_sweigard@cable.comcast.com
- GAS — UGI UTILITIES INC., 1301 AIP DRIVE, MIDDLETOWN, PA 17057, CONTACT: CHESTER WENTZ, EMAIL: cwentz@ugi.com

PROFESSIONAL GEOLOGIST:

I, _____, HEREBY CERTIFY THAT THE ENTIRE SITE AND ALL PROPOSED STORMWATER MANAGEMENT FACILITIES ARE UNDERLAIN BY CARBONATE GEOLOGY.

_____
PROFESSIONAL GEOLOGIST

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG!

PA ONE-CALL SERIAL NUMBER
20180541020

ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

TENTATIVE PHASING SCHEDULE

PHASE	TENTATIVE START/ STOP SCHEDULE	NUMBER OF DWELLINGS/UNITS
1	2021–2024	356
2	2025–2028	299
TOTAL		655

1. Net tract area: 4,786,780.16 square feet, or 109.89 acres.
2. Proposed total number of dwelling units: 655
3. Proposed uses:
--134 single family detached dwellings.
--209 single family attached (townhouse) dwelling units.
--312 multifamily (apartment) dwelling units.
--accessory community center with private recreation facilities for the overall development.
4. Proposed lot area per dwelling unit: 7,308 square feet.
5. Proposed impervious lot coverage: 45.81 acres, or 41.7% of the lot.
6. Proposed vegetative coverage: 64.08 acres, or 58.3% of the lot.
7. Required off-street parking:
--2.5 spaces per townhouse or apartment dwelling unit (including visitor parking) = (521x2.5) 1303 spaces
--2 spaces per single family detached unit = 268 spaces required.
--Total of 1591 parking spaces required.

8. Provided parking:
--209 townhouse units each have a minimum of 2 parking spaces either in the garage and/or the driveway outside the garage of each unit = 418 spaces minimum.
--Each of the 134 detached dwelling unit has minimum 2 parking spaces either in the garage and/or driveway outside of the garage = 268 spaces minimum.
--1084 designated parking spaces are provided in common parking areas scattered throughout the lot.
--Total number of parking spaces provided: 1770

--The townhouse and apartment units must have 0.5 space per unit for visitor parking in a common lot(s)= (521 x 0.5) 261 spaces. 352 common spaces are available in the area of the townhouses and apartments after the 2 spaces per apartment unit is accommodated. Visitor parking is accommodated in common lots scattered throughout the lot.
--Note that 60 of the provided parking spaces are in freestanding common garages.

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

OVERALL PROJECT DIAGRAM

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

240 120 24 0 24 120 240
GRAPHIC SCALE
1" = 120'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 120'
DWG FILE : X:\2019\319582\dwg\Plans\Pre-Final\02-OA_DIAGRAM.dwg
SHEET 2 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

600 300 60 0 60 300 600
GRAPHIC SCALE
1" = 300'

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

AERIAL CONTEXT PLAN

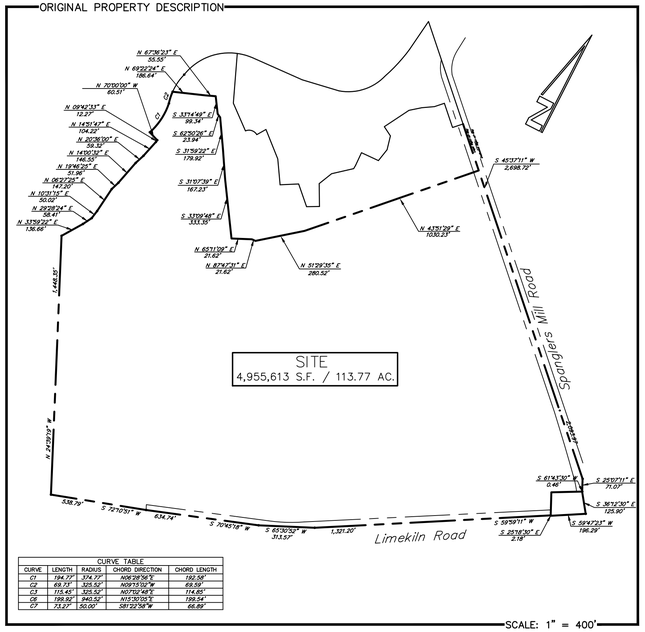
FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 300'
DWG. FILE : Y:\2019\319582.dgn\319582\dwg\Plans\Pre-Final\04-DA-AERIAL.dwg
SHEET 3 of 89

ORIGINAL PROPERTY DESCRIPTION


N 67°36'23" E 55.55'
N 69°22'24" E 186.64'
N 70°00'00" W 60.37'
N 09°42'33" E 12.27'
N 14°57'41" E 104.29'
N 40°28'00" E 59.32'
N 14°06'26" E 140.55'
N 19°16'20" E 74.98'
N 09°29'00" E 143.00'
N 10°21'14" E 50.02'
N 29°28'24" E 58.41'
N 33°39'22" E 136.66'
L 446.55'
N 24°39'59" E
S 31°14'49" E 99.34'
S 62°50'26" E 23.94'
S 31°59'23" E 179.92'
S 31°07'39" E 167.23'
S 53°09'48" E 333.35'
N 65°17'09" E 21.62'
N 87°47'31" E 21.62'
N 51°29'35" E 280.52'
N 43°01'28" E 1090.23'
S 45°37'11" W 2,698.72'
Sprogles Mill Road
S 63°47'30" E 0.46'
S 25°07'11" E 71.07'
S 36°12'26" E 125.80'
S 59°49'27" W 196.29'
S 25°16'30" E 2.19'
S 72°10'51" W 634.74'
S 70°45'18" W
S 63°06'53" W 1,321.20'
37.57'
538.79'
Limekiln Road
SITE
4,955,613 S.F. / 113.77 AC.
SCALE: 1" = 400'

CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C1	194.77'	374.77'	N06°28'56"E	192.56'
C2	69.13'	325.52'	N09°13'39"W	69.59'
C3	115.45'	325.52'	N01°02'48"E	114.85'
C6	199.93'	940.52'	N15°35'05"E	199.54'
C7	73.27'	50.00'	S81°23'58"W	66.89'

(On-Site)
Natural 15% Or Greater Slopes

W
Lw
100 Yr. Floodplain Water Surface Elevation
Lower Allen Township Conservation District
Tennis Court
Existing House
Brick
Macadam
Lot 1
N/F
Luther B. & Homer Stanley Hetrick
Deed Book 2425, Page 2436
Lot 1, Instrument # 201603763
Tax Parcel 27-000-SE-002
N/F
Bruno G. Bertin
N/F
Fairview York Investments, LLC
Lot N/F
Hempt Bros., Inc.
P.O. Parcel 3,
Deed Book 48-D, Page 443
Lot 4, Instrument # 2011056773
Tax Parcel 27-000-RE-0029C
GROSS AREA = 283,234 Sq. Ft. / 6.50 Ac.
EkB
CkA
DuC
Lot 3A
Lot 2A
N/F
Hempt Bros., Inc.
P.O. Parcel 3,
Deed Book 48-D, Page 443
Lot 2A, Instrument # 2011056773
Tax Parcel 27-000-RE-0029D
GROSS AREA = 162,173 Sq. Ft. / 3.72 Ac.
NET AREA = 153,963 Sq. Ft. / 3.53 Ac.
Lot
N/F
Hempt Bros., Inc.
P.O. Parcel 3,
Deed Book 48-D, Page 443
Lots 2 & 2A, Instrument # 2011056773
Tax Parcel 27-000-RE-0029B
GROSS AREA = 2,805,958 Sq. Ft. / 64.42± Ac.
NET AREA = 2,693,821 Sq. Ft. / 61.84 Ac.
N/F
Luther B. & Homer Stanley Hetrick
Deed Book 2425, Page 2436
Lot 1, Instrument # 201603763
Tax Parcel 27-000-SE-002
N/F
Homer S. & Doris B. Hetrick
Deed Book 104-C, Page 0031
Tax Parcel 27-000-RE-0035B
N/F
Hempt Bros., Inc.
Instrument # 201800753 1
Tax Parcel 27-000-RE-0029A
GROSS AREA = 23,583 Sq. Ft. / 0.54 Ac.
(T-670)
Pin Oak Drive
Lot N/F
Hempt Bros., Inc.
Tract No. 1
Deed Book 68-C, Page 883
Tax Parcel 27-000-RE-003E
GROSS AREA = 939,257 Sq. Ft. / 21.56 Ac.
N/F
Hempt Bros., Inc.
Tract No. 1A
Deed Book 64-A, Page 502
Tax Parcel 27-000-RE-001
Lot 1N/F
Hempt Bros., Inc.
Deed Book 65-S, Page 088
Lots 3 & 3A, Instrument # 2011056773
Tax Parcel 27-000-RE-0001E
GROSS AREA = 903,582 Sq. Ft. / 20.74 Ac.
NET AREA = 883,866 Sq. Ft. / 20.29 Ac.
50' Enterprise Pipeline Easement (60' width per email from Cole Lee, Enterprise Products Representative (received on May 24, 2019))
(Unspecified width per Record Book 2, Volume 29, Page 65.)
25' Drainage Easement Plan Book RR, Page 943 & Instrument # 2011056773
Right-of-Way Easement (33' width per Record Book A, Volume 29, Page 644)
Limekiln Road T-655
N/F
Timothy E. Langlotz
Lot 2, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0131
N/F
Bonnie Plants, Inc.
Deed Book 2096, Page 8448
Lot 1, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0025N
N/F
Pennsylvania Power & Light Company
Deed Book 1, Page 1
Tax Parcel 27-000-RE-0025D
300 150 30 0 30 150 300
GRAPHIC SCALE
1" = 150'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

OVERALL EXISTING FEATURES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 150'
DWG. FILE : Y:\2019\319582.dgn\319582\dwg\Plans\Pre-Final\04_04_EXIST.dwg
SHEET 4 of 89

LEGEND

- Property Line
- Adjoining Property Line
- Existing Right of Way Line
- Easement Line
- Existing Curb Line
- Existing Pavement Edge
- Existing Edge Of Water
- 350 — Existing Contour
- × 488.7 — Existing Spot Elevation
- Existing Mailbox
- Existing Sign
- Existing Fire Hydrant
- Existing Light Standard
- Existing Utility Pole With Guy Wire
- Existing Storm Sewer Inlet/Pipe
- S — Existing Sanitary Manhole/Line
- G — Existing Gas Valve/Line/Pipeline
- W — Existing Water Valve/Line
- E — Existing Overhead Electric Line
- UE — Existing Underground Electric Line
- Existing Fence Line
- Existing Tree/Brush Line
- Township & County Boundary Line (Approximate)
- 100 Year Floodplain/Water Surface Elevation
- 500 Year Floodplain Limit
- Regulatory Floodway Limit
- NRCS Soil Boundary Limit
- HF-18 / #44 — Soil Test Site; Identification #
- Existing Tree
- Existing Rip-Rap Rock
- Existing Property Corners
- (On-Site) Natural 15% Or Greater Slopes

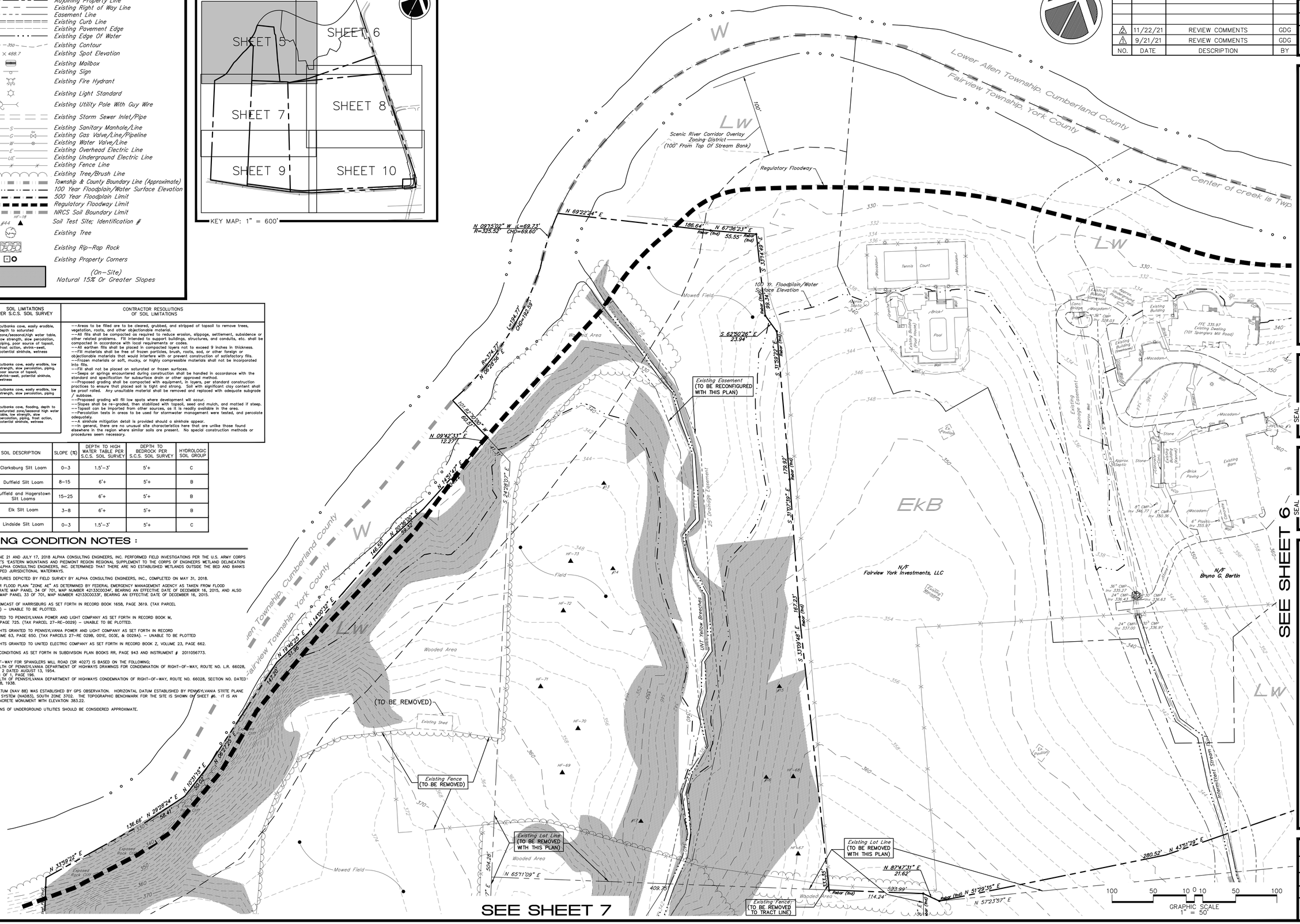
KEY MAP: 1" = 600'

SOIL SYMBOL	SOIL LIMITATIONS PER S.C.S. SOIL SURVEY	CONTRACTOR RESOLUTIONS OF SOIL LIMITATIONS
CkA	cutbanks cave, easily erodible, depth to saturated zone/seasonal,high water table, low strength, slow percolation, piping, poor source of topsoil, frost action, shrink-swell, potential sinkhole, wetness	--Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, and other objectionable material. --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. --All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness. --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. --Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills. --Fill shall not be placed on saturated or frozen surfaces. --Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method. --Proposed grading shall be compacted with equipment, in layers, per standard construction practices to ensure that placed soil is tight and strong. Soil with significant clay content shall be proof rolled. Any unsuitable material shall be removed and replaced with adequate subgrade / subbase. --Proposed grading will fill low spots where development will occur. --Slopes shall be re-graded, then stabilized with topsoil, seed and mulch, and matted if steep. --Topsoil can be imported from other sources, as it is readily available in the area. --Percolation tests in areas to be used for stormwater management were tested, and percolate adequately. --A sinkhole mitigation detail is provided should a sinkhole appear. --In general, there are no unusual site characteristics here that are unlike those found elsewhere in the region where similar soils are present. No special construction methods or procedures seem necessary.
DuC	cutbanks cave, easily erodible, low strength, slow percolation, piping, poor source of topsoil, shrink-swell, potential sinkhole, wetness	
DwD	cutbanks cave, easily erodible, low strength, slow percolation, piping	
EkB	cutbanks cave, flooding, depth to saturated zone/seasonal high water table, low strength, slow percolation, piping, frost action, potential sinkhole, wetness	
Lw		

SOIL SYMBOL	SOIL DESCRIPTION	SLOPE (%)	DEPTH TO HIGH WATER TABLE PER S.C.S. SOIL SURVEY	DEPTH TO BEDROCK PER S.C.S. SOIL SURVEY	HYDROLOGIC SOIL GROUP
CkA	Clarksburg Silt Loam	0–3	1.5'–3'	5'+	C
DuC	Duffield Silt Loam	8–15	6'+	5'+	B
DwD	Duffield and Hagerstown Silt Loams	15–25	6'+	5'+	B
EkB	Elk Silt Loam	3–8	6'+	5'+	B
Lw	Lindside Silt Loam	0–3	1.5'–3'	5'+	C

EXISTING CONDITION NOTES :

1. BETWEEN JUNE 21 AND JULY 17, 2018 ALPHA CONSULTING ENGINEERS, INC. PERFORMED FIELD INVESTIGATIONS PER THE U.S. ARMY CORPS OF ENGINEER'S "EASTERN MOUNTAINS AND PIEDMONT REGION REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL". ALPHA CONSULTING ENGINEERS, INC. DETERMINED THAT THERE ARE NO ESTABLISHED WETLANDS OUTSIDE THE BED AND BANKS OF THE MAPPED JURISDICTIONAL WATERWAYS.
2. EXISTING FEATURES DEPICTED BY FIELD SURVEY BY ALPHA CONSULTING ENGINEERS, INC., COMPLETED ON MAY 31, 2018.
3. THE 100 YEAR FLOOD PLAIN "ZONE AE" AS DETERMINED BY FEDERAL EMERGENCY MANAGEMENT AGENCY AS TAKEN FROM FLOOD INSURANCE RATE MAP PANEL 34 OF 701, MAP NUMBER 42133C0034F, BEARING AN EFFECTIVE DATE OF DECEMBER 16, 2015, AND ALSO FROM RATE MAP PANEL 33 OF 701, MAP NUMBER 42133C0033F, BEARING AN EFFECTIVE DATE OF DECEMBER 16, 2015.
4. RIGHTS OF COMCAST OF HARRISBURG AS SET FORTH IN RECORD BOOK 1658, PAGE 3619. (TAX PARCEL 27-RE-0029) – UNABLE TO BE PLOTTED.
5. RIGHTS GRANTED TO PENNSYLVANIA POWER AND LIGHT COMPANY AS SET FORTH IN RECORD BOOK M, VOLUME 99, PAGE 725. (TAX PARCEL 27-RE-0029) – UNABLE TO BE PLOTTED.
6. POSSIBLE RIGHTS GRANTED TO PENNSYLVANIA POWER AND LIGHT COMPANY AS SET FORTH IN RECORD BOOK I, VOLUME 63, PAGE 650. (TAX PARCELS 27-RE 0298, 001E, 003E, & 0029A). – UNABLE TO BE PLOTTED
7. POSSIBLE RIGHTS GRANTED TO UNITED ELECTRIC COMPANY AS SET FORTH IN RECORD BOOK Z, VOLUME 23, PAGE 662.
8. SUBJECT TO CONDITIONS AS SET FORTH IN SUBDIVISION PLAN BOOKS RR, PAGE 943 AND INSTRUMENT # 2011056773.
9. THE RIGHT-OF-WAY FOR SPANGLERS MILL ROAD (SR 4027) IS BASED ON THE FOLLOWING;
   a. COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF HIGHWAYS DRAWINGS FOR CONDEMNATION OF RIGHT-OF-WAY, ROUTE NO. L.R. 66028, SECTION NO. 2 DATED AUGUST 13, 1954.
   b. SLD SHEET 1 OF 1, PAGE 196.
   c. COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF HIGHWAYS CONDEMNATION OF RIGHT-OF-WAY, ROUTE NO. 66028, SECTION NO. DATED DECEMBER 28, 1938.
10. VERTICAL DATUM (NAV 88) WAS ESTABLISHED BY GPS OBSERVATION. HORIZONTAL DATUM ESTABLISHED BY PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NAD83), SOUTH ZONE 3702. THE TOPOGRAPHIC BENCHMARK FOR THE SITE IS SHOWN ON SHEET #6. IT IS AN EXISTING CONCRETE MONUMENT WITH ELEVATION 383.22.
11. THE LOCATIONS OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE.



NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EXISTING FEATURES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : S:\2019\319582.sur\319582sv*.field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582_05-05-EXIST-PARTIAL.dwg
FILE : dwg\Plans\Pre-Final\
SHEET 5 of 89

LEGEND

- Property Line
- Adjoining Property Line
- Existing Right of Way Line
- Easement Line
- Existing Curb Line
- Existing Pavement Edge
- Existing Edge Of Water
- 350 Existing Contour
- × 488.7 Existing Spot Elevation
- Existing Mailbox
- Existing Sign
- Existing Fire Hydrant
- Existing Light Standard
- Existing Utility Pole With Guy Wire
- Existing Storm Sewer Inlet/Pipe
- S Existing Sanitary Manhole/Line
- G Existing Gas Valve/Line/Pipeline
- W Existing Water Valve/Line
- E Existing Overhead Electric Line
- UE Existing Underground Electric Line
- Existing Fence Line
- Existing Tree/Brush Line
- Township Boundary Line (Approximate)
- 100 Year Floodplain/Water Surface Elevation
- 500 Year Floodplain Limit
- Regulatory Floodway Limit
- NRCS Soil Boundary Limit
- #44 HF-18 Soil Test Site; Identification #
- Existing Tree
- Existing Rip-Rap Rock
- Existing Property Corners
- (On-Site) Natural 15% Or Greater Slopes

SEE SHEET 5

SEE SHEET 8

Twp. York County

Perland County

Center of creek is Twp. boundary

Regulatory Floodway

100 Yr. Floodplain/Water Surface Elevation

Center of street is Zoning District Boundary

RMU-Residential Mixed Use Zoning District

Wooded Area

Cultivated Field

Existing Building (Greenhouse)

Existing Building

Existing Building (Greenhouse)

Above-Ground Utility Pole

Conc. Bridge

Macadam

36" CMP Inv 328.03

FFE 335.97 Existing Dwelling (101 Spanglers Mill Road)

Electric Box

Wall

Existing Drainage Easement

Iron Rod

Stone Wall

Existing Garage (Removed)

Concrete

Stone

Approx. Septic

Existing Barn

Brick Paving

Existing Driveway

Approx. Septic Drain Field

Water Meter Vault (Well)

8" CMP Inv 346.77

8" CMP Inv 350.36

6" Plastic Inv 355.97

24" CMP Inv 337.00

30" CMP Inv 336.97

36" CMP Inv 335.27

24" CMP Inv 336.43

30" CMP Inv 336.63

15" CMP Inv 356.98

15" CMP Inv 359.58

10" CMP Inv 354.63

10" CMP Inv 354.50

Fence

Intermittent Stream

Ex. Pavilion

Existing Easement (TO BE REMOVED ACROSS SITE, TO TRACT LINE)

Existing Driveway (TO BE REMOVED)

10' Access Easement Plan Book RR, Page 943 Instrument #201056773

Existing Lot Line (TO BE REMOVED WITH THIS PLAN)

N/F Bruno G. Bertin

N/F Luther B. & Homer Stanley Hetrick Deed Book 2425, Page 2436 Lot 1, Instrument # 201603763 Tax Parcel 27-000-SE-002

N/F Homer S. & Janis B. Hetrick Deed Book 104-C, Page 0031 Tax Parcel 27-000-RE-0030B

PPL 23588/S32047

PPL 23558/S32024

PPL 23583/S32035

PPL 23599/S32021

PPL 23545/S31996

PPL 23528/S31978

PPL 23535/S31972

PPL 23549/S31967

PPL 23562/S31963

PPL 23634/S31988

PPL 23646/S31978

Retaining Wall

Guide Rail

Rip-Rap Area

Rip-Rap Apron

Driveway

Macadam

Fence

Rebar (fnd)

No #'s

60' DEP

R.O.W.

LEGAL R/W

ZONING DISTRICT BOUNDARY LINE

EXISTING MONUMENT
PRIMARY CONTROL POINT
TOPOGRAPHIC BENCHMARK
ELEV. 383.22

1030.23'

1000.23'

30.00'

30.79'

343.07'

561.69'

217.21'

100'

25 MPH Right Turn Sign

Driveway

KEY MAP: 1" = 600'

SHEET 5 | SHEET 6 | SHEET 7 | SHEET 8 | SHEET 9 | SHEET 10

GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
NEW MEMBERS, P.O. BOX G
NEW FREEDOM, PA 17349-0070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EXISTING FEATURES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582

SURVEY BOOK : F:\2019\319582.sur\319582sur\field

SCALE : 1" = 50'

DWG : F:\2019\319582.dgn\319582\05-EXIST-PARTIAL.dgn

FILE :

SHEET 6 of 89

SEE SHEET 5

SEE SHEET 8

SEE SHEET 9

SEE SHEET 5 FOR LEGEND AND KEY MAP

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
ALPHA CONSULTING ENGINEERS, INC.
115 LINKLINE ROAD, SUITE 2
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EXISTING FEATURES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO.
319582

SURVEY BOOK :
Z:\2019\319582.sur\319582sur\Field

SCALE : 1" = 50'

DWG : Y:\2019\319582.dgn\319582Y
FILE : dwg\Plans\Pre-Final\
05-EXIST-PARTIAL.dwg

SHEET 7 of 89

SEE SHEET 6

SEE SHEET 7

SEE SHEET 10

SEE SHEET 5 FOR LEGEND AND KEY MAP

Existing Driveway (TO BE REMOVED)

10' Access Easement Plan Book PP, Page 943 Instrument #201105773

Existing Lot Line (TO BE REMOVED WITH THIS PLAN)

500 Yr. Floodplain

N 43°51'29" E 1312.28'

30.79'

1343.07'

N/F Homer S. & Janis B. Hetrick Deed Book 104-C, Page 0031 Tax Parcel 27-000-RE-0030B

RS-Single Family Residential Zoning District

RMU-Residential Mixed Zoning District

EkB

Lw

JC

PPL 23646/531978

Drive#01

Rebar (fnd)

PPL 23658/531964

40 MPH Sign

Existing Easement (TO BE RECONFIGURED WITH THIS PLAN)

Existing Driveway (TO BE REMOVED)

All Existing Fences (TO BE REMOVED)

Mowed Field

Wooded Area

Intermittent Stream (I-1)

Intermittent Stream (I-2)

10' Access Easement

33' Sinclair Refining Co. Easement

Cultivated Field

N/F Sean Christopher Campbell & Kelly Lane Martin Instrument # 20160017334 Tax Parcel 27-000-RE-0030

N/F Kimberly M. Midgarden Deed Book 1956, Page 8116 Tax Parcel 27-000-RE-0030A

Verizon H4001/04-06

18" HDPE Inv 395.38

Top 399.58

4" HDPE Inv In 396.29

4" HDPE Inv Out 396.26

N/F Todd W. & Jeri L. Warner Deed Book 1734, Page 5144 Lot #2, Plan Book PP, Page 634 Tax Parcel 27-000-35-0042

(T-676) Pin Oak Drive

Spanglers Mill Road S.R. 4027

Concrete Sidewalk

Stone Wall

Verizon Box

Top 391.60

18" CMP Inv Out 388.50

226.6' 8" PVC @ 1.72%

Top 389.39

18" CMP Inv In 383.54

24" CMP Inv In 383.54

48" CMP Inv Out 383.46

18" CMP Inv Out 383.50

24" CMP Inv Out 383.44

Top 389.44

24" CMP Inv Out 383.50

48" CMP Inv Out 383.50

Top 389.68

Elev 389.68

Inv 384.40

18" CMP Inv 383.04

Stop Sign

Existing Curb Vertical

Top 391.45

18" CMP Inv In 388.11

18" CMP Inv Out 388.10

Top 389.54

18" CMP Inv In 385.97

18" CMP Inv In 383.76

48" CMP Inv Out 383.67

Top 389.82

24" CMP Inv In 384.82

48" CMP Inv In 384.61

48" CMP Inv Out 384.86

25 MPH Sign

Tele. Box

PPL 23699/531941

Cable Box

N/F Kirby W. & Jennifer M. Baker Deed Book 1630, Page 7288 Lot 26, Plan Book PP, Page 634 Tax Parcel 27-000-35-0026

RS-Single Family Residential Zoning District

PPL 23698/531925

N/F Ernest C. & Carolyn R. Baker Deed Book 1630, Page 7288 Lot 24, Plan Book PP, Page 634 Tax Parcel 27-000-35-0024

End Of Existing Curb

40 MPH Sign

PPL 23714/531909

N/F Tasha Pitts Deed Book 2254, Page 4847 Lot 2, Plan Book OO, Page 684 Tax Parcel 27-000-35-0031K

RMU-Residential Mixed Zoning District

100 50 10 0 10 50 100

GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2600
FAX: (717) 770-2601
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EXISTING FEATURES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582

SURVEY BOOK : Z:\2019\319582.sur\319582sur\field

SCALE : 1" = 50'

DWG : Y:\2019\319582.cph\319582\dwg\Plans\Pre-Fin\
FILE : 05-EXST-PARTIAL.dwg

SHEET 8 of 89

SEE SHEET 7

SEE SHEET 10

Cultivated Field

Mowed Field

Cultivated Field

Existing Lot Line (TO BE REMOVED WITH THIS PLAN)

Existing Lot Line (TO BE REMOVED WITH THIS PLAN)

Existing Lot Line (TO BE REMOVED WITH THIS PLAN)

All Existing Fences (TO BE REMOVED)

UNT Yellow Breeches

25' Drainage Easement

Legal Right-of-Way

Dedicated Right-of-Way

Driveway

Deed Limit Line

Conc. Mon. (fnd)

CkA

EkB

N/F
Thomas S. & Pamela A. Wenerick
Deed Book 1912, Page 623
Lot 5, Plan Book NN, Page 541
Tax Parcel 27-000-RE-002C

N/F
Timothy E. Langletz
Lot 2, Plan Book 1830, Pag
Tax Parcel 27-000-RE-

SEE SHEET 5 FOR LEGEND

GRAPHIC SCALE
1" = 50'

KEY MAP: 1" = 600'

SHEET 5 | SHEET 6 | SHEET 7 | SHEET 8 | SHEET 9 | SHEET 10

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2500
FAX: (717) 774-4007
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EXISTING FEATURES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG FILE : Y:\2019\319582.npb\319582\dwg\Plans\Pre-Final\05-EXIST-PARTIAL.dwg

SEE SHEET 8

SEE SHEET 9

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EXISTING FEATURES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur*.field
SCALE : 1" = 50'
DWG. FILE : Y:\2019\319582.opr\319582\Dwg\Plans\Pre-Final\05-EXIST-PARTIAL.dwg
SHEET 10 of 89

SEE SHEET 4 FOR LEGEND AND KEY MAP

GRAPHIC SCALE 1" = 50'
100 50 10 0 10 50 100

Limekiln Road T-955
33' Sinclair Refining Co. Easement
Intermittent Stream (S-3)
Wooded Area
Cultivated Field
Lw
EkB
RMU-Residential Mixed Zoning District
Existing Driveway (TO BE REMOVED)
Existing Access Easement (TO BE REMOVED WITH THIS PLAN)
Existing Structures Fence And Paving (TO BE REMOVED)
Existing Lot Line (TO BE REMOVED WITH THIS PLAN)
(WELL TO BE ABANDONED)
Center of street is Zoning District Boundary
Dedicated Right-of-Way
Legal Right-of-Way
Approximate Right-of-Way (Not Dimensioned on Condemnation Plan)
Possible Former Outhouse Location
Existing Building
Concrete
Basement Door
Bridge Weight Sign
Stop Sign
Street Sign
Gate
Driveway
Utility Pole
Guy Wire
Rebar (fnd)
Conc. Mon. (fnd)
Pipe (fnd)
Deed
Plan
Meas.
Calc.
Inv.
CMP
PVC
Decid.
Conif.
Tree
Spruce
Pine
Maple
Oak
Poplar
Boxwood
Juniper
Hedge
Shrub
Bush
Stump
Caliper
Roof Drain
Concrete
Asphalt
Stone
Gravel
Paving
Curb
End Of Existing Curb
40 MPH Sign
Pole #5
Pole #35
Pole #36
Pole #37
Pole #38
Pole #39
Pole #40
Pole #41
Pole #42
Pole #43
Pole #44
Pole #45
Pole #46
Pole #47
Pole #56
HF-1
HF-2
HF-3
HF-4
HF-5
HF-6
HF-7
HF-8
HF-9
HF-10
HF-11
HF-12
HF-13
HF-14
HF-15
HF-16
HF-17
HF-18
HF-34
HF-35
HF-36
HF-38
HF-39
HF-41
HF-42
HF-43
HF-44
PPL 23714/531909
PPL 23727/531899
PPL 23740/531883
PPL 23754/531877
PPL 23750/531873
PPL 23755/531867
PPL 23755/531852
PPL 23746/531840
PPL 23740/531837
PPL 23759/531843
PPL 23717/531825
PPL 23690/531810
PPL 23664/531796
PPL 23641/531784
Verizon 4001/08
N/F Tasha Pitts Deed Book 2254, Page 4847 Lot 2, Plan Book 00, Page 684 Tax Parcel 27-000-35-0031K
N/F New Cumberland Alliance Church Deed Book 934, Page 961 Lot 1, Plan Book 00, Page 684 Tax Parcel 27-000-35-00310
N/F John J. & Kar... Deed Book 1726, Tract 3, Plan Book ... Tax Parcel 27-00...
N/F Verlyn K., Della M. ... Deed Bo... Lot 1, Plo... Tax Parc...
N/F Pennsylvania Power & Light Company Deed Book 62-Y, Page 079 Tax Parcel 27-000-RE-00250
N/F Bonnie Plants, Inc. Deed Book 2096, Page 8448 Lot 1, Plan Book 1830, Page 2658 Tax Parcel 27-000-RE-0025N
N/F Timothy E. Langletz Lot 2, Plan Book 1830, Page 2658 Tax Parcel 27-000-RE-0131
S 38°12'20" E L=78.85' R=476.04' CHD=78.7...
S 25°28'30" E 98.97'
S 60°11'49" W 122.30'
S 59°59'11" W 196.29'
S 59°47'23" W 125.30'
S 61°43'36" W 30.66'
S 36°12'50" E 71.02'
S 25°54'23" E 134.25'
S 25°54'23" E 132.84'
S 25°54'23" E 132.84'
S 25°54'23" E 132.84

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PROPOSED TRACT AREA

Existing Lot Line

CONSOLIDATED NET TRACT AREA AND PROPOSED CONDOMINIUM/PLANNED COMMUNITY UNIT = 109.89 ACRES, TIMES 6 UNITS PER ACRE PERMITTED DENSITY = 636 UNITS PERMITTED

N/F
Hempt Bros., Inc.
P.O. Parcel 3
Deed Book 48-D, Page 443
Lot 4, Instrument # 2011056773
Tax Parcel 27-000-RE-0029C

GROSS AREA = 283,034 Sq. Ft. / 6.50 Ac.

N/F
Hempt Bros., Inc.
P.O. Parcel 3
Deed Book 48-D, Page 443
Lot 24, Instrument # 2011056773
Tax Parcel 27-000-RE-0029D

GROSS AREA = 162,173 Sq. Ft. / 3.72 Ac.
NET AREA = 153,863 Sq. Ft. / 3.53 Ac.

Existing Lot Line
(TO BE REMOVED WITH THIS PLAN)

Existing Lot Line
(TO BE REMOVED WITH THIS PLAN)

PROPOSED SIENNA BLVD.

PROPOSED 50 R/W

PROPOSED TRACT AREA
4,786,780.16 S.F. / 109.89 AC.

N/F
Hempt Bros., Inc.
Tract No. 1
Deed Book 68-C, Page 883
Tax Parcel 27-000-RE-003E

GROSS AREA = 939,257 Sq. Ft. / 21.56 Ac.

N/F
Hempt Bros., Inc.
Deed Book 65-S, Page 088
Lots 3 & 3A, Instrument # 2011056773
Tax Parcel 27-000-RE-0001E

GROSS AREA = 903,582 Sq. Ft. / 20.74 Ac.
NET AREA = 883,866 Sq. Ft. / 20.29 Ac.

Existing Lot Line
(TO BE REMOVED WITH THIS PLAN)

N/F
Hempt Bros., Inc.
P.O. Parcel 3
Deed Book 48-D, Page 443
Lots 2 & 2A, Instrument # 2011056773
Tax Parcel 27-000-RE-0029B

GROSS AREA = 2,805,958 Sq. Ft. / 64.42 Ac.
NET AREA = 2,691,821 Sq. Ft. / 61.84 Ac.

Existing Lot Line
(TO BE REMOVED WITH THIS PLAN)

N/F
Hempt Bros., Inc.
Instrument # 2018007531
Tax Parcel 27-000-RE-0029A

GROSS AREA = 23,583 Sq. Ft. / 0.54 Ac.

(T-678) Pin Oak Drive

200' SR 2004 R/W

Limekiln Road T-622

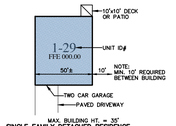
300 150 30 0 30 150 300
GRAPHIC SCALE
1" = 150'

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
EXISTING LOT CONSOLIDATION DIAGRAM
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

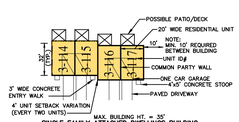
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 150'
DWG. Y:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\
11-LOT CONSOLIDATION.dwg
SHEET 11 of 89

LEGEND

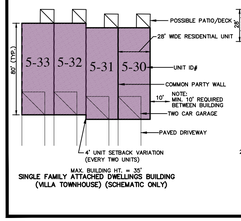
- Property Line
- Adjoiner Property Line
- Existing Right-of-way
- Easement Line
- Existing Curb
- Existing Edge Of Pave
- G — Existing Gas Line
- Edge Of Stream
- BUILDING SETBACK LINE
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- LOT LINE
- POSSIBLE PHASE LINE
- PROPOSED 4' WIDE PUBLIC SIDEWALK
- ACCESSIBLE RAMP LOCATION (SEE DETAIL)
- PROPOSED ASPHALT PATH/TRAIL (SEE DETAIL)
- I.P. PROPOSED IRON PIN LOT MARKER
- CONC. MON. PROPOSED CONCRETE MONUMENT
- PROPOSED STREET LIGHT
- PROPOSED SIGN (SEE SIGN CHART)



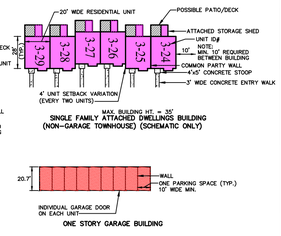
SINGLE FAMILY DETACHED RESIDENCE (SCHEMATIC ONLY)



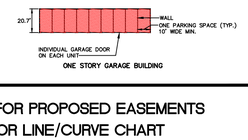
SINGLE FAMILY ATTACHED DWELLINGS BUILDING (ONE CAR GARAGE TOWNHOUSE) (SCHEMATIC ONLY)



SINGLE FAMILY ATTACHED DWELLINGS BUILDING (VILLA TOWNHOUSE) (SCHEMATIC ONLY)

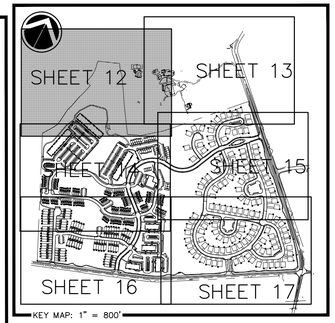


SINGLE FAMILY ATTACHED DWELLINGS BUILDING (NON-GARAGE TOWNHOUSE) (SCHEMATIC ONLY)



ONE STORY GARAGE BUILDING

SEE SHEETS #24-29 FOR PROPOSED EASEMENTS
SEE SHEET 13 FOR LINE/CURVE CHART



KEY MAP: 1" = 800'

SIGN CHART

PLAN SYMBOL	PENNDOT DESIGNATION	SIGN DESCRIPTION	SIZE
A	R1-1	STOP	24"x24"
B	---	STREET NAME SIGN	PER TWP REQ.
C	R8-3a	NO PARKING SIGN	12"x12"
D	R2-1	SPEED LIMIT SIGN	18"x24"
E	R4-7	KEEP RIGHT SIGN	18"x24"
F	---	ADA PARKING SIGNAGE	SEE DETAIL
G	---	NO PARKING THIS SIDE OF STREET (SEE DIAGRAM)	12' X 18'
H	---	NO PARKING SYMBOL AND RIGHT ARROW	12' X 18'
J	---	NO PARKING SYMBOL AND LEFT ARROW (SEE DIAGRAM)	12' X 18'

Lower Allen Township, Cumberland County
Fairview Township, York County
Yellow Breeches Creek
Center of creek is Twp. bou
100'
Scenic River Corridor Overlay Zoning District (100' From Top Of Stream Bank)
Regulatory Floodway
100 Yr. Floodplain/Water Surface Elevation
N 69°22'44" E 186.64'
N 09°15'09" W L=69.73' R=323.52' CHD=69.60'
N 67°36'23" E 55.55'
S 37°14'49" E 99.34'
S 62°50'26" E 23.94'
L=184.77' R=374.77' N 08°38'56" E CHD=182.88'
N 20°00'00" W 80.31'
N 09°42'33" E 12.27'
N 14°51'27" E 146.55'
N 20°36'09" E 59.30'
N 14°30'32" E 147.20'
N 19°45'29" E 51.96'
N 10°31'15" E 50.03'
N 08°27'25" E 136.66'
N 29°28'24" E 58.41'
N 33°59'22" E
S 31°59'22" E 179.82'
S 41°07'59" E 167.23'
S 37°09'48" E 333.35'
N 87°47'31" E 21.62'
N 51°29'35" E 280.52'
N 43°31'29" E 106.26'
Rebar (fnd)
100' SETBACK FROM TOP OF STREAM BANK
8' WIDE ASPHALT TRAIL
PHASE LINE
PHASE 2
BUILDING #3B 72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. FFE 337.67)
NOTE: ALL ROOF DRAINS MUST BE DIRECTED TO STORMTECH FACILITY #3
BUILDING #3C 72 UNIT 4-STORY APARTMENT BUILDING
TRASH/RECYCLING ENCLOSURE (SEE DETAIL)
PATIO/ PORCH (TYP.)
SEWAGE PUMP STA.
TRUCK ACCESS ROUTE
10' WIDE ASPHALT SERVICE ROAD TO PUMP STATION
15' SIDE YARD SETBACK LINE (TYP.)
N/F Fairview York Investments, LLC
Farm/Vacant
N/F Bruno G. Bertin
Tennis Court
Pool
Clubhouse (Pool House)
Brick
Wall
Macadam
Existing Building (Townhouses)
Approx. Limits of Existing Septic Tile Field
Concr. Bridge
FFE 335.97 Existing Dwelling (101 Spanglers Mill Road)
Existing Building (Garage)
Approx. Well
Stone
Concrete Wall
Existing Building (Garage)
Brick Paving
Existing Barn
Existing Shed
SEE SHEET 13
SEE SHEET 14
GRAPHIC SCALE 1" = 50'

2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG
NO.	DATE	DESCRIPTION	BY

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING•ENGINEERING•SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

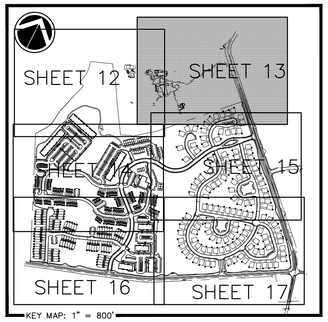
PROPOSED SITE PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : D:\2019\319582.sur\319582sw*.field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dph\319582_dwg\Plans\Pre-Final\11-SITE-PARTIAL.dwg
FILE :
SHEET 12 of 89



SEE SHEETS #24-29 FOR PROPOSED EASEMENTS
SEE SHEET 12 FOR LEGEND AND SIGN CHART

SEE SHEET 12

SEE SHEET 15

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

LINE TABLE		
LINE	LENGTH	BEARING
L1	201.82'	S48°52'23"E
L2	57.40'	S84°03'07"E
L3	20.26'	S45°37'11"E
L4	5.00'	S44°22'48"W
L5	931.72'	S45°37'12"E
L6	10.00'	S46°38'32"W
L7	10.82'	N45°42'55"E
L8	88.92'	S60°11'48"W
L9	363.72'	S45°37'11"E
L10	26.99'	N44°20'32"E
L11	107.30'	N61°01'22"E
L12	100.06'	N25°03'59"E
L13	69.60'	N19°18'17"W
L14	83.06'	S21°57'39"W
L15	69.34'	N19°18'17"W
L16	72.95'	N22°03'17"E
L17	201.82'	N48°52'23"W
L18	57.40'	S84°03'07"E
L19	216.76'	N25°03'59"E
L20	67.42'	N55°12'34"E
L21	29.78'	N36°53'02"E
L22	146.41'	N44°20'32"E
L23	29.78'	N36°53'02"E
L24	24.00'	S61°01'22"W
L25	27.01'	S24°39'12"W
L26	41.16'	N55°12'34"E
L27	303.70'	N70°32'38"E
L28	538.18'	N71°31'12"E

CURVE TABLE				
CURVE	LENGTH	RADIUS	BEARING	CHORD
C1	39.20'	25.00'	N25°37'11"E	35.31'
C2	126.33'	175.00'	S1°22'30"W	123.60'
C3	271.22'	375.00'	N0°12'32"W	265.35'
C4	182.90'	375.00'	N34°54'03"W	181.09'
C5	758.28'	300.00'	S23°32'15"W	571.95'
C6	278.35'	225.00'	N60°30'39"E	260.94'
C8	182.27'	450.00'	S36°40'13"W	181.03'
C9	51.53'	125.00'	N36°27'50"E	51.17'
C10	106.64'	168.00'	S42°50'17"W	104.86'
C11	58.23'	200.00'	N52°40'57"E	58.02'
C12	39.25'	25.00'	N0°38'20"W	35.34'
C13	39.29'	25.00'	S89°21'40"W	35.37'
C14	26.03'	200.00'	S40°36'47"W	26.02'
C15	69.73'	218.00'	N46°02'48"E	69.43'
C16	210.44'	400.00'	S40°08'17"W	208.02'
C17	157.64'	275.00'	N41°29'19"E	155.49'
C18	182.57'	275.00'	N76°55'46"E	179.23'
C19	631.90'	250.00'	S23°32'15"W	476.62'
C20	526.12'	425.00'	N13°24'33"W	493.16'
C21	90.23'	125.00'	S1°22'30"W	88.29'
C22	39.34'	25.00'	S64°22'49"E	35.40'
C23	206.19'	11517.13'	N43°52'15"W	206.19'
C24	176.37'	11507.13'	N42°55'08"W	176.37'
C25	135.72'	452.23'	N34°18'58"W	135.21'
C26	50.98'	34.00'	N17°14'20"E	46.34'
C27	13.04'	5.00'	S50°04'07"E	9.65'
C28	85.69'	135.00'	S42°50'17"W	84.26'
C29	27.26'	10.00'	N46°52'10"W	19.57'
C30	59.17'	185.00'	N46°02'48"E	58.92'

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PH. (717) 770-2400
FAX (717) 770-2400
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
PROPOSED SITE PLAN
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\Field
SCALE : 1" = 50'
DWG. Y:\2019\319582.cph\319582\Dwg\Plans\Pre-Final\
FILE 11-SITE-PARTIAL.dwg
SHEET 13 of 89

GRAPHIC SCALE 1" = 50'

SEE SHEET 12

SEE SHEETS #24-29 FOR PROPOSED EASEMENTS
SEE SHEET 12 FOR LEGEND AND SIGN CHART
SEE SHEET 13 FOR LINE/CURVE CHART

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING ● ENGINEERING ● SURVEYING
115 LIMEKILN RD. P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2400
FAX: (717) 770-2402
WWW.ALPHACEI.COM

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

PROPOSED SITE PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019_319582.sur_319582sur\field
SCALE : 1" = 50'
DWG. : X:\2019_319582.cor_319582\dwg\Plans\Pre-Final\11-STC-PARTIAL.dwg
FILE : 11-STC-PARTIAL.dwg
SHEET 14 of 89

SEE SHEET 14

SEE SHEET 16

GRAPHIC SCALE 1" = 50'

SEE SHEET 13

SEE SHEET 14

SEE SHEET 17

PHASE 1

PHASE 2

(PRIVATE ACCESS DRIVE) LOMBARDI COURT

(PRIVATE ACCESS DRIVE) RIVOLI COURT

(PRIVATE ACCESS DRIVE) SIENNA BOULEVARD (50' R/W)

(PRIVATE ACCESS DRIVE) FIRENZE DRIVE

(PRIVATE ACCESS DRIVE) COMO CIRCLE

(PRIVATE ACCESS DRIVE) LAZIO DRIVE

PHASE LINE

500 Yr. Floodplain

N 43°31'29" E 106.26'

2-1 2-2 2-3 2-5 2-6 2-7 2-8 2-9 2-10 2-11 2-12 2-13 2-20 2-21 2-22 2-23 2-24 2-25

1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13 1-14 1-15 1-16 1-17 1-18 1-19 1-20 1-21 1-22 1-23 1-24 1-25 1-26 1-27 1-28 1-29 1-30 1-31 1-32 1-33 1-34 1-35 1-36 1-38 1-39 1-40 1-41 1-44 1-73 1-74 1-75 1-76 1-77 1-78 1-79 1-80 1-81 1-82

3-1 3-2 3-3 3-4 3-5 3-6

N/F
Homer S. & Janis B. Hetrick
Deed Book 104-C, Page 0031
Tax Parcel 27-000-RE-0030B

N/F
Sean Christopher C.
Kelly Lane Mc.
Instrument # 201
Tax Parcel 27-000-

N/F
Kimberly M. Mi
Deed Book 1956,
Tax Parcel 27-00

N/F
Thad W. & Carol L. Kramer
Deed Book 1774, Page 5141
Plan Book 00, Page 634
Tax Parcel 27-000-35-0042

N/F
Kirby W. & Jennifer M. Bixler
Deed Book 2370, Page 0170
Plan Book PP, Page 634
Lot 2B
Tax Parcel 27-000-35-0026

N/F
Ernest C. & Carolyn R. Baker
Deed Book 1630, Page 7288
Lot 24, Plan Book PP, Page 634
Tax Parcel 27-000-35-0024

N/F
Tasha Pitts
Deed Book 2254, Page 4847
Lot 2, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031K

(T-676)
Pin Oak Drive

Spangler's Mill Road S.R. 4027

SEE SHEETS #24-29 FOR PROPOSED EASEMENTS
SEE SHEET 12 FOR LEGEND AND SIGN CHART
SEE SHEET 13 FOR LINE/CURVE CHART

KEY MAP: 1" = 800'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

PROPOSED SITE PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sw*.field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582_11-SITE-PARTIAL.dwg
FILE : dwg\Plans\Pre-Final\
SHEET 15 of 89

GRAPHIC SCALE 1" = 50'

SEE SHEET 14

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2500
FAX: (717) 770-2600
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEE SHEET 17

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

PROPOSED SITE PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PHASE 1

PHASE 2

PHASE LINE

9 VERONA DRIVE

2 VERONA DRIVE

3 PISA COURT

(PRIVATE ACCESS DRIVE)

LODI BOULEVARD

SIENNA BOULEVARD (50' R/W)

Limekiln Road (T-955)

BUILDING # 4D
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4C
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4A
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4B
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

ONE-STORY GARAGE (9 SPACES)

PROPOSED 10' CURB TRANSITION FROM SLANT CU TO 6" VERTICAL CURB (SEE DETAIL)

PROPOSED 10' CURB TRANSITION FROM VERTICAL TO SLANT CURB

PROPOSED SLANT CURB (TYP.)

4' x 10' CONC. PAD FOR COMMUNITY MAILBOXES

10' x 4' CONC. PAD FOR COMMUNITY MAILBOXES

10' PAINTED CROSSWALK

5' CONC. WALK

5' PASSING ZONE (TYP.)

30' FRONT YARD SETBACK LINE (TYP.)

VAN ACCESS. SPACE

TRASH/RECYCLING ENCLOSURE (SEE DETAIL)

10'x20' SCHOOL BUS SHELTER

4' PAINTED CROSSWALK

CONCRETE PAVING

5' WIDE CURB CUT FOR DRAINAGE

PROPOSED 6" CURB (TYP.)

OVERFLOW VISITOR PARKING

5' WIDE ASPHALT WALK (SEE GENERAL NOTE #16)

PROPOSED EDGE OF PAVEMENT (TYP.)

PROPOSED CONC. MON.

50' PAVEMENT TAPER TO EXISTING

30' FRONT YARD SETBACK LINE (TYP.)

288'-TYPE 31S GUIDE RAIL

10' PAINTED CROSSWALK

PROPOSED R/W LINE

Legal Right-of-Way

Dedicated Right-of-Way

Conc. Mon. (find)

Rebar (find)

Driveway

N/F
Jessica L. & Travis C. Willow
Deed Book 2332, Page 4592
Lot 6, Plan Book NN, Page 541
Tax Parcel 27-000-RE-002D

N/F
Thomas S. & Pamela A. Wenerick
Deed Book 1912, Page 623
Lot 5, Plan Book NN, Page 541
Tax Parcel 27-000-RE-002C

N/F
Timothy E. L
Lot 2, Plan Book 1
Tax Parcel 27-0

SEE SHEETS #24-29 FOR PROPOSED EASEMENTS
SEE SHEET 12 FOR LEGEND AND SIGN CHART
SEE SHEET 13 FOR LINE/CURVE CHART

SHEET 12 | SHEET 13 | SHEET 14 | SHEET 15 | SHEET 16 | SHEET 17

KEY MAP: 1" = 800'

GRAPHIC SCALE
1" = 50'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG: Y:\2019\319582.dgn\319582\
FILE : 11-SITE-PARTIAL.dwg

SHEET 16 of 89

SEE SHEET 15

SEE SHEET 16

HASE 1

POSED 10' CURB
VISITION FROM SLANT CURB
5" VERTICAL CURB
: DETAIL)

PHASE LINE

Intermittent Stream I5-1

RECYCLING
JRE (SEE DETAIL)

PHASE 2

PHASE 1
PHASE 2

PHASE 2

PHASE 2

PHASE 2

PHASE 2

1-11 1-12 1-13 1-14 1-15 1-16 1-44 1-45 1-46 1-47 1-48 1-49 1-50 1-51 1-52 1-53 1-54 1-55 1-56 1-57 1-58 1-59 1-60 1-61 1-62 1-63 1-64 1-65 1-66 1-67 1-68 1-69 1-70 1-71 1-72 1-73 1-74 1-75 1-76 1-77 1-78 1-79 1-80 1-81 1-82 1-83 1-84 1-85 1-86 1-87 1-88 1-90 1-91 1-92 1-93 1-94 1-95 1-96 1-97 1-98 1-99 1-100 1-101 1-102 1-103 1-104 1-105 1-106 1-107 1-108 1-109 1-110 1-111 1-112 1-113 1-114

PROPOSED SLANT CURB (TYP.)

PROPOSED EDGE OF PAVEMENT (TYP.)

PHASE LINE

10' (MIN.)

25' MIN.

25' (MIN.)

(PRIVATE ACCESS DRIVE)
LAZIO DRIVE

(PRIVATE ACCESS DRIVE)
(TURIN CT.)

5' CURB OPENING FOR DRAINAGE

OVERFLOW/ VISITOR PARKING

PROPOSED SLANT CURB (TYP.)

5' CURB OPENING FOR DRAINAGE

(PRIVATE ACCESS DRIVE)
PERUGIA CIRCLE

(PRIVATE ACCESS DRIVE)
FIRENZE DRIVE

(PRIVATE ACCESS DRIVE)
SCHIFANO DRIVE

LANDSCAPE ISLAND

ONE WAY

10' PAINTED CROSSWALK

PROPOSED SLANT CURB (TYP.)

PROPOSED PATH BRIDGE

5' WIDE ASPHALT WALK (SEE GENERAL NOTE #16)

PROPOSED EDGE OF PAVEMENT (TYP.)

30' FRONT YARD SETBACK LINE (TYP.)

PROPOSED RIGHT-OF-WAY LINE

188' TYPE 315 GUIDE RAIL

Limekiln Road T-955

Legal Right-of-Way

Dedicated Right-of-Way

Located Right-of-Way

Driveway

END CURB

1,189.70

S 60°11'49" W
Conc. Mon. (fnd)
L8

Deed Book 2254, Page 4847
Lot 2, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031K

N/F
New Cumberland Alliance Church
Deed Book 934, Page 961
Lot 1, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031G

N/F
Timothy E. Langletz
Lot 2, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0013I

N/F
Bonnie Plants, Inc.
Deed Book 2096, Page 8448
Lot 1, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0025N

REQUIRED SIGHT DISTANCE = 233'
MEASURED SIGHT DISTANCE = 529'
SLOPE = +5.0%

REQUIRED SIGHT DISTANCE = 255'
MEASURED SIGHT DISTANCE = 610'
SLOPE = -2.6%

POSTED SPEED LIMIT 35 MPH

SEE SHEETS #2-29 FOR PROPOSED EASEMENTS
SEE SHEET 12 FOR LEGEND AND SIGN CHART
SEE SHEET 13 FOR LINE/CURVE CHART

SHEET 12 SHEET 13 SHEET 14 SHEET 15 SHEET 16 SHEET 17

KEY MAP: 1" = 800'

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

PROPOSED SITE PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582

SURVEY BOOK : Z:\2019\319582.sur\319582sur\field

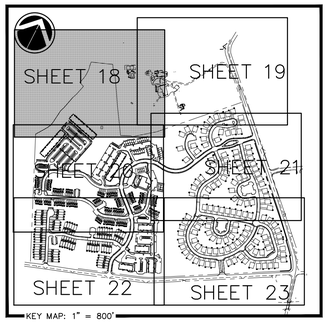
SCALE : 1" = 50'

DWG : N:\2019\319582.nsh\319582\Plans\Pre-Final\Exhibits\PARTIAL.dwg

FILE :

LEGEND

- Property Line
- Adjoiner Property Line
- Existing Right-of-way
- Easement Line
- Existing Curb
- Existing Edge Of Pave
- 175 Existing Contour
- Existing Light Pole
- Existing Utility Pole & Guy Wire
- Existing Storm Sewer Pipe & Inlet
- S Existing Sanitary Line, Manhole
- E Existing Overhead Electric Line
- UE Existing Underground Electric Line
- Existing Tree/brush Line
- G Existing Gas Line/Valve/Pipeline
- #44 HF-18 Soil Test Site; ID#
- B1 PROPOSED STORM SEWER LINE, INLET, ID#
- RD ROOF DRAIN COLLECTION PIPE
- PROPOSED RIP RAP APRON
- S S PROPOSED SANITARY SEWER MAIN; MANHOLE
- SL PROPOSED SANITARY LATERAL
- W PROPOSED WATER LINE; HYDRANT; VALVE
- WL PROPOSED WATER LATERAL
- 452 PROPOSED CONTOUR
- 506.33 H.P. PROPOSED SPOT ELEVATION B.C.=BOTTOM OF CURB H.P.=HIGH POINT
- PROPOSED WALK/PAVED PATH ACCESSIBLE RAMP LOCATION
- 3-109 POSSIBLE FIRST FLOOR ELEVATION DECK/PATIO
- POSSIBLE BASEMENT FLOOR ELEVATION (IF EXPOSED)
- UNIT BOUNDARY (SCHEMATIC ONLY)
- DRIVEWAY
- APPROXIMATE LOCATION OF PROPOSED TREE/BRUSH LINE
- HP HIGH POINT
- STORMWATER FACILTY ENCLOSURE FENCE (SEE DETAIL)
- CALCULATED 100-YEAR FLOODWAY AREA (SEE ALPHA REPORT)
- (On-Site) Natural 15% Or Greater Slopes
- CO UNDERDRAIN; CLEANOUT



KEY MAP: 1" = 800'

Yellow Breeches Creek

SWM FACILITY #31

STORMWATER FACILITY #30

72 UNIT 4-STORY APARTMENT BUILDING
BUILDING #3B
(BLDG. #3A BY)
FFE=340.00
NOTE: ALL ROOF DRAINS MUST BE DIRECTED TO STORM FACILITY #30

PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)

SPILLWAY LOCATION FOREBAY

10' WIDE ACCESS RAMP AT MAX. 25% SLOPE (TYP.)

GRASSED ACCESS TO/AND OVER DIKE

PROPOSED BOX CULVERT

SWALE #19

SWALE #20

Tennis Court

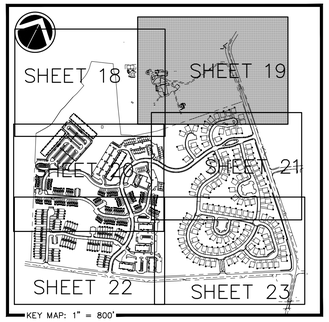
Pool

Existing Building (Pool House)

Existing Building (Concrete Block Garage)

Existing Building (Concrete Block Garage)

Existing Building (Concrete Block Garage



NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LINKLINE RD., SUITE 2
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

GRADING / UTILITIES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

SEE SHEET 18

SEE SHEET 21

YELLOW BREECHES CREEK

STORMWATER FACILITY #1

STORMWATER FACILITY #10

SWALE #1, SEGMENT #1

SEGMENT 2

SEGMENT 3

10' WIDE GRASS ACCESS RAMP @ 4:1 SLOPE

PERMANENT EMERGENCY ACCESSWAY (SEE DETAIL)

(PRIVATE ACCESS DRIVE)

BONBARDIER COURT

2-13 FFE 393.00
2-14 FFE 393.00
2-15 FFE 394.00
2-16 FFE 395.00
2-17 FFE 394.00
2-18 FFE 393.00
2-19 FFE 393.00
2-20 FFE 394.00

FFE 335.97 Existing Dwelling (101 Spanglers Mill Road)

Existing Building (Demolish)
Existing Building (Demolish)
Existing Building
Existing Building (Demolish)
Existing Building (Demolish)
Existing Barn
Existing Concrete Pad
Existing Shed
Existing Building (Kennel)
Existing Building (Garage)
Existing Building (Demolish)
Existing Building (Demolish)
Existing Building (Demolish

SEE SHEET 18

NOTE: SEE SHEET 22 FOR TYPICAL GARAGE TOWNHOUSE PLAN FOR WATER AND SEWER LATERALS

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LINKLINE PLACE
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

SEAL

SEE SHEET 21

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

GRADING / UTILITIES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\Xed
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\FILE : dwg\Plans\Pre-Final\17-GRADE-PARTIAL.dwg
SHEET 20 of 89

SEE SHEET 22

SEE SHEET 18 FOR LEGEND

GRAPHIC SCALE 1" = 50'

SEE SHEET 19

SEE SHEET 20

SEE SHEET 23

SEE SHEET 18 FOR LEGEND

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2500
FAX: (717) 770-2501
WWW.ALPHACEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

GRADING / UTILITIES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : 2:\2019\319582.sur\319582sur\Field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\Plans\Pre-Final\17-GRADE-PARTIAL.dwg
FILE :
SHEET 21 of 89

GRAPHIC SCALE 1" = 50'

SEE SHEET 20

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2500
FAX: (717) 770-4600
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEE SHEET 23

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

GRADING / UTILITIES PLAN

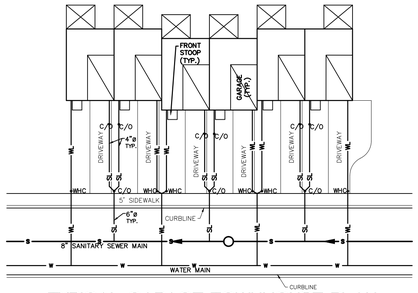
FOR

SIENNA

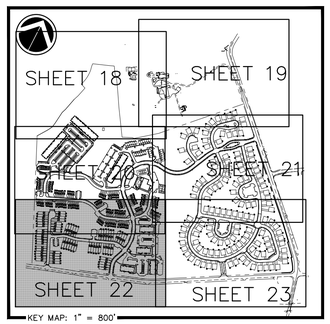
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PEDESTRIAN BRIDGE

EXISTING CULVERT TO BE EXTENDED AT SAME SIZE AND SLOPE FOR STREET WIDENING



TYPICAL GARAGE TOWNHOUSE PLAN FOR WATER AND SEWER LATERALS



KEY MAP: 1" = 800'

SEE SHEET 18 FOR LEGEND

GRAPHIC SCALE
1" = 50'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.npk\319582\dwg\Plans\Pre-Final\17-GRADE-PARTIAL.dwg
FILE :

SHEET 22 of 89

SEE SHEET 21

SEE SHEET 22

EXISTING CULVERT TO BE EXTENDED AT SAME SIZE AND SLOPE FOR STREET WIDENING

Limekiln Road T-955

SEE SHEET 18 FOR LEGEND

GRAPHIC SCALE 1" = 50'

KEY MAP: 1" = 800'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 2400
WWW.ALPHAGEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

GRADING / UTILITIES PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur*.field
SCALE : 1" = 50'
DWG : X:\2019\319582.dgn\319582*.dwg\Plans\Pre-Final\17-GRADE-PARTIAL.dwg
FILE :

LEGEND

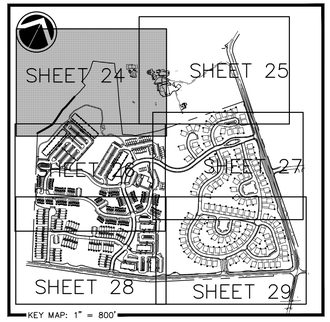
- Property Line
- Adjoiner Property Line
- Existing Right-of-way
- Easement Line
- Existing Curb
- Existing Edge Of Pave
- Existing Light Pole
- Existing Utility Pole & Guy Wire
- Existing Storm Sewer Pipe & Inlet
- Existing Sanitary Line, Manhole
- Existing Overhead Electric Line
- Existing Underground Electric Line
- Existing Tree/brush Line
- Existing Gas Line/Valve/Pipeline
- PROPOSED STORM SEWER LINE, INLET, ID#
- ROOF DRAIN COLLECTION PIPE
- PROPOSED RIP RAP APRON
- PROPOSED SANITARY SEWER MAIN; MANHOLE
- PROPOSED SANITARY LATERAL
- PROPOSED WATER LINE; HYDRANT; VALVE
- PROPOSED WATER LATERAL
- PROPOSED WALK/PAVED PATH ACCESSIBLE RAMP LOCATION

PROPOSED DRAINAGE EASEMENT

PROPOSED PUBLIC WATER AND SEWER EASEMENT IN FAVOR OF PA AMERICAN WATER COMPANY

EXISTING PIPELINE RIGHT-OF-WAY

SEE SHEET 25 FOR EASEMENT LINE/CURVE TABLES



Lower Allen Township, Cumberland County
Fairview Township, York County
Yellow Breeches Creek
Regulatory Floodway
100 Yr. Floodplain/Water Surface Elevation
Center of creek is Twp. bou
Existing drainage easement to be reconfigured with this plan
Existing Drainage Easement
25' Drainage Easement
Tennis Court
Pool
Existing Building (Pool House)
Existing Building (Gamehouse)
Existing Building (Storage)
Existing Building (Dwelling)
Existing Barn
Concr. Bridge
Brick Paving
Macadam
Wall
Fence
Approx. Underground Petroleum Tank
Approx. Well
TFF: 335.97 Existing Dwelling (101 Spanglers Mill Road)
N/F Fairview York Investments, LLC
N/F Bruno G. Bertin
72 UNIT 4-STORY APARTMENT BUILDING
BUILDING #3B
(BLDG. #1 & #3)
BUILDING #3C
APARTMENT BUILDING
CLUBHOUSE
SWIMMING POOL
FM
SEE SHEET 26
SEE SHEET 25
GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EASEMENT PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.su\319582su\field
SCALE : 1" = 50'
DWG: Y:\2019\319582.dph\319582\FILE: dwg\Plans\Pre-Final\23-EASE-PARTIAL.dwg
SHEET 24 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING ● ENGINEERING ● SURVEYING
115 LIMEKILN RD. P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2400
FAX: (717) 770-2405
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

LINE TABLE		
LINE	LENGTH	BEARING
L1	41.84'	S71°08'55"W
L2	26.18'	N15°19'30"W
L3	51.72'	N40°06'05"E
L4	35.00'	S12°43'30"E
L5	18.01'	S17°44'20"E
L6	436.17'	S43°51'29"W
L7	127.92'	N45°37'11"W
L8	57.34'	N45°37'11"W
L9	83.31'	N45°37'11"W
L10	25.00'	N45°37'11"W
L11	28.58'	N44°30'19"E
L12	62.48'	N49°41'53"W
L13	32.00'	N63°54'39"W
L14	14.66'	N44°20'32"E
L15	12.34'	S64°29'24"E
L16	51.08'	N60°03'04"E
L17	95.02'	S40°49'59"E
L18	69.66'	S44°22'49"W
L19	144.62'	S52°48'34"E
L20	52.06'	N49°14'24"E

LINE TABLE		
LINE	LENGTH	BEARING
L21	51.86'	N31°8'25"W
L22	29.76'	N66°31'16"W
L23	25.00'	N23°28'44"E
L24	45.22'	S66°31'16"E
L25	87.18'	S31°6'10"E
L26	63.52'	S40°45'36"E
L27	211.82'	N43°51'29"E
L28	10.00'	N43°51'29"E
L29	129.24'	N43°51'29"E
L30	25.00'	S46°08'31"E
L31	102.24'	S72°56'04"W
L32	42.76'	S18°16'37"E
L33	101.34'	N74°27'55"E
L34	45.46'	N17°02'01"W
L35	28.57'	N35°46'03"E
L36	29.98'	N83°11'56"W
L37	36.95'	S83°11'56"E
L38	175.16'	S44°46'38"E
L39	75.90'	N79°26'47"E
L40	21.79'	N17°07'46"W

LINE TABLE		
LINE	LENGTH	BEARING
L41	142.50'	N7°51'57"W
L42	30.12'	N21°32'09"E
L43	44.01'	S21°56'28"W
L44	123.11'	S7°38'25"E
L45	44.32'	N80°31'39"E
L46	17.09'	S9°28'21"E
L47	83.15'	S52°29'06"E
L48	48.66'	N56°41'15"E
L49	79.89'	N54°39'13"E
L50	165.43'	N51°28'16"E
L51	22.76'	S38°31'44"E
L52	206.92'	S51°28'48"W
L53	95.18'	S51°29'35"W
L54	101.09'	S51°29'35"W
L55	307.21'	S43°51'29"W
L56	195.78'	S62°45'22"W
L57	117.06'	N26°54'02"W
L58	97.38'	S73°44'28"W
L59	12.12'	S64°44'56"W
L60	11.78'	N27°05'38"W

LINE TABLE		
LINE	LENGTH	BEARING
L61	26.49'	S60°17'26"W
L62	25.00'	N29°42'34"W
L63	51.99'	N60°17'26"E
L64	15.34'	S29°42'34"E
L65	109.75'	N73°44'28"E
L66	112.65'	S26°54'02"E
L67	143.38'	N62°45'22"E
L68	68.67'	N29°49'04"E
L69	87.89'	N5°41'26"W
L70	105.51'	S81°42'47"W
L71	33.56'	N83°05'39"W
L72	83.08'	S63°18'26"W
L73	27.97'	N53°21'08"W
L74	103.18'	N63°18'26"E
L75	37.78'	S83°05'39"E
L76	20.86'	N81°42'47"E
L77	45.38'	N22°45'26"W
L78	86.80'	N46°49'43"E
L79	16.70'	N33°26'58"W
L80	48.64'	N41°31'07"W

LINE TABLE		
LINE	LENGTH	BEARING
L81	38.60'	S61°01'59"W
L82	33.64'	N88°24'38"W
L83	34.22'	N23°42'17"W
L84	50.49'	N23°28'53"E
L85	22.26'	N49°33'03"W
L86	33.70'	N64°42'11"W
L87	61.24'	S81°40'16"W
L88	109.51'	S51°25'59"W
L89	66.70'	N40°16'53"W
L90	30.66'	S85°05'50"W
L91	95.13'	S40°16'53"E
L92	139.75'	S46°31'26"W
L93	91.90'	S17°33'45"W
L94	32.47'	N16°45'50"W
L95	64.85'	S33°34'28"W
L96	21.35'	N33°34'28"E
L97	101.91'	S40°13'30"E
L98	629.69'	S45°37'12"E
L99	5.00'	S44°22'48"W
L100	20.26'	S45°37'11"E

LINE TABLE		
LINE	LENGTH	BEARING
L101	6.23'	N44°20'32"E
L102	11.77'	N44°20'32"E
L103	15.01'	N43°35'08"W
L104	95.17'	N53°13'50"E
L105	35.88'	N30°01'12"E
L106	32.65'	N55°56'26"E
L107	22.76'	N36°53'02"E
L108	25.99'	S75°52'36"E
L109	55.14'	S55°56'26"W
L110	166.48'	N40°23'49"W
L111	14.30'	S45°15'07"W
L112	38.72'	S43°07'57"W
L113	25.00'	S44°38'30"E
L114	26.02'	N43°43'01"E
L115	141.14'	S40°23'49"E
L116	24.80'	S30°01'12"W
L117	87.41'	S53°13'50"W
L118	145.55'	N45°37'11"W
L119	5.30'	S44°22'49"W
L120	340.72'	N48°16'03"W

LINE TABLE		
LINE	LENGTH	BEARING
L121	110.17'	N41°00'05"E
L122	26.12'	N48°46'04"E
L123	39.58'	N57°57'28"E
L124	67.22'	S43°48'56"E
L125	91.21'	N38°56'16"E
L126	39.60'	N38°27'45"W
L127	54.90'	N44°03'34"E
L128	5.92'	S47°40'40"E
L129	143.54'	N44°06'26"E
L130	130.16'	S29°22'12"E
L131	177.29'	N23°03'04"E
L132	69.18'	N25°55'48"E
L133	95.82'	N72°56'04"E
L134	5.29'	S14°54'31"E
L135	26.31'	N74°24'10"E
L136	15.85'	N71°12'51"E
L137	38.68'	S18°16'37"E
L138	24.98'	S80°15'19"W
L139	25.00'	S9°44'41"E
L140	23.33'	N80°15'19"E

LINE TABLE		
LINE	LENGTH	BEARING
L141	88.86'	S4°49'25"W
L142	107.84'	S28°37'44"W
L143	26.59'	N59°30'36"W
L144	25.00'	S30°29'24"W
L145	52.41'	S59°30'36"E
L146	138.94'	N28°37'44"E
L147	105.31'	N4°49'25"E
L148	99.07'	N74°27'55"E
L149	68.45'	S73°02'19"E
L150	113.83'	S24°34'15"E
L151	153.60'	S51°19'41"W
L152	43.54'	S69°49'39"W
L153	77.31'	N63°52'42"W
L154	46.02'	S36°59'45"W
L155	72.00'	S61°39'38"E
L156	60.34'	S11°5'42"W
L157	79.32'	S42°19'30"E
L158	5.66'	S31°7'40"E
L159	105.99'	S31°28'34"W
L160	32.54'	S45°50'20"W

LINE TABLE		
LINE	LENGTH	BEARING
L161	43.86'	S0°33'23"E
L162	10.49'	N0°33'23"W
L163	24.97'	N45°50'20"E
L164	146.31'	N31°28'34"E
L165	33.30'	N38°58'17"W
L166	122.31'	N12°34'46"E
L167	178.60'	N51°17'49"E
L168	75.85'	S57°19'16"W
L169	13.83'	S41°15'33"E
L170	14.76'	N41°35'54"W
L171	51.02'	N14°05'54"W
L172	84.33'	N57°19'10"E
L173	39.88'	S51°28'06"E
L174	56.34'	S77°02'42"E
L175	61.77'	S68°05'47"E
L176	40.19'	S81°37'04"E
L177	17.46'	N10°06'46"W
L178	31.09'	N72°00'22"W
L179	151.33'	N54°28'54"E
L180	50.56'	N22°06'06"E

LINE TABLE		
LINE	LENGTH	BEARING
L181	105.79'	N65°7'22"E
L182	25.00'	N83°02'38"W
L183	102.47'	S6°57'22"W
L184	38.10'	S22°06'06"W
L185	157.18'	S59°51'32"W
L186	84.60'	N50°40'41"W
L187	77.24'	S71°33'06"W
L188	75.85'	S57°19'16"W
L189	37.14'	N35°03'47"W
L190	74.81'	N9°04'14"W
L191	35.49'	N19°47'45"W
L192	104.95'	S72°57'59"W
L193	9.01'	N17°03'56"W
L194	357.58'	S72°56'04"W
L195	155.94'	S73°02'19"W
L196	133.08'	S16°59'36"W
L197	74.95'	S44°06'26"W
L198	5.91'	N45°56'26"W
L199	51.04'	S44°03'34"W
L200	19.96'	N38°27'45"W

LINE TABLE		
LINE	LENGTH	BEARING
L201	99.09'	S52°56'32"W
L202	14.90'	S43°48'56"E
L203	36.38'	S57°57'28"E
L204	29.88'	S48°46'04"W
L205	109.47'	S40°42'55"W
L206	117.37'	N45°50'54"W
L207	105.52'	N40°13'30"W
L208	60.30'	N31°39'33"W
L209	25.77'	S72°22'38"W
L210	68.42'	S31°39'33"E
L211	254.58'	N46°03'30"E
L212	122.94'	S81°43'05"E
L213	43.36'	S18°51'08"E
L214	18.30'	N18°51'08"W
L215	150.47'	N81°43'05"W
L216	241.58'	S46°03'30"W
L217	92.81'	N69°15'58"W
L218	4.58'	N36°58'04"W
L219	26.29'	N67°21'27"W
L220	100.53'	N25°10'04"W

LINE TABLE		
LINE	LENGTH	BEARING
L221	21.74'	N47°11'38"E
L222	70.50'	N49°42'57"E
L223	181.72'	N44°10'28"E
L224	25.00'	N25°49'32"W
L225	184.89'	S64°10'28"W
L226	74.22'	S49°42'57"W
L227	30.98'	S47°11'38"W
L228	14.46'	S82°55'34"W
L229	27.03'	S66°55'41"W
L230	26.17'	S43°13'55"W
L231	41.62'	N34°43'30"W
L232	260.98'	S60°11'48"W
L233	195.18'	S56°42'36"W
L234	163.89'	S53°30'54"W
L235	143.05'	S60°21'29"W
L236	56.78'	N87°16'12"W
L237	34.84'	S60°11'48"W
L238	38.08'	S73°56'42"E
L239	160.04'	S13°22'27"W
L240	43.43'	S11°33'50"E

LINE TABLE		
LINE	LENGTH	BEARING
L241	25.00'	N78°26'10"E
L242	37.90'	N11°33'50"W
L243	144.53'	N13°22'27"E
L244	71.46'	S63°03'32"E
L245	123.67'	N44°02'54"E
L246	17.84'	N23°00'44"W
L247	118.82'	N53°30'54"E
L248	89.92'	S10°47'00"E
L249	47.50'	S56°16'15"W
L250	46.39'	S6°36'33"W
L251	210.93'	S44°29'34"W
L252	42.52'	S26°05'27"W
L253	25.06'	S68°00'02"E
L254	36.68'	N26°05'27"E
L255	193.66'	N44°29'34"E
L256	20.12'	S26°32'28"E
L257	25.03'	N60°29'37"E
L258	32.62'	N26°32'28"W
L259	35.40'	N6°36'33"E
L260	52.50'	N56°16'15"E

LINE TABLE		
LINE	LENGTH	BEARING
L261	99.30'	N10°47'00"W
L262	189.50'	N68°24'36"E
L263	90.72'	S82°21'07"E
L264	103.40'	S6°30'00"W
L265	39.51'	S6°31'22"W
L266	25.00'	S83°30'11"E
L267	39.50'	N6°31'22"E
L268	88.74'	N6°30'00"E
L269	19.22'	N58°47'46"E
L270	41.82'	S78°36'38"E
L271	29.45'	S67°05'27"E
L272	50.93'	S63°39'30"E
L273	28.87'	S56°29'04"E
L274	51.10'	S48°16'23"E
L275	26.13'	S43°53'34"E
L276	54.09'	S35°51'53"E
L277	7.94'	S3°03'38"W
L278	65.71'	S62°30'38"W
L279	45.19'	S62°52'27"W
L280	7.39'	S28°30'27"E

LINE TABLE		
LINE	LENGTH	BEARING
L281	125.36'	S62°07'33"W
L282	40.62'	N34°25'40"W
L283	19.02'	N70°15'11"W
L284	36.41'	S86°37'10"W
L285	44.49'	S83°56'55"W
L286	69.64'	S79°43'50"W
L287	24.54'	S70°09'15"W
L288	20.07'	S64°47'05"W
L289	22.33'	S60°44'45"W
L290	55.81'	S54°21'48"W
L291	19.48'	S45°54'11"W
L292	25.00'	S44°05'49"E
L293	17.63'	N45°54'11"E
L294	52.57'	N54°21'48"E
L295	20.06'	N60°44'45"E
L296	18.02'	N64°47'05"E
L297	21.27'	N70°09'15"E
L298	64.11'	N79°43'50"E
L299	18.86'	S84°38'13"E
L300	110.11'	S40°32'32"E

LINE TABLE		
LINE	LENGTH	BEARING
L301	51.54'	S20°58'48"E
L302	30.62'	N69°01'12"E
L303	88.25'	N10°50'35"W
L304	110.47'	N62°07'33"E
L305	14.80'	S23°23'16"E
L306	12.37'	N67°30'02"E
L307	39.46'	N66°57'17"E
L308	14.61'	N22°33'33"W
L309	9.66'	N22°33'33"W
L310	20.61'	N62°07'33"E
L311	70.17'	N66°09'24"E
L312	55.41'	S19°52'51"E
L313	26.78'	S13°25'11"E
L314	51.45'	S80°05'59"E
L315	25.91'	S3°11'02"W
L316	51.00'	S2°56'14"W
L317	15.83'	S14°38'06"W
L318	64.27'	S3°54'54"W
L319	28.23'	S16°26'15"E
L320	12.08'	S24°06'59"E

LINE TABLE		
LINE	LENGTH	BEARING
L321	125.13'	N64°09'17"W
L322	38.17'	S82°52'49"W
L323	58.85'	S28°22'14"W
L324	21.85'	S8°44'19"E
L325	168.57'	S72°20'34"W
L326	23.97'	N48°42'21"W
L327	55.94'	N4°57'18"W
L328	16.97'	S82°47'05"W
L329	45.32'	N17°54'05"W
L330	55.75'	N72°21'14"W
L331	58.91'	S34°35'44"W
L332	91.65'	S17°39'26"E
L333	71.38'	S72°20'34"W
L334	97.39'	S79°19'29"W
L335	52.87'	N12°21'33"W
L336	32.20'	N3°42'59"W
L337	28.39'	N4°08'45"W
L338	15.40'	N9°00'38"E
L339	37.77'	N13°42'27"E
L340	25.00'	N76°17'33"W

LINE TABLE		
LINE	LENGTH	BEARING
L341	40.24'	S13°42'27"W
L342	26.46'	S22°5'43"W
L343	21.81'	S1°43'53"E
L344	34.49'	S3°42'59"E
L345	55.93'	S12°12'33"E
L346	113.60'	S68°38'42"W
L347	34.74'	N12°37'36"W
L348	49.50'	S81°48'27"W
L349	25.00'	S8°11'36"E
L350	30.78'	N81°48'24"E
L351	13.37'	S15°30'01"E
L352	29.70'	S74°29'38"W
L353	114.59'	S89°06'30"W
L354	207.50'	N46°33'57"W
L355	50.67'	S54°05'44"W
L356	110.91'	S47°30'33"W
L357	25.00'	S43°10'30"E
L358	108.66'	N47°30'33"E
L359	29.27'	N56°27'12"E
L360	180.52'	S46°33'57"E

LINE TABLE		
LINE	LENGTH	BEARING
L361	30.60'	S24°20'00"W
L362	25.00'	S65°39'56"E
L363	30.69'	N24°20'00"E
L364	99.25'	N89°06'30"E
L365	36.02'	S15°43'29"E
L366	25.00'	N74°16'31"E
L367	31.66'	N15°43'29"W
L368	17.35'	N74°29'38"E
L369	127.24'	S1°32'14"W
L370	25.00'	S88°27'46"E
L371	135.85'	N1°32'14"E
L372	126.01'	N68°38'42"E
L373	90.59'	N79°22'19"E
L374	36.78'	S16°06'39"W
L375	30.07'	N72°20'34"E
L376	33.68'	N16°06'39"E
L377	141.86'	N72°20'34"E
L378	32.68'	S48°42'21"E
L379	204.08'	N72°20'34"E
L380	34.84'	N8°44'19"W

LINE TABLE		
LINE	LENGTH	BEARING
L381	37.58'	N28°22'14"E
L382	17.89'	N82°52'49"E
L383	147.48'	S64°09'17"E
L384	54.38'	S24°06'59"E
L385	315.58'	N72°54'44"E
L386	134.25'	N18°30'42"W
L387	114.44'	N70°50'05"E
L388	28.18'	N82°58'21"E
L389	35.13'	N69°18'09"E
L390	25.00'	N20°41'51"W
L391	32.13'	S69°18'09"W
L392	27.84'	S82°58'21"W
L393	135.86'	S70°50'05"W
L394	36.94'	N88°39'22"W
L395	49.37'	S86°10'20"W
L396	95.92'	N22°45'48"W
L397	85.84'	N62°56'33"E
L398	248.99'	N67°59'36"E
L399	25.00'	N22°00'20"W
L400	243.06'	S67°59'36"W

LINE TABLE		
LINE	LENGTH	BEARING
L401	109.33'	N25°50'04"W
L402	115.39'	N21°06'02"E
L403	116.45'	N7°70'8"32"E
L404	80.17'	N78°06'41"E
L405	82.00'	S78°06'41"W
L406	123.90'	S7°70'8"32"W
L407	7.37'	S64°10'37"W
L408	103.34'	S21°06'02"W
L409	162.26'	N25°50'04"W
L410	70.85'	N74°12'32"W
L411	32.91'	N70°32'38"E
L412	15.82'	S19°18'17"E
L413	95.50'	S55°46'16"W
L414	10.96'	S26°12'48"E
L415	8.75'	S37°09'18"E
L416	18.73'	S4°55'46"W
L417	29.92'	S31°15'11"E
L418	90.16'	N59°53'05"E
L419	23.33'	N27°45'14"W
L420	103.39'	N79°12'55"E

LINE TABLE		
LINE	LENGTH	BEARING
L421	162.37'	N36°29'16"E
L422	11.82'	N75°34'40"W
L423	117.69'	S82°17'02"W
L424	77.53'	S11°25'39"E
L425	95.44'	S79°15'09"W
L426	6.83'	N34°13'44"W
L427	74.49'	S31°12'18"E
L428	21.82'	S6°57'05"W
L429	36.47'	S18°20'45"W
L430	106.06'	S86°20'16"W
L431	28.20'	N37°46'03"W
L432	26.04'	S68°30'20"W
L433	26.04'	S37°46'03"E
L434	95.66'	S68°30'20"W
L435	26.73'	N42°13'21"W
L436	26.73'	S68°30'20"W
L437	53.46'	S42°13'21"E
L438	127.42'	N68°30'20"E
L439	1.81'	N68°30'20"E
L440	120.36'	N86°20'16"E

LINE TABLE		
LINE	LENGTH	BEARING
L441	54.48'	N18°20'45"E
L442	43.25'	S63°23'12"E
L443	85.14'	N67°18'12"E
L444	2.92'	S22°41'48"E
L445	292.40'	S56°28'07"W
L446	43.62'	S60°36'44"W
L447	98.33'	S43°32'52"E
L448	43.92'	N58°07'39"E
L449	70.23'	N28°25'43"W
L450	263.38'	N56°28'07"E
L451	54.95'	S21°20'14"E
L452	24.86'	S4°32'21"E
L453	58.95'	S40°06'05"W
L454	68.41'	N26°30'39"W
L455	25.00'	S63°29'21"W
L456	67.11'	S26°30'39"E
L457	31.96'	S22°40'03"W
L458	80.88'	S10°43'24"E
L459	16.42'	S78°16'37"E
L460	7.65'	S10°57'55"W

LINE TABLE		
LINE	LENGTH	BEARING
L461	106.03'	S76°45'44"W
L462	154.43'	S67°11'02"W
L463	135.26'	N67°18'20"E
L464	25.70'	S28°12'55"E
L465	25.00'	N59°9'20"E
L466	19.92'	N28°40'40"W
L467	105.60'	N76°45'44"E
L468	30.42'	N11°00'05"E
L469	24.55'	N69°54'06"E
L470	45.88'	N17°16'21"W
L471	41.70'	N71°08'55"E
L472	4.58'	S17°44'20"E
L473	63.89'	S19°40'43"E
L474	22.23'	S60°20'01"E
L475	16.99'	S12°38'00"E
L476	40.48'	S29°34'53"E
L477	21.72'	S1°57'43"W
L478	101.42'	S7°05'32"W
L479	38.22'	N40°44'00"W
L480	38.15'	N49°12'26"E

LINE TABLE		
LINE	LENGTH	BEARING
L481	57.39'	N40°59'36"W
L482	75.20'	S49°00'24"W
L483	124.75'	N72°12'51"W
L484	25.00'	S42°3'15"W
L485	122.18'	S72°12'51"E
L486	95.24'	S40°44'36"E
L487	34.99'	S63°24'07"E
L488	195.79'	S2°09'52"W
L489	46.51'	S51°55'18"W
L490	75.64'	N85°36'45"W
L491	25.00'	S4°23'15"W
L492	85.36'	S85°36'45"E
L493	44.10'	N14°25'44"E
L494	44.26'	S72°40'44"E
L495	87.64'	S2°58'56"E
L496	43.99'	S3°09'30"E
L497	36.96'	S19°51'12"E
L498	22.64'	S33°22'04"E
L499	136.03'	S65°39'52"W
L500	276.45'	S32°56'26"E

LINE TABLE		
LINE	LENGTH	BEARING
L501	84.52'	N65°40'33"E
L502	41.03'	S56°12'50"E
L503	21.75'	S40°13'52"E
L504	22.44'	S16°42'38"W
L505	47.58'	S30°05'14"E
L506	48.16'	S31°22'36"E
L507	45.31'	S46°43'30"E
L508	39.00'	S43°57'36"E
L509	28.47'	S63°01'42"E
L510	52.77'	S64°31'53"E
L511	45.45'	S66°51'29"E
L512	49.27'	S58°56'08"E
L513	59.79'	N70°00'00"W
L516	6.60'	S10°16'55"W
L517	16.69'	S16°19'19"W
L518	162.60	S15°24'38"W

LINE TABLE		
LINE	LENGTH	BEARING
L538	7.63'	N63°51'45"W
L539	47.62'	N68°21'03"W
L540	51.39'	N63°02'20"W

LINE TABLE		
LINE	LENGTH	BEARING
L541	17.60'	N68°46'08"W
L542	30.75'	N41°21'39"W
L543	37.87'	N48°31'25"W
L544	67.93'	N30°08'33"W
L545	26.45'	N12°27'33"E
L546	59.08'	N37°34'28"W
L547	32.29'	N58°47'35"W
L548	87.42'	N59°53'05"E
L549	129.91'	S27°45'14"E
L550	100.50'	N48°06'21"E
L551	87.67'	N17°11'18"W
L552	151.67'	N36°29'16"E
L553	144.10'	N14°25'44"E
L554	9.68'	N58°10'15"W
L555	121.83'	N12°18'08"E
L556	14.94'	N29°25'36"E
L557	359.89'	N14°24'52"E
L558	25.00'	N75°55'16"W
L559	356.45'	S14°24'52"W
L560	15.41'	S29°25'36"W

LINE TABLE		
LINE	LENGTH	BEARING
L561	116.73'	S12°18'08"W
L562	19.06'	N58°10'15"W
L563	285.54'	N62°19'08"W
L564	83.55'	N22°23'01"E
L565	25.24'	N75°34'40"W
L566	86.37'	S22°23'01"W
L567	62.30'	S66°35'27"W
L568	31.65'	S14°25'20"W
L569	80.82'	N66°35'27"E
L570	290.06'	S62°19'08"E
L571	36.00'	S58°10'15"E
L572	72.97'	S14°25'44"W
L573	23.85'	N75°34'40"W
L574	120.97'	S82°14'41"W
L575	129.30'	N75°08'00"W
L576	88.16'	S7°17'39"E
L577	42.73'	S28°06'41"E
L578	91.08'	S55°46'16"W
L579	17.48'	N12°58'43"W
L580	41.83'	N41°13'14"W

LINE TABLE		
LINE	LENGTH	BEARING
L581	16.59'	N5°59'52"E
L582	5.71'	N34°12'51"E
L583	45.45'	N8°46'45"W
L584	50.67'	N35°04'26"W
L585	20.28'	N13°47'58"W
L586	37.83'	N3°24'00"W
L587	35.28'	N7°11'29"W
L588	13.74'	N6°08'30"W
L589	23.71'	N34°19'19"E
L590	43.08'	N17°38'54"E
L591	57.02'	N5°08'17"E
L592	68.34'	N2°12'40"E
L593	69.35'	N3°50'06"W
L594	35.52'	N15°20'37"W
L595	13.15'	N3°28'07"W
L596	48.43'	N63°39'29"E
L597	58.89'	S15°31'51"E
L598	18.24'	N87°34'26"E
L599	75.44'	S77°42'32"E
L600	82.15'	S66°29'17"E

LINE TABLE		
LINE	LENGTH	BEARING
L601	25.28'	N14°59'20"E
L602	68.97'	N66°29'17"W
L603	66.84'	N14°25'20"E
L604	62.24'	S75°34'40"E
L605	111.38'	N55°06'05"E
L606	169.17'	N43°02'32"E
L607	27.02'	N24°39'20"W
L608	176.78'	S43°02'32"W
L609	97.26'	S55°06'05"W
L610	75.76'	N75°34'40"W
L611	90.46'	S14°25'20"W
L612	51.38'	N77°42'32"W
L613	37.83'	N21°53'03"W
L614	45.48'	N13°02'19"E
L615	29.31'	N41°18'07"E
L616	49.18'	N7°41'27"E
L617	97.09'	N44°50'59"E
L618	205.09'	N70°08'05"E
L619	34.59'	N65°20'40"E
L620	25.00'	N24°39'20"W

LINE TABLE		
LINE	LENGTH	BEARING
L621	33.54'	S65°20'40"W
L622	193.90'	S70°08'05"W
L623	24.54'	N17°48'49"W
L624	25.00'	S72°11'11"W
L625	29.89'	S17°48'49"E
L626	97.96'	S44°47'17"W
L627	40.97'	S63°51'45"W
L628	16.54'	S72°15'05"W
L629	18.99'	N18°30'46"W
L630	0.84'	N24°25'35"W
L631	41.24'	N7°59'33"W
L632	26.59'	S62°05'09"W
L633	35.79'	S7°59'33"E
L634	3.16'	S24°25'35"E
L635	17.37'	S18°30'46"E
L636	42.54'	S70°36'58"W
L637	28.62'	N0°37'42"E
L638	87.63'	N31°03'55"W
L639	88.26'	N67°48'19"E
L640	59.67'	N86°08'31"E

LINE TABLE		
LINE	LENGTH	BEARING
L641	38.23'	N56°45'45"E
L642	100.34'	N70°20'23"E
L643	29.03'	N49°41'34"E
L644	155.69'	N70°38'56"E
L645	25.00'	N19°21'39"W
L646	144.09'	S70°37'43"W
L647	34.57'	N59°45'07"W
L648	19.22'	N12°59'19"W
L649	51.20'	N29°48'50"E
L650	82.70'	N19°21'39"W
L651	140.92'	N88°30'01"E
L652	26.92'	N23°15'13"W
L653	139.76'	S88°30'01"W
L654	28.28'	N23°15'13"W
L655	25.00'	S66°44'47"W
L656	36.50'	S23°15'13"E
L657	1.58'	S23°15'13"E
L658	86.09'	S19°31'02"E
L659	34.42'	S29°48'50"W
L660	92.50'	S67°41'54"W

LINE TABLE		
LINE	LENGTH	BEARING
L661	104.62'	N23°15'13"W
L662	2.00'	N23°15'13"W
L663	36.50'	N23°15'13"W
L664	25.00'	S66°44'47"W
L665	36.50'	S23°15'13"E
L666	2.00'	S23°15'13"E
L667	92.58'	S23°15'13"E
L668	32.57'	S67°45'42"W
L669	53.43'	S73°14'06"W
L670	85.08'	N16°57'33"W
L671	45.38'	N5°12'37"E
L672	28.44'	S66°44'47"W
L673	36.73'	S5°12'37"W
L674	111.90'	S16°57'33"E
L675	13.05'	S59°35'16"W
L676	46.20'	S21°40'00"E
L677	44.41'	S63°41'23"W
L678	27.96'	N57°20'33"W
L679	41.55'	N18°45'00"W
L680	46.07'	N19°15'32"W

LINE TABLE		
LINE	LENGTH	BEARING
L681	22.60'	N15°15'10"W
L682	34.95'	N2°13'53"E
L683	30.66'	N6°08'34"E
L684	41.72'	N48°45'20"W
L685	57.82'	N21°40'05"W
L686	98.97'	N67°02'48"E
L687	60.35'	N88°56'09"E
L688	321.89'	N66°46'45"E
L689	25.00'	N23°13'15"W
L690	170.82'	S66°46'45"W
L691	16.42'	N24°41'48"W
L692	145.79'	S60°09'47"W
L693	68.38'	S88°56'09"W
L694	192.87'	N59°00'31"W
L695	38.48'	N21°27'16"W
L696	63.85'	N13°41'14"W
L697	44.46'	N34°08'47"W
L698	51.96'	N17°18'08"W
L699	39.00'	N31°08'51"W
L700	41.24'	N26°42'09"W

LINE TABLE		
LINE	LENGTH	BEARING
L701	22.84'	N20°57'26"W
L702	75.55'	N69°42'45"E
L703	182.04'	N85°47'24"E
L704	148.62'	S14°25'05"E
L705

SEE SHEET 25 FOR EASEMENT LINE/CURVE TABLES

SEE SHEET 24

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

BUILDING #3C
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. HT: 63')

BUILDING #3B
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. HT: 63')

BUILDING #3A
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. HT: 63')

BUILDING # 4D
THREE-STORY 24 UNI
APARTMENT BUILDIN

ONE-STORY COMMUNITY CENTER
10,000 S.F.

VISITOR PARKING LOT EASEMENT IN FAVOR OF LOT #3

ONE-STORY GARAGE (9 SPACES)

ONE-STORY GARAGE (7 SPACES)

Existing drainage easement to be reconfigured with this plan

50' Drainage Easement

50' Enterprise Pipeline Easement

SIENNA BOULEVARD

PRIVATE ACCESS DRIVE

SEE SHEET 28

SEE SHEET 27

GRAPHIC SCALE
1" = 50'

ALPHA CONSULTING ENGINEERS, INC.
PLANNING ● ENGINEERING ● SURVEYING
115 LIMEKILN RD. P.O. BOX 67
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2400
FAX: (717) 770-2400
WWW.ALPHACEI.COM

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EASEMENT PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.su\319582su*.field
SCALE : 1" = 50'
DWG : K:\2019\319582.sph\319582A\dwg\Plans\Pre-Final\23-EASE-PARTIAL.dwg
FILE : 23-EASE-PARTIAL.dwg

SHEET 26 of 89

SEE SHEET 25

SEE SHEET 26

SEE SHEET 29

N/F
Homer S. & Janis B. Hetrick
Deed Book 104-C, Page 0031
Tax Parcel 27-000-RE-0030B

N/F
Sean Christopher Cr
Kelly Lane Mc
Instrument # 201
Tax Parcel 27-000-

N/F
Kimberly M. Mi
Deed Book 1956,
Tax Parcel 27-00C

N/F
Todd W. & Kelly L. Kramer
Deed Book 17414, Page 5141
Plan Book 634
Lot 42
Tax Parcel 27-000-35-0042

N/F
Jennifer M. Bixler
Deed Book 2370, Page 970
Plan Book 634
Lot 2
Tax Parcel 27-000-35-0026

N/F
Ernest C. & Carolyn R. Baker
Deed Book 1630, Page 7288
Lot 24, Plan Book PP, Page 634
Tax Parcel 27-000-35-0024

N/F
Tasha Pitts
Deed Book 2254, Page 4847
Lot 2, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031K

Spangler's Mill Road S.R. 4027

(T-6; Pin Oak

Existing drainage easement to be reconfigured with this plan

Existing drainage easement to be reconfigured with this plan

33' Sinclair Refining Co. Easement

33' Sinclair Refining Easement

SHEET 24 | SHEET 25
SHEET 26 | SHEET 27
SHEET 28 | SHEET 29
KEY MAP: 1" = 800'

SEE SHEET 25 FOR EASEMENT LINE/CURVE TABLES

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2600
FAX: (717) 770-2601
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EASEMENT PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\Field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\23-EASE-PARTIAL.dwg
FILE : dwg\Plans\Pre-Final\
SHEET 27 of 89

SEE SHEET 25

SEE SHEET 28

BUILDING # 4D
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4C
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4A
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4B
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

ONE-STORY GARAGE (9 SPACES)

ONE-STORY GARAGE (9 SPACES)

ONE-STORY GARAGE (9 SPACES)

ONE-STORY GARAGE (9 SPACES)

5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8 5-9 5-10 5-11 5-12 5-13 5-14 5-15 5-16 5-17 5-18 5-19 5-20 5-21 5-22 5-23 5-24 5-25 5-26 5-27 5-28 5-29 5-30 5-31 5-32 5-33 5-34 5-35 5-36 5-37 5-38 5-39 5-40 5-41 5-42 5-43 5-44 5-45 5-46 5-47 5-48 5-49 5-50 5-51 5-52 5-53 5-54 5-55 5-56 5-57 5-58 5-59 5-60 5-61 5-62 5-63 5-64 5-65 5-66

3-1 3-2 3-3 3-4 3-5 3-6 3-7 3-8 3-9 3-10 3-11 3-12 3-13 3-14 3-15 3-16 3-17 3-18 3-19 3-20 3-21 3-22 3-23 3-24 3-25 3-26 3-27 3-28 3-29 3-30 3-31 3-32 3-33 3-34 3-35 3-36 3-37 3-38 3-39 3-40 3-41 3-42 3-43 3-44 3-45 3-46 3-47 3-48 3-49 3-50 3-51 3-52 3-53 3-54 3-55 3-56 3-57 3-58 3-59 3-60 3-61 3-62 3-63 3-64 3-65 3-66 3-67 3-68 3-69 3-70 3-71 3-72 3-73

4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8 4-9 4-10 4-11 4-12 4-13 4-14 4-15 4-16 4-17 4-18 4-19 4-20

Existing drainage easement to be reconfigured with this plan

Existing drainage easement to be reconfigured with this plan

PROPOSED R/W LINE

SIENNA BOULEVARD (50' R/W)

WOLF RUN BOULEVARD

TIGER HOOF BOULEVARD

25' ASPHALT WALK

5' CONC. WALK

16"X 8" TEE
(2) 16" BUTTERFLY VALVE
(1) 6"GV

16"X 12" TEE
(2) 16" BUTTERFLY VALVE
(1) 12"GV

(1) 8"x6" MJ TEE
(1) 6"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 8"x6" MJ TEE
(2) 8" MJ GATE VALVES
(3) VALVE BOXES

(1) 12"x6" MJ TEE
(1) 6"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 12"x6" MJ TEE
(1) 12"x6" MJ TEE
(2) 12" MJ GATE VALVES
(1) 8" MJ GATE VALVE
(4) VALVE BOXES

(1) 12"x8" MJ TEE
(1) 8"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 12"x8" MJ TEE
(1) 8"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 12"x8" MJ TEE
(2) 12" MJ GATE VALVES
(1) 8" MJ GATE VALVE
(3) VALVE BOXES

(1) 8"x6" MJ TEE
(1) 6"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 8"x6" MJ TEE
(1) 6"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 8"x6" MJ TEE
(2) 8" MJ GATE VALVES
(3) VALVE BOXES

(1) 8"x6" MJ TEE
(1) 6"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 8"x6" MJ TEE
(1) 6"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 8"x6" MJ TEE
(1) 6"MJ GATE VALVE
(1) VALVE BOX
(1) 5-1/4 MJ FIRE HYDRANT

(1) 12"x8" MJ TEE
(1) 8

SEE SHEET 27

SEE SHEET 28

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EASEMENT PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

Deed Book 2254, Page 4847
Lot 2, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031K

N/F
New Cumberland Alliance Church
Deed Book 934, Page 961
Lot 1, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031G

N/F
Timothy E. Langletz
Lot 2, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0131

N/F
Bonnie Plants, Inc.
Deed Book 2096, Page 8448
Lot 1, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0025N

Existing drainage easement to be reconfigured with this plan

50' Drainage Easement

Intermittent Stream I5-1

PROPOSED RIGHT-OF-WAY LINE

Limekiln Road T-955

188'-TYPE 315 GUIDE RAIL

16"x 8" TEE
16"x 16" BUTTERFLY VALVE
(1) W.O.V.

16" CLASS 56 ZINC COATED DI

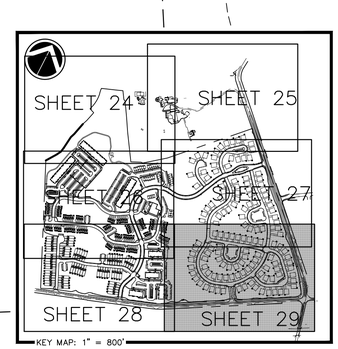
CONNECT TO EX 16" WATER MAIN

Bridge Weight Sign

Stop Sign

Driveway

SEE SHEET 25 FOR
EASEMENT LINE/CURVE TABLES



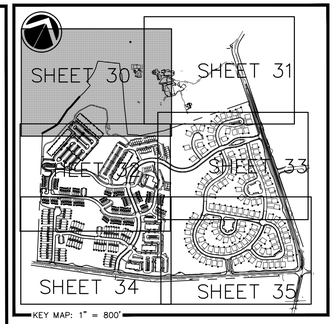
KEY MAP: 1" = 800'

GRAPHIC SCALE
1" = 50'

PROJECT NO.	319582
SURVEY BOOK :	Z:\2019\319582.sur\319582sur\field
SCALE :	1" = 50'
DWG :	Y:\2019\319582.sp\319582\dwg\Plans\Pre-Final\23-EASE-EASEMENT.dwg
FILE :	
SHEET	29 of 89

LEGEND

- Property Line
- Adjoiner Property Line
- Existing Right-of-way
- Easement Line
- Existing Curb
- Existing Edge Of Pave
- G — Existing Gas Line
- Edge Of Stream
- BUILDING SETBACK LINE
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- LOT LINE
- PROPOSED 4' WIDE PUBLIC SIDEWALK
- ACCESSIBLE RAMP LOCATION (SEE DETAIL)
- PROPOSED ASPHALT PATH/TRAIL (SEE DETAIL)
- REQUIRED PARKING AREA LANDSCAPE TREE CALCULATION ZONE
- REQUIRED PARKING AREA TREE SEE PLANTING SCHEDULE (THIS SHEET)
- EVERGREEN SCREENING CONCEPT (I.E., PINE, FIR OR SPRUCE TREES)
- SPECIMEN ORNAMENTAL PLANTING CONCEPT FOR DRAMATIC EFFECT (I.E., CHERRY, DOGWOOD, REDBUD TREES)
- APPROXIMATE AREA OF TREES/BRUSH TO REMAIN
- MANAGED MEADOW IN STORMWATER FACILITY SEE MEADOW SEEDING SCHEDULE (THIS SHEET)



Luminaire Schedule

Symbol	Qty	Tag	Label	Lum. Lumens	LLF	Description
	20	P1A	OSQM-B-16L-40K7-4M-Ux-xx-xx-x_1	16098	0.900	CREE OSQ TYPE IV - 16L
	26	A1A	SRT-1-NL120W4KU3NNNXX	11135	0.900	DUAL HEAD ACORN STYLE TYPE III POLE-TOP
	22	P1	OSQM-B-16L-40K7-4M-Ux-xx-xx-x_4	12349	0.900	CREE OSQ TYPE IV - 16L WITH BLS
	8	P2	OSQM-B-16L-40K7-2M-Ux-xx-xx-x_2	12349	0.900	CREE OSQ TYPE II - 16L WITH BLS
	28	A1	SRT-1-NL120W4KU3NNNXX_1	11135	0.900	SINGLE HEAD ACORN STYLE TYPE III POLE-TOP
	19	P3	OSQM-B-16L-40K7-3M-Ux-xx-xx-x	12699	0.900	CREE OSQ TYPE III - 16L WITH BLS

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

MEADOW SEEDING SCHEDULE

NATIVE SPECIES RE-VEGETATION MEADOW SEEDING

Native, Upland Wildlife Forage & Cover Meadow Mix – ERNMX-123 Or Approved Equivalent

Scientific Name	Common Name	Lbs/Ac.
Andropogon gerardii	Turkey Foot Bluestem	10 Lbs/Ac. - 1/4 Lb/1000 sq. ft.
Chamaecrista fasciculata	Partridge Pea	
Coreopsis tinctoria	Plains Coreopsis	
Desmodium canadense	Showy Tick Trefoil	
Elymus virginicus	Virginia Wild Rye	
Panicum virgatum	Switchgrass	
Poa palustris	Fowl Bluegrass	
Rudbeckia hirta	Black Eyed Suson	
Schizachyrium scoparium	Little Bluestem	
Sorghastrum nutans	Indiangrass	
Tripsacum dactyloides	Eastern Gamma Grass	

MEADOW ESTABLISHMENT GUIDE

DISTURBED SITES & STEEP SLOPES

DISTURBED SITES & STEEP SLOPES have variable soil types and conditions.

Examples of DISTURBED SITES:

- Landfills
- Surface mines
- Road cuts
- Construction sites

Disturbed site - Before

SITE PREPARATION

Eradicate existing vegetation by having a licensed spray technician apply an approved herbicide. Perennial weeds not addressed before establishment will be a difficult problem to remove. Wherever possible, re-grade the site to reduce slope, and build diversions which will reduce erosion and minimize seed loss.

Habitat: Consists of various soils that are the result of construction, resulting in exposed clay, sand, and rock outcropping without topsoil.

Fertility: These sites are generally low in fertility; therefore, adding topsoil or organic matter (compost) can be very beneficial. Check your soil pH and select species adapted to that pH. Add lime and fertilizer as recommended by soil analysis, incorporate any amendments into the soil. All incorporating activities should be done in a manner, such as tracking, that will leave the soil rough, and minimize soil erosion and rapid runoff. If there is a weed problem, fertilizing is not recommended. For more information, please see the FAQs on p. 40.

Disturbed site - After

Seeding Method: Hand seed, broadcast, hydroseed, or drill seed. Once the seed has been broadcast, drag/rake with a light harrow to cover the seed (1/4"-1/2" deep), mulching, or mulching with straw, hydromulch, or shred coconut fiber mats is recommended to protect the seed from drying out or washing away. With adequate temperature and moisture, the seed should begin to germinate within approximately three weeks.

FIRST YEAR MAINTENANCE

Observation of the desired species' growth and weed competition is essential when making maintenance decisions. Minimum mowing (4"-9" high) to top off aggressive weeds is recommended to give desirable plants an opportunity to develop roots. Most of the competition the first year will be annual weeds. Mowing too close encourages weedy grass species.

SECOND YEAR MAINTENANCE

Monitor and control undesirable vegetation with spot spraying or mowing. Mowing the entire area (4"-9" high) during the dormant season can enhance the appearance without jeopardizing wildlife habitat and erosion protection.

SPECIAL CONSIDERATIONS

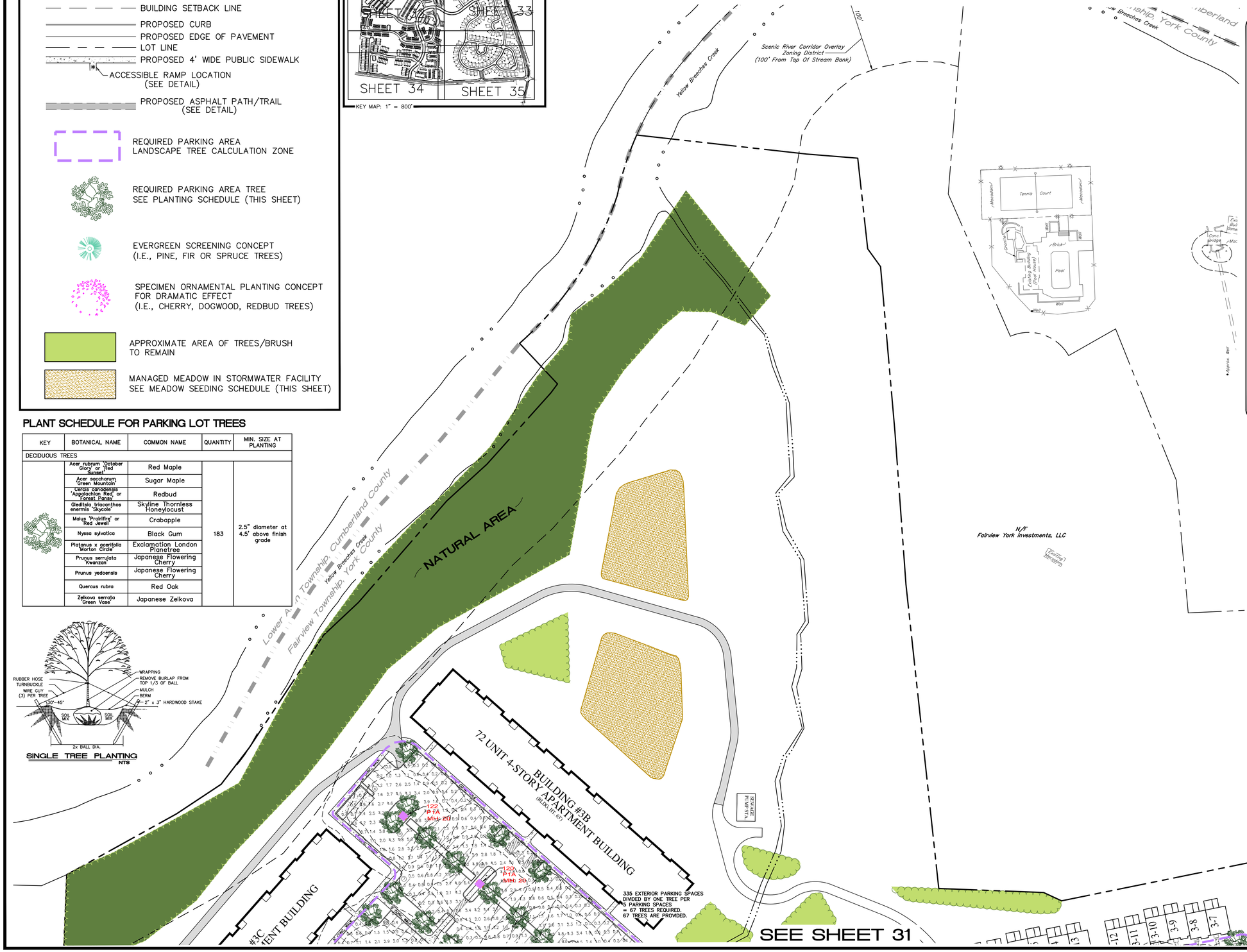
Vegetation allowed to grow without mowing provides more protection for wildlife and aids in erosion control.

1•800•873•3321 www.ernstseed.com FAX 814•336•5191

PLANT SCHEDULE FOR PARKING LOT TREES

KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	MIN. SIZE AT PLANTING
DECIDUOUS TREES				
	Acer rubrum 'October Glory' or 'Red Sunset'	Red Maple	183	2.5" diameter at 4.5' above finish grade
	Acer saccharum 'Green Mountain'	Sugar Maple		
	Cercis canadensis 'Appalachian Red' or 'Forest Pansy'	Redbud		
	Gleditsia triacanthos enermis 'Skycole'	Skyline Thornless Honeylocust		
	Malus 'Prairifire' or 'Red Jewell'	Crabapple		
	Nyssa sylvatica	Black Gum		
	Platanus x acerifolia 'Morton Circle'	Exclamation London Planetree		
	Prunus serrulata 'Kwanzan'	Japanese Flowering Cherry		
	Prunus yedoensis	Japanese Flowering Cherry		
	Quercus rubra	Red Oak		
	Zelkova serrata 'Green Vase'	Japanese Zelkova		

SINGLE TREE PLANTING
NTS



SEAL

SEAL

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEO.COM
ALPHA CONSULTING ENGINEERS, INC.

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LANDSCAPE AND LIGHTING PLAN

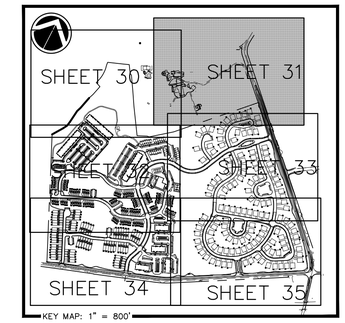
FOR SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur_319582sur\field
SCALE : 1" = 50'
DWG : Z:\2019\319582.sur_319582\dwg\Plans\Pre-Final_22-LSCAPE-PARTIAL.dwg
FILE :
SHEET 30 of 89

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021



SEE SHEET 30 FOR LEGEND, SCHEDULES AND DETAILS

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2400
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LANDSCAPE AND LIGHTING PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

Lower Allen Township, Cumberland County
Fairview Township, York County
Yellow Breeches Creek
Center of creek is Twp. boundary
YELLOW BREECHES CREEK
Retaining Wall
Weigl Gulph Rd
Weigl Gulph Rd
Driveway
Macadam
25 MPH Right Turn Sign
Existing Building (Greenhouse)
Existing Building (Greenhouse)
Existing Building (Greenhouse)

SEE SHEET 30

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING ● ENGINEERING ● SURVEYING
115 LIMEKILN RD. P.O. BOX 67
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 2400
FAX: (717) 770 2400
WWW.ALPHAEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LANDSCAPE AND LIGHTING PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

BUILDING #3C
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. H.T. 63')

BUILDING #3B
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. H.T. 63')

BUILDING #3A
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. H.T. 63')

BUILDING #4D
THREE-STORY 24 UNI
APARTMENT BUIL DIN

335 EXTERIOR PARKING SPACES
DIVIDED BY ONE TREE PER
5 PARKING SPACES
= 67 TREES REQUIRED.
67 TREES ARE PROVIDED.

142 EXTERIOR PARKING SPACES,
DIVIDED BY ONE TREE PER
5 PARKING SPACES
= 28 TREES REQUIRED.
28 TREES ARE PROVIDED.

79 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 16 TREES REQUIRED.
16 TREES ARE PROVIDED.

16 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

13 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

30 PARKING SPACES,
DIVIDED BY ONE TREE PER
5 PARKING SPACES
= 6 TREES REQUIRED.
6 TREES ARE PROVIDED.

39 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 8 TREES REQUIRED.
8 TREES ARE PROVIDED.

15 EXTERIOR PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

14 PARKING SPACES,
DIVIDED BY ONE TREE PER
5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

16 PARKING SPACES
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

ONE-STORY COMMUNITY CENTER
10,000 S.F.

ONE-STORY GARAGE (9 SPACES)

ONE-STORY GARAGE (10 SPACES)

ONE-STORY GARAGE (9 SPACES)

(PRIVATE ACCESS DRIVE)
MODENA DRIVE

(PRIVATE ACCESS DRIVE)
VERONA DRIVE

(PRIVATE ACCESS DRIVE)
MILANO DRIVE

50' Enterprise Pipeline Easement

Unit Yellow Brandies

SEE SHEET 33

SEE SHEET 34

GRAPHIC SCALE
1" = 50'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : K:\2019\319582.dgn\319582\dwg\Plans\Pre-Final\29-LSCAPE-PARTIAL.dwg
FILE :
SHEET 32 of 89

SEE SHEET 31

SEE SHEET 32

SEE SHEET 35

500 Yr. Floodplain

17 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

14 PARKING SPACES,
DIVIDED BY ONE TREE PER
5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

(PRIVATE ACCESS DRIVE)
RIVOLI COURT

(PRIVATE ACCESS DRIVE)
FIRENZE DRIVE

(PRIVATE ACCESS DRIVE)
LAZIO DRIVE

33' Sinclair Refining Co. Easement

75' C.S.T.

PROPOSED R.O.W. FOR WATERS ROAD

N/F
Homer S. & Janis B. Hetrick
Deed Book 104-C, Page 0031
Tax Parcel 27-000-RE-0030B

N/F
Sean Christopher Cr
Kelly Lane Mc
Instrument # 201
Tax Parcel 27-000-

N/F
Kimberly M. Mi
Deed Book 1956,
Tax Parcel 27-00C

N/F
Todd M. & Heidi L. Kramer
Deed Book 17474, Page 6141
Lot 42, Plan Book 634
Tax Parcel 27-000-35-0042

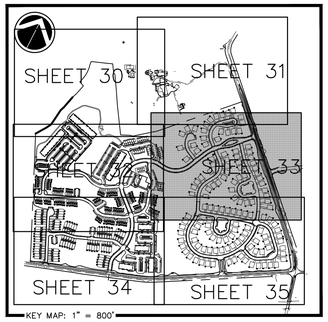
N/F
Kirby W. & Nancy M. Bixler
Deed Book 2370, Page 84
Lot 2, Plan Book 00, Page 684
Tax Parcel 27-000-35-0028

N/F
Nuttifer M. Bixler
Deed Book 570, Page 84

N/F
Ernest C. & Carolyn R. Baker
Deed Book 1630, Page 7288
Lot 24, Plan Book PP, Page 634
Tax Parcel 27-000-35-0024

N/F
Tasha Pitts
Deed Book 2254, Page 4847
Lot 2, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031K

Stop Sign
Concrete Sidewalk
Existing Vertical Curb
Watch Children Sign
Concrete Sidewalk
Stone Wall
25 MPH Sign
End Of Existing Curb
40 MPH Sign
Driveway



KEY MAP: 1" = 800'

SEE SHEET 30 FOR LEGEND, SCHEDULES AND DETAILS

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-0600
FAX: (717) 770-0645
WWW.ALPHACEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LANDSCAPE AND LIGHTING PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.npd\319582\
FILE : dwg\Plans\Pre-Final\
29-LSCAPE-PARTIAL.dwg
SHEET 33 of 89

GRAPHIC SCALE
1" = 50'

SEE SHEET 31

SEE SHEET 34

9 VERONA DRIVE

(PRIVATE ACCESS DRIVE)
LODI BOULEVARD

(PRIVATE ACCESS DRIVE)
PISA COURT

(PRIVATE ACCESS DRIVE)

5' ASPHALT WALK

5' CONC. WALK

13 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

16 PARKING SPACES
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

16 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

15 EXTERIOR PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

14 PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 3 TREES REQUIRED.
3 TREES ARE PROVIDED.

ONE-STORY GARAGE (9 SPACES)

BUILDING # 4D
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

ONE-STORY GARAGE (9 SPACES)

25 EXTERIOR PARKING SPACES,
DIVIDED BY ONE TREE PER 5 PARKING SPACES
= 15 TREES REQUIRED.
15 TREES ARE PROVIDED.

BUILDING #4C
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4A
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

BUILDING #4B
THREE-STORY 24 UNIT
APARTMENT BUILDING
BLDG. HT. = 48.25'

50 PARKING SPACES,
DIVIDED BY ONE TREE PER 5
PARKING SPACES
= 10 TREES REQUIRED.
10 TREES ARE PROVIDED.

36 EXTERIOR PARKING SPACES,
DIVIDED BY ONE TREE PER
5 PARKING SPACES
= 8 TREES REQUIRED.
8 TREES ARE PROVIDED.

20 EXTERIOR PARKING SPACES,
DIVIDED BY ONE TREE PER
4 PARKING SPACES
= 5 TREES REQUIRED.
5 TREES ARE PROVIDED.

N/F
Jessica L. & Travis C. Willow
Deed Book 2332, Page 4592
Lot 6, Plan Book NN, Page 541
Tax Parcel 27-000-RE-002D

N/F
Thomas S. & Pamela A. Wenerick
Deed Book 1912, Page 623
Lot 5, Plan Book NN, Page 541
Tax Parcel 27-000-RE-002C

SHEET 30 | SHEET 31 | SHEET 32 | SHEET 33 | SHEET 34 | SHEET 35

KEY MAP: 1" = 800'

SEE SHEET 30 FOR LEGEND, SCHEDULES AND DETAILS

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2500
FAX: (717) 770-2501
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LANDSCAPE AND LIGHTING PLAN

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO.
319582

SURVEY BOOK :
Z:\2019\319582.sur\319582sur\field

SCALE : 1" = 50'

DWG : Y:\2019\319582.npk\319582\dwg\Plans\Pre-Final\
FILE : 29-LSCAPE-PARTIAL.dwg

SHEET 34 of 89

SEE SHEET 33

SEE SHEET 34

KING SPACES,
) BY ONE TREE PER
KING SPACES
EES REQUIRED.
ES ARE PROVIDED.

(PRIVATE ACCESS DRIVE)
LAZIO DRIVE

(PRIVATE ACCESS DRIVE)
PERUGIA CIRCLE

(PRIVATE ACCESS DRIVE)
FIRENZE DRIVE

(PRIVATE ACCESS DRIVE)
SIENNA BOULEVARD

5' CONC. WALK

75' C.S.T.

1-11 1-12 1-13 1-14 1-15 1-16 1-17 1-18 1-19 1-20 1-21 1-22 1-23 1-24 1-25 1-26 1-27 1-28 1-29 1-30 1-31 1-32 1-33 1-34 1-35 1-36 1-37 1-38 1-39 1-40 1-41 1-42 1-43 1-44 1-45 1-46 1-47 1-48 1-49 1-50 1-51 1-52 1-53 1-54 1-55 1-56 1-57 1-58 1-59 1-60 1-61 1-62 1-63 1-64 1-65 1-66 1-67 1-68 1-69 1-70 1-71 1-72 1-73 1-74 1-75 1-76 1-77 1-78 1-79 1-80 1-81 1-82 1-83 1-84 1-85 1-86 1-87 1-88 1-89 1-90 1-91 1-92 1-93 1-94 1-95 1-96 1-97 1-98 1-99 1-100 1-101 1-102 1-103 1-104 1-105 1-106 1-107 1-108 1-109 1-110 1-111 1-112 1-113 1-114

Intermittent Stream (S-1)

Deed Book 2254, Page 4847
Lot 2, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031K

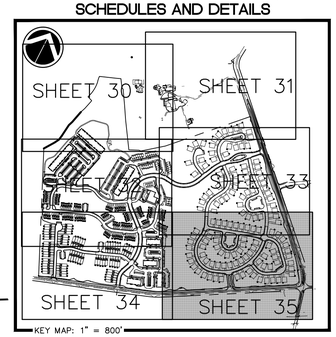
N/F
New Cumberland Alliance Church
Deed Book 934, Page 961
Lot 1, Plan Book 00, Page 684
Tax Parcel 27-000-35-0031G

N/F
Timothy E. Langletz
Lot 2, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0131

N/F
Bonnie Plants, Inc.
Deed Book 2096, Page 8448
Lot 1, Plan Book 1830, Page 2658
Tax Parcel 27-000-RE-0025N

48 P3 MH: 20
43 P3 MH: 16
48 P3 MH: 16
39 P3 MH: 16
38 P3 MH: 16
55 A1A MH: 1
47 A1A MH: 16
35 A1A MH: 16
29 A1A MH: 16
26 P1 MH: 20
9 A1A MH: 16
12 A1A MH: 16
23 P1 MH: 20
17 P1 MH: 20
11 P1 MH: 20
5 A1A MH: 16
6 A1A MH: 16
7 A1A MH: 16
4 A1A MH: 16
3 A1A MH: 16
2 A1A MH: 16

SEE SHEET 29 FOR LEGEND, SCHEDULES AND DETAILS



KEY MAP: 1" = 800'

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING•ENGINEERING•SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 2400
WWW.ALPHAGEI.COM

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LANDSCAPE AND LIGHTING PLAN

FOR

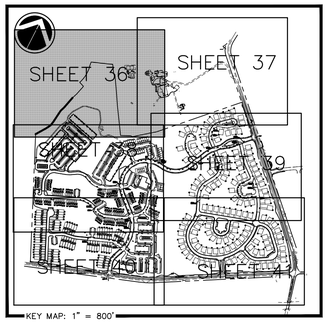
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur*.field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582*
FILE : dwg\Plans\Pre-Final\29-LSCAPE-PARTIAL.dwg
SHEET 35 of 89

LEGEND

- Property Line
- Adjoiner Property Line
- Existing Right-of-way
- Easement Line
- Existing Curb
- Existing Edge Of Pave
- 175 Existing Contour
- Existing Light Pole
- Existing Utility Pole & Guy Wire
- Existing Storm Sewer Pipe & Inlet
- S Existing Sanitary Line, Manhole
- E Existing Overhead Electric Line
- UE Existing Underground Electric Line
- Existing Tree/brush Line
- G Existing Gas Line/Valve/Pipeline
- HF-18 Soil Test Site; ID#
- D1 PROPOSED STORM SEWER LINE, INLET, ID#
- RD ROOF DRAIN COLLECTION PIPE
- PROPOSED RIP RAP APRON
- S S S PROPOSED SANITARY SEWER MAIN; MANHOLE
- S PROPOSED SANITARY LATERAL
- H W PROPOSED WATER LINE; HYDRANT; VALVE
- W PROPOSED WATER LATERAL
- 452 PROPOSED CONTOUR
- 506.33 H.P. PROPOSED SPOT ELEVATION B.C.=BOTTOM OF CURB H.P.=HIGH POINT
- PROPOSED WALK/PAVED PATH ACCESSIBLE RAMP LOCATION
- POSSIBLE FIRST FLOOR ELEVATION
- DECK/PATIO
- POSSIBLE BASEMENT FLOOR ELEVATION (IF EXPOSED)
- UNIT BOUNDARY (SCHEMATIC ONLY)
- DRIVEWAY
- APPROXIMATE LOCATION OF PROPOSED TREE/BRUSH LINE
- HP HIGH POINT
- MAXIMUM LIMIT OF EARTH DISTURBANCE
- APPROXIMATE SEDIMENT TRAP AREA NOTE: SEDIMENT TRAP BOTTOM ELEVATION TO BE MINIMUM 1' ABOVE PERMANENT INFILTRATION BASIN ELEVATION
- STABILIZED CONSTRUCTION ENTRANCE (SEE DETAIL)
- 12" DIA. SILT SOCK SILT SOCK w/ SIZE (SEE DETAIL)
- APPROXIMATE WATERSHED TO SEDIMENT TRAP (AS LABELED)
- TEMPORARY DIVERSION BERM, SWALE AND/OR BROAD BASED DIP, TO DIVERT DIRTY RUNOFF TO BMP
- SEDIMENT TRAP DISCHARGE DIRECTION/ROUTE



KEY MAP: 1" = 800'

A licensed professional or their designee shall be present on the site for the following:
-installation of infiltration basin berms (clay core) and outlet pipes.
All other BMPs can be inspected / verified after their installation.

ALL AREAS OF CONCENTRATED FLOWS (FOR EXAMPLE, STORMWATER SWALES AND ROOF DOWNSPOUTS) NEED TO HAVE A TEMPORARY EROSION CONTROL BLANKET INSTALLED IMMEDIATELY UPON COMPLETION OF FINAL GRADE. ROOF LEADERS MAY BE TEMPORARILY CONNECTED TO THE END OF ROOF DOWN SPOUTS AND EXTENDED TO AN UNDISTURBED AREA UNTIL THE GRASS IS WELL-ESTABLISHED.

NOTE:

RED COLOR EROSION CONTROL BMP'S ARE FOR PHASE 1 CONSTRUCTION

BLUE COLOR EROSION CONTROL BMP'S ARE FOR PHASE 2 CONSTRUCTION

Yellow Breeches Creek

18 ACRE TO SEDIMENT TRAP #31

3.9 ACRES TO SEDIMENT TRAP #30

.97 ACRES TO SEDIMENT TRAP #14

SEE STAGING OF EARTHMOVING ACTIVITIES FOR SPECIAL STREAM CROSSING PROCEDURES

12" DIA. SILT SOCK

24" DIA. SILT SOCK

18" DIA. SILT SOCK

72 UNIT 4-STORY APARTMENT BUILDING BUILDING #3B (BLDG. 17 OF 67) FFE=339.50

NOTE: ALL ROOF DRAINS MUST BE DIRECTED TO STORM FACILITY #9

FOREBAY

FACILITY #14

Tennis Court

Pool

Existing Building (Pool House)

Existing Building (Gymnasium)

Existing Building (Greenhouse)

Existing Barn

Existing Dwelling (101 Spanglers Mill Road) FFE: 335.97

Approx. Septic

Approx. Underground Utility Line

Approx. Well

Brick Paving

Stone

Concrete Pad

Macadam

Wall

Fence

Exposed Rock Cliff

ROOF DRAINS FROM GARAGES MUST DISCHARGE TO STORM FACILITY #27

UNDERDRAIN 3in 348.1 72 LF @ 0.55%

LEVEL SPREADER (SEE DETAIL)

SEE SHEET 37

SEE SHEET 38

GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

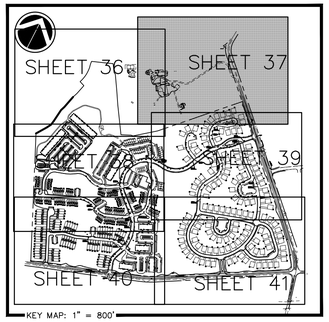
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
CONCEPTUAL EROSION AND SEDIMENTATION CONTROL PLAN
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : S:\2019\319582.sur\319582sv*.field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\FILE : dwg\Plans\Pre-Final\Exhibit.dwg
SHEET 36 of 89



A licensed professional or their designee shall be present on the site for the following:
--installation of infiltration basin berms (clay core) and outlet pipes.
All other BMPs can be inspected / verified after their installation.

ALL AREAS OF CONCENTRATED FLOWS (FOR EXAMPLE, STORMWATER SWALES AND ROOF DOWNSPOUTS) NEED TO HAVE A TEMPORARY EROSION CONTROL BLANKET INSTALLED IMMEDIATELY UPON COMPLETION OF FINAL GRADE. ROOF LEADERS MAY BE TEMPORARILY CONNECTED TO THE END OF ROOF DOWN SPOUTS AND EXTENDED TO AN UNDISTURBED AREA UNTIL THE GRASS IS WELL-ESTABLISHED,

SEE SHEET 36

YELLOW BREECHES CREEK

PPL 23588/S32047

PPL 23581/S32044

PPL 23558/S32024

PPL 23581/S32035

PPL 23545/S31996

PPL 23599/S32021

PPL 23528/S31978

PPL 23535/S31973

PPL 23549/S31967

PPL 23562/S31963

PPL 23634/S31988

PPL 23646/S31978

Retaining Wall

Existing Building (Greenhouse)

Concr. Bridge

Macadam

36" CMP Inv 326.03

Existing Building

FFE 335.97
Existing Dwelling
(101 Spanglers Mill Road)

Electric Box

15" CMP Inv 156.98

15" CMP Inv 159.38

10" CMP Inv 354.67

10" CMP Inv 354.50

Existing Building (Garage)

Existing Building (Kennel)

Existing Barn

Approx. Septic

Stone

Brick Paving

Concrete Pad

Water Meter Vault (Well)

Approx. Septic Drain Field

8" CMP Inv 346.77

8" CMP Inv 350.39

6" Plastic Inv 355.97

36" CMP Inv 335.27

24" CMP Inv 336.43

30" CMP Inv 336.63

24" CMP Inv 337.00

30" CMP Inv 336.97

Driveway

Macadam

25 MPH Right Turn Sign

No #'s

STORMWATER FACILITY #1

12" DIA. SILT SOCK

10' WIDE GRASS ACCESS RAMP @ 4:1 SLOPE

PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)

UNDERDRAIN IN=378.10

OUT=378.00

2-15 FFE 394.00

2-16 FFE 395.00

2-17 FFE 394.00

2-18 FFE 393.00

2-19 FFE 393.00

2-20 FFE 394.00

2-13 FFE 393.00

4 FFE 393.00

4.1 ACRES TO SEDIMENT TRAP #10

2.1 ACRES TO SEDIMENT TRAP #1

STORMWATER FACILITY #10

12" DIA. SILT SOCK

SEE SHEET 39

SEE SHEET 36 FOR LEGEND

100 50 10 0 10 50 100
GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LINDEN LANE, SUITE 202
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
CONCEPTUAL EROSION AND SEDIMENTATION CONTROL PLAN
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.su*\319582bas*\field
SCALE : 1" = 50'
DWG : X:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\
Exhibit.dwg
SHEET 37 of 89

A licensed professional or their designee shall be present on the site for the following:
--installation of infiltration basin berms (clay core) and outlet pipes.
All other BMPs can be inspected / verified after their installation.

ALL AREAS OF CONCENTRATED FLOWS (FOR EXAMPLE, STORMWATER SWALES AND ROOF DOWNSPOUTS) NEED TO HAVE A TEMPORARY EROSION CONTROL BLANKET INSTALLED IMMEDIATELY UPON COMPLETION OF FINAL GRADE. ROOF LEADERS MAY BE TEMPORARILY CONNECTED TO THE END OF ROOF DOWN SPOUTS AND EXTENDED TO AN UNDISTURBED AREA UNTIL THE GRASS IS WELL-ESTABLISHED,

SEE SHEET 36

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LINKLINE RD
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
CONCEPTUAL EROSION AND SEDIMENTATION CONTROL PLAN
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.su*.\319582su\Sfield
SCALE : 1" = 50'
DWG : X:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\Exhibit.dwg
SHEET 38 of 89

SEE SHEET 39
SEE SHEET 40
SEE SHEET 36 FOR LEGEND

3.9 ACRES TO SEDIMENT TRAP #30
3.5 ACRES TO SEDIMENT TRAP #28
3.4 ACRES TO SEDIMENT TRAP #27
3.9 ACRES TO SEDIMENT TRAP #26
1.08 ACRE TO SEDIMENT TRAP #25
0.5 ACRE TO SEDIMENT TRAP
1.4 ACRES TO SEDIMENT TRAP #24
1.8 ACRES TO SEDIMENT TRAP #32
0.7 ACRES TO SEDIMENT TRAP #33
0.5 ACRE TO SEDIMENT TRAP
0.8 ACRE TO SEDIMENT TRAP
2.6 ACRES TO SEDIMENT TRAP #35
3.6 ACRES TO SEDIMENT TRAP #42
2.2 ACRES TO SEDIMENT TRAP #41
4.9 ACRES TO SEDIMENT TRAP #37

SEE STAGING OF EARTHMOVING ACTIVITIES FOR SPECIAL STREAM CROSSING PROCEDURES

BUILDING #3C 72 UNIT 4-STORY APARTMENT BUILDING
BUILDING #3A 72 UNIT 4-STORY APARTMENT BUILDING
BUILDING #4D THREE-STORY 24 UNI APARTMENT BUILDIN
ONE-STORY COMMUNITY CENTER 10,000 S.F. FFE 366.00
ONE-STORY GARAGE (9 SPACES)
ONE-STORY GARAGE (7 SPACES)
(PRIVATE ACCESS DRIVE) MODEN DRIVE
(PRIVATE ACCESS DRIVE) VERONA DRIVE
(PRIVATE ACCESS DRIVE) ODI BOULEVARD

STORMWATER FACILITY #26
STORMWATER FACILITY #23
STORMWATER FACILITY #24
SWM FACILITY #35
SWM FACILITY #36
SWM FACILITY #37
FACILITY #27 (subsurface Portion)
FOREBAY

12" DIA. SILT SOCK
18" DIA. SILT SOCK
2" SIDE CURB CUT FOR DRAINAGE
ROOF DRAINS FROM GARAGES MUST DISCHARGE TO STORM FACILITY #27
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
PERMANENT SPILLWAY
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
LEVEL SPREADER (SEE DETAIL)
BROAD BASED DIP TO DIVERT STREET RUNOFF INTO SEDIMENT TRAP
PLANTED TOPSOIL STOCKPILE AREA #3
UNT fellow Branch Bermless Channel
GRAPHIC SCALE 1" = 50'

SEE SHEET 37

SEE SHEET 38

SEE SHEET 41

4.1 ACRES TO SEDIMENT TRAP #10

2.1 ACRES TO SEDIMENT TRAP #1

1.5 ACRES TO SEDIMENT TRAP #9-10

3.2 ACRES TO SEDIMENT TRAP #8

3.2 ACRES TO SEDIMENT TRAP #7

0.8 ACRE TO SEDIMENT TRAP #2

0.7 ACRES TO SEDIMENT TRAP #6

5.1 ACRES TO SEDIMENT TRAP #5

1.8 ACRES TO SEDIMENT TRAP #3

2.6 ACRES TO SEDIMENT TRAP #4

STORMWATER FACILITY #10

STORMWATER FACILITY #43

SWM FACILITY #8

SWM FACILITY #5

STORMWATER FACILITY #4

SWM FACILITY #3

STORMWATER FACILITY #24

SWM FACILITY #23

FOREBAY SWM FACILITY #9

PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)

LEVEL SPREADER (SEE DETAIL)

12" DIA. SILT SOCK AT TOP OF WALL

18" DIA. SILT SOCK

8" DIA. SILT SOCK

(T-676) Pin Oak Drive

Spangler's Mill Road S.R. 4027

PHASE 1 TOPSOIL STOC

SEE SHEET 36 FOR LEGEND

GRAPHIC SCALE 1" = 50'

KEY MAP: 1" = 800'

SHEET 36 | SHEET 37 | SHEET 38 | SHEET 39 | SHEET 40 | SHEET 41

A licensed professional or their designee shall be present on the site for the following:
--installation of infiltration basin berms (clay core) and outlet pipes.
All other BMPs can be inspected / verified after their installation.

ALL AREAS OF CONCENTRATED FLOWS (FOR EXAMPLE, STORMWATER SWALES AND ROOF DOWNSPOUTS) NEED TO HAVE A TEMPORARY EROSION CONTROL BLANKET INSTALLED IMMEDIATELY UPON COMPLETION OF FINAL GRADE. ROOF LEADERS MAY BE TEMPORARILY CONNECTED TO THE END OF ROOF DOWN SPOUTS AND EXTENDED TO AN UNDISTURBED AREA UNTIL THE GRASS IS WELL-ESTABLISHED,

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

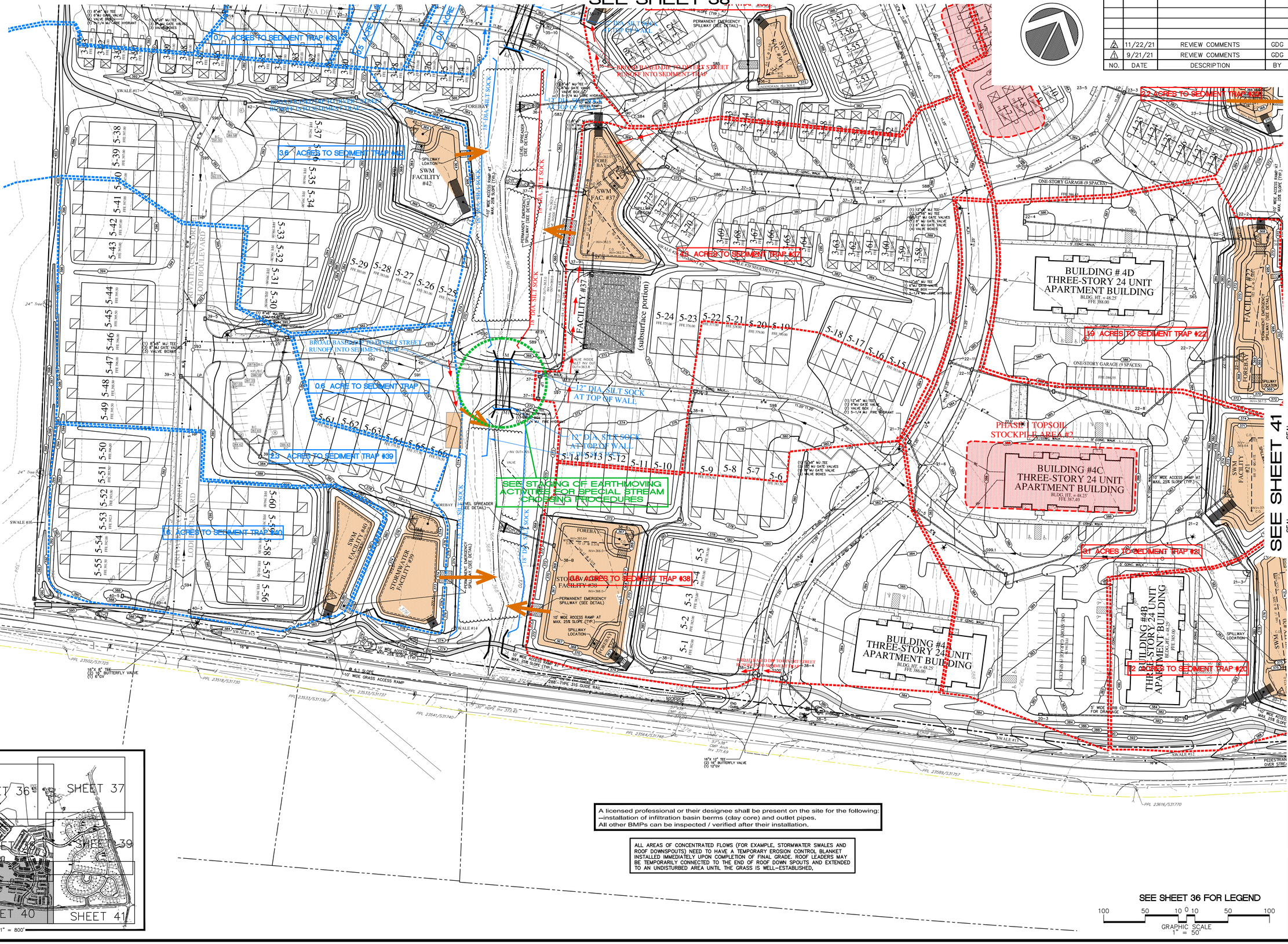
ALPHA CONSULTING ENGINEERS, INC.
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2500
FAX: (717) 770-2565
WWW.ALPHACE.COM

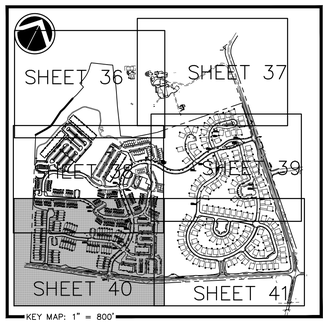
SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
CONCEPTUAL EROSION AND SEDIMENTATION CONTROL PLAN
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\Yield
SCALE : 1" = 50'
DWG / FILE : Y:\2019\319582.dph\319582\Dwg\Plans\Pre-Final\Exhibit.dwg
SHEET 39 of 89

SEE SHEET 38





A licensed professional or their designee shall be present on the site for the following:
--installation of infiltration basin berms (clay core) and outlet pipes.
All other BMPs can be inspected / verified after their installation.

ALL AREAS OF CONCENTRATED FLOWS (FOR EXAMPLE, STORMWATER SWALES AND ROOF DOWNSPOUTS) NEED TO HAVE A TEMPORARY EROSION CONTROL BLANKET INSTALLED IMMEDIATELY UPON COMPLETION OF FINAL GRADE. ROOF LEADERS MAY BE TEMPORARILY CONNECTED TO THE END OF ROOF DOWN SPOUTS AND EXTENDED TO AN UNDISTURBED AREA UNTIL THE GRASS IS WELL-ESTABLISHED.

SEE SHEET 36 FOR LEGEND

GRAPHIC SCALE
100 50 10 0 10 50 100
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING•ENGINEERING•SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770-2500
FAX: (717) 770-4600
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEE SHEET 41

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
CONCEPTUAL EROSION AND SEDIMENTATION CONTROL PLAN

FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.npk\319582\dwg\Plans\Pre-Final\Exhibit.dwg
FILE :
SHEET 40 of 89

SEE SHEET 39

SEE SHEET 40

SEE SHEET 24 FOR LEGEND

Limekiln Road T-955

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
CONCEPTUAL EROSION AND SEDIMENTATION CONTROL PLAN
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

A licensed professional or their designee shall be present on the site for the following:
--installation of infiltration basin berms (clay core) and outlet pipes.
All other BMPs can be inspected / verified after their installation.

ALL AREAS OF CONCENTRATED FLOWS (FOR EXAMPLE, STORMWATER SWALES AND ROOF DOWNSPOUTS) NEED TO HAVE A TEMPORARY EROSION CONTROL BLANKET INSTALLED IMMEDIATELY UPON COMPLETION OF FINAL GRADE. ROOF LEADERS MAY BE TEMPORARILY CONNECTED TO THE END OF ROOF DOWN SPOUTS AND EXTENDED TO AN UNDISTURBED AREA UNTIL THE GRASS IS WELL-ESTABLISHED,

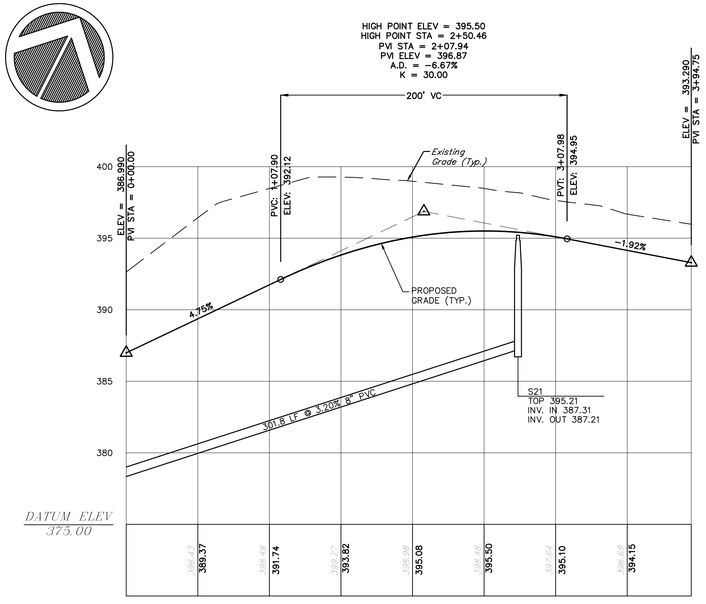
KEY MAP: 1" = 800'

GRAPHIC SCALE
1" = 50'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : X:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\
Exhibits.dwg
SHEET 41 of 89

PLAN VIEW

SCALE: 1" = 50'



STREET PROFILE: SIENNA BLVD.

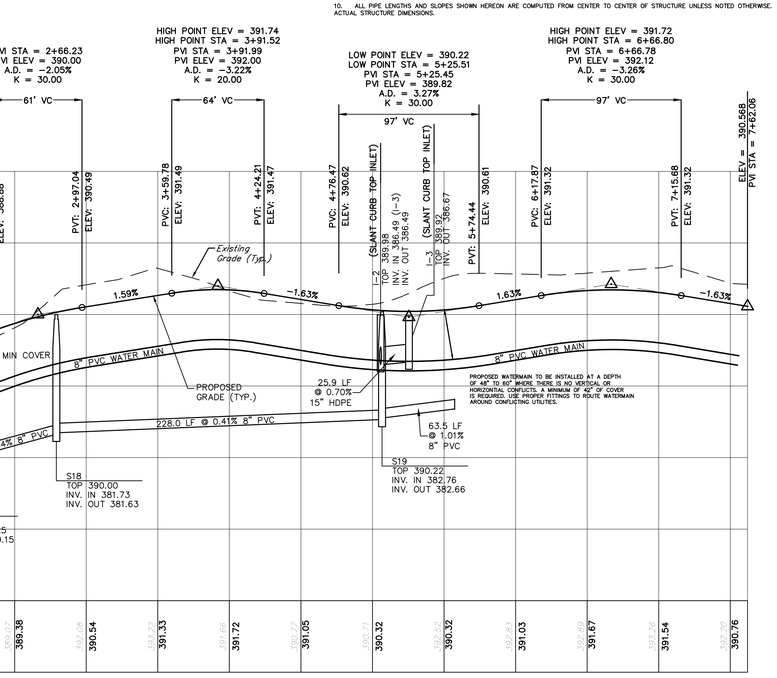
SCALES: 1"=50'H 1"=5'V

NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.

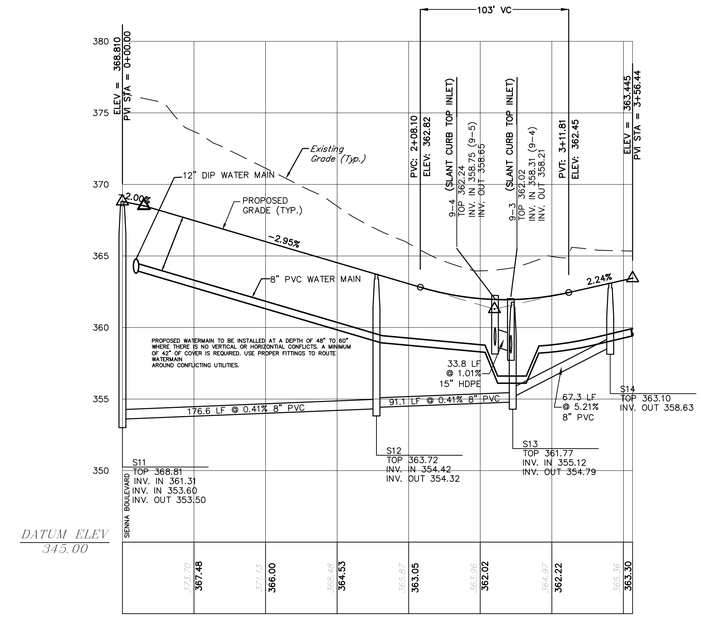
PLAN VIEW

SCALE: 1" = 50'



STREET PROFILE: LOMBARDI COURT

SCALES: 1"=50'H 1"=5'V



STREET PROFILE: RIVOLI COURT

SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE
100 50 10 0 10 50 100
1" = 50'

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

RIVOLI CT. AND LOMBARD CT. PROFILE

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sw*.field
SCALE : 1" = 50'
DWG. : Y:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\
41-PRO-ACCESS A B.dwg
SHEET 42 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

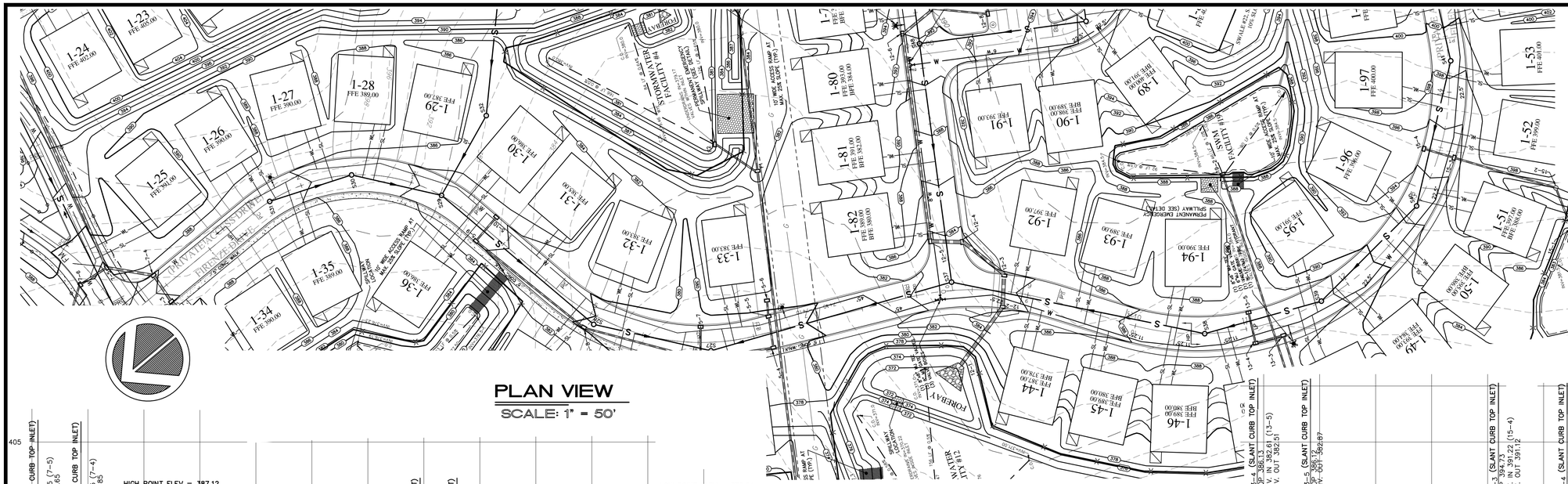
DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
1 MILL BRIDGE, P.O. BOX 97
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

ALPHA CONSULTING ENGINEERS, INC.

SEE SHEET 44

PLAN VIEW
SCALE: 1" = 50'


1-23 FFE 405.00
1-24 FFE 402.00
1-25 FFE 390.00
1-26 FFE 390.00
1-27 FFE 390.00
1-28 FFE 389.00
1-29 FFE 387.00
1-30 FFE 385.00
1-31 FFE 382.00
1-32 FFE 383.00
1-33 FFE 383.00
1-34 FFE 390.00
1-35 FFE 389.00
1-36 FFE 386.00
1-80 FFE 393.00 BFE 384.00
1-81 FFE 391.00 BFE 382.00
1-82 FFE 389.00 BFE 380.00
1-89 FFE 390.00 BFE 381.00
1-90 FFE 388.00 BFE 379.00
1-91 FFE 393.00
1-92 FFE 397.00
1-93 FFE 389.00
1-94 FFE 390.00
1-95 FFE 392.00
1-96 FFE 396.00
1-97 FFE 400.00
1-50 FFE 385.00 BFE 376.00
1-51 FFE 387.00 BFE 378.00
1-52 FFE 399.00
1-53 FFE 401.00
1-44 FFE 392.00 BFE 383.00
1-45 FFE 389.00 BFE 380.00
1-46 FFE 389.00 BFE 380.00
1-49 FFE 390.00 BFE 381.00
PRIVATE ACCESS DRIVE
FORBAY
STORMWATER FACILITY #1
STORMWATER FACILITY #2
STORMWATER FACILITY #3
WATER TANK
SPILLWAY (SEE DETAIL)
EMERGENCY OVERFLOW SPILLWAY
10' WIDE ACCESS RAMP AT 10% (TYP.)
8' WIDE ACCESS RAMP AT 8% (TYP.)
TOP OF BERM @ 393.50
TOP OF BERM @ 391.50
TOP OF BERM @ 389.50
TOP OF BERM @ 387.50
TOP OF BERM @ 385.50
TOP OF BERM @ 383.50
TOP OF BERM @ 381.50
TOP OF BERM @ 379.50
TOP OF BERM @ 377.50
TOP OF BERM @ 375.50
TOP OF BERM @ 373.50
TOP OF BERM @ 371.50
TOP OF BERM @ 369.50
TOP OF BERM @ 367.50
TOP OF BERM @ 365.50
TOP OF BERM @ 363.50
TOP OF BERM @ 361.50
TOP OF BERM @ 359.50
TOP OF BERM @ 357.50
TOP OF BERM @ 355.50
TOP OF BERM @ 353.50
TOP OF BERM @ 351.50
TOP OF BERM @ 349.50
TOP OF BERM @ 347.50
TOP OF BERM @ 345.50
TOP OF BERM @ 343.50
TOP OF BERM @ 341.50
TOP OF BERM @ 339.50
TOP OF BERM @ 337.50
TOP OF BERM @ 335.50
TOP OF BERM @ 333.50
TOP OF BERM @ 331.50
TOP OF BERM @ 329.50
TOP OF BERM @ 327.50
TOP OF BERM @ 325.50
TOP OF BERM @ 323.50
TOP OF BERM @ 321.50
TOP OF BERM @ 319.50
TOP OF BERM @ 317.50
TOP OF BERM @ 315.50
TOP OF BERM @ 313.50
TOP OF BERM @ 311.50
TOP OF BERM @ 309.50
TOP OF BERM @ 307.50
TOP OF BERM @ 305.50
TOP OF BERM @ 303.50
TOP OF BERM @ 301.50
TOP OF BERM @ 299.50
TOP OF BERM @ 297.50
TOP OF BERM @ 295.50
TOP OF BERM @ 293.50
TOP OF BERM @ 291.50
TOP OF BERM @ 289.50
TOP OF BERM @ 287.50
TOP OF BERM @ 285.50
TOP OF BERM @ 283.50
TOP OF BERM @ 281.50
TOP OF BERM @ 279.50
TOP OF BERM @ 277.50
TOP OF BERM @ 275.50
TOP OF BERM @ 273.50
TOP OF BERM @ 271.50
TOP OF BERM @ 269.50
TOP OF BERM @ 267.50
TOP OF BERM @ 265.50
TOP OF BERM @ 263.50
TOP OF BERM @ 261.50
TOP OF BERM @ 259.50
TOP OF BERM @ 257.50
TOP OF BERM @ 255.50
TOP OF BERM @ 253.50
TOP OF BERM @ 251.50
TOP OF BERM @ 249.50
TOP OF BERM @ 247.50
TOP OF BERM @ 245.50
TOP OF BERM @ 243.50
TOP OF BERM @ 241.50
TOP OF BERM @ 239.50
TOP OF BERM @ 237.50
TOP OF BERM @ 235.50
TOP OF BERM @ 233.50
TOP OF BERM @ 231.50
TOP OF BERM @ 229.50
TOP OF BERM @ 227.50
TOP OF BERM @ 225.50
TOP OF BERM @ 223.50
TOP OF BERM @ 221.50
TOP OF BERM @ 219.50
TOP OF BERM @ 217.50
TOP OF BERM @ 215.50
TOP OF BERM @ 213.50
TOP OF BERM @ 211.50
TOP OF BERM @ 209.50
TOP OF BERM @ 207.50
TOP OF BERM @ 205.50
TOP OF BERM @ 203.50
TOP OF BERM @ 201.50
TOP OF BERM @ 199.50
TOP OF BERM @ 197.50
TOP OF BERM @ 195.50
TOP OF BERM @ 193.50
TOP OF BERM @ 191.50
TOP OF BERM @ 189.50
TOP OF BERM @ 187.50
TOP OF BERM @ 185.50
TOP OF BERM @ 183.50
TOP OF BERM @ 181.50
TOP OF BERM @ 179.50
TOP OF BERM @ 177.50
TOP OF BERM @ 175.50
TOP OF BERM @ 173.50
TOP OF BERM @ 171.50
TOP OF BERM @ 169.50
TOP OF BERM @ 167.50
TOP OF BERM @ 165.50
TOP OF BERM @ 163.50
TOP OF BERM @ 161.50
TOP OF BERM @ 159.50
TOP OF BERM @ 157.50
TOP OF BERM @ 155.50
TOP OF BERM @ 153.50
TOP OF BERM @ 151.50
TOP OF BERM @ 149.50
TOP OF BERM @ 147.50
TOP OF BERM @ 145.50
TOP OF BERM @ 143.50
TOP OF BERM @ 141.50
TOP OF BERM @ 139.50
TOP OF BERM @ 137.50
TOP OF BERM @ 135.50
TOP OF BERM @ 133.50
TOP OF BERM @ 131.50
TOP OF BERM @ 129.50
TOP OF BERM @ 127.50
TOP OF BERM @ 125.50
TOP OF BERM @ 123.50
TOP OF BERM @ 121.50
TOP OF BERM @ 119.50
TOP OF BERM @ 117.50
TOP OF BERM @ 115.50
TOP OF BERM @ 113.50
TOP OF BERM @ 111.50
TOP OF BERM @ 109.50
TOP OF BERM @ 107.50
TOP OF BERM @ 105.50
TOP OF BERM @ 103.50
TOP OF BERM @ 101.50
TOP OF BERM @ 99.50
TOP OF BERM @ 97.50
TOP OF BERM @ 95.50
TOP OF BERM @ 93.50
TOP OF BERM @ 91.50
TOP OF BERM @ 89.50
TOP OF BERM @ 87.50
TOP OF BERM @ 85.50
TOP OF BERM @ 83.50
TOP OF BERM @ 81.50
TOP OF BERM @ 79.50
TOP OF BERM @ 77.50
TOP OF BERM @ 75.50
TOP OF BERM @ 73.50
TOP OF BERM @ 71.50
TOP OF BERM @ 69.50
TOP OF BERM @ 67.50
TOP OF BERM @ 65.50
TOP OF BERM @ 63.50
TOP OF BERM @ 61.50
TOP OF BERM @ 59.50
TOP OF BERM @ 57.50
TOP OF BERM @ 55.50
TOP OF BERM @ 53.50
TOP OF BERM @ 51.50
TOP OF BERM @ 49.50
TOP OF BERM @ 47.50
TOP OF BERM @ 45.50
TOP OF BERM @ 43.50
TOP OF BERM @ 41.50
TOP OF BERM @ 39.50
TOP OF BERM @ 37.50
TOP OF BERM @ 35.50
TOP OF BERM @ 33.50
TOP OF BERM @ 31.50
TOP OF BERM @ 29.50
TOP OF BERM @ 27.50
TOP OF BERM @ 25.50
TOP OF BERM @ 23.50
TOP OF BERM @ 21.50
TOP OF BERM @ 19.50
TOP OF BERM @ 17.50
TOP OF BERM @ 15.50
TOP OF BERM @ 13.50
TOP OF BERM @ 11.50
TOP OF BERM @ 9.50
TOP OF BERM @ 7.50
TOP OF BERM @ 5.50
TOP OF BERM @ 3.50
TOP OF BERM @ 1.50
TOP OF BERM @ -0.50
TOP OF BERM @ -2.50
TOP OF BERM @ -4.50
TOP OF BERM @ -6.50
TOP OF BERM @ -8.50
TOP OF BERM @ -10.50
TOP OF BERM @ -12.50
TOP OF BERM @ -14.50
TOP OF BERM @

SEE SHEET 43

NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, PA
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

FIRENZE DRIVE PROFILE

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PLAN VIEW

SCALE: 1" = 50'

HIGH POINT ELEV = 411.20
HIGH POINT STA = 23+38.97
PVI STA = 23+53.82
PVI ELEV = 411.50
A.D. = -3.00%
K = 30.00

STREET PROFILE: FIRENZE DRIVE

SCALES: 1"=50'H
1"=5'V

HIGH POINT ELEV = 415.06
HIGH POINT STA = 19+03.21
PVI STA = 18+75.70
PVI ELEV = 416.08
A.D. = -5.54%
K = 30.00
166' VC
PVC: 17+92.66 ELEV: 413.02
PVT: 19+58.73 ELEV: 414.54

LOW POINT ELEV = 410.28
LOW POINT STA = 22+16.94
PVI STA = 22+04.22
PVI ELEV = 410.00
A.D. = 2.85%
K = 30.00
85' VC
PVC: 21+61.42 ELEV: 410.79
PVT: 22+47.02 ELEV: 410.43

HIGH POINT ELEV = 411.20
HIGH POINT STA = 23+38.97
PVI STA = 23+53.82
PVI ELEV = 411.50
A.D. = -3.00%
K = 30.00
89' VC
PVC: 23+08.89 ELEV: 411.05
PVT: 23+98.75 ELEV: 410.60

LOW POINT ELEV = 407.31
LOW POINT STA = 25+84.23
PVI STA = 25+78.19
PVI ELEV = 407.03
A.D. = 3.38%
K = 20.00
67' VC
PVC: 25+44.38 ELEV: 407.70
PVT: 26+12.00 ELEV: 407.50

HIGH POINT ELEV = 408.84
HIGH POINT STA = 27+29.14
PVI STA = 27+20.19
PVI ELEV = 409.00
A.D. = -2.18%
K = 30.00
65' VC
PVC: 26+87.49 ELEV: 408.55
PVT: 27+52.90 ELEV: 408.74

PVI STA = 28+46.46
PVI ELEV = 408.00
A.D. = -4.05%
K = 30.00
121' VC
PVC: 27+85.64 ELEV: 408.48
PVT: 29+07.28 ELEV: 405.05

3.5' MIN COVER
PROPOSED GRADE (TYP.)
Existing Grade (Typ.)

16-5 (SLANT CURB TOP INLET) TOP 408.25 INV. IN 405.00 (16-2) INV. OUT 404.90
16-6 (SLANT CURB TOP INLET) TOP 408.53 INV. OUT 405.28
12-15 (SLANT CURB TOP INLET) INV. OUT 407.36
12-14 (SLANT CURB TOP INLET) TOP 410.61 INV. IN 407.10 (12-15) INV. OUT 407.00
12-13 (STORM MANHOLE) TOP 410.10 INV. IN 403.50 (12-17) INV. IN 408.10 (12-16) INV. IN 403.60 (12-14) INV. OUT 403.00
12-16 (TYPE 'M' INLET TOP) TOP 410.50 INV. OUT 407.25
3-1 (SLANT CURB TOP INLET) TOP 407.02 INV. IN 403.63 (3-4) INV. OUT 403.53
3-2 407.01 INV. IN 401.40 (3-1) INV. OUT 401.00
7-10 (SLANT CURB TOP INLET) TOP 403.04 INV. IN 398.46 (7-11) INV. OUT 398.36
7-11 (SLANT CURB TOP INLET) TOP 403.72 INV. OUT 399.72
(8" HOOD) (TYPE 'C' INLET TOP) TOP 395.30 INV. IN 391.56 (7-10) INV. IN 386.44 (7-9) INV. OUT 386.34
(8" HOOD) (TYPE 'C' INLET TOP) TOP 395.09 INV. IN 386.83 (7-12) INV. OUT 386.73

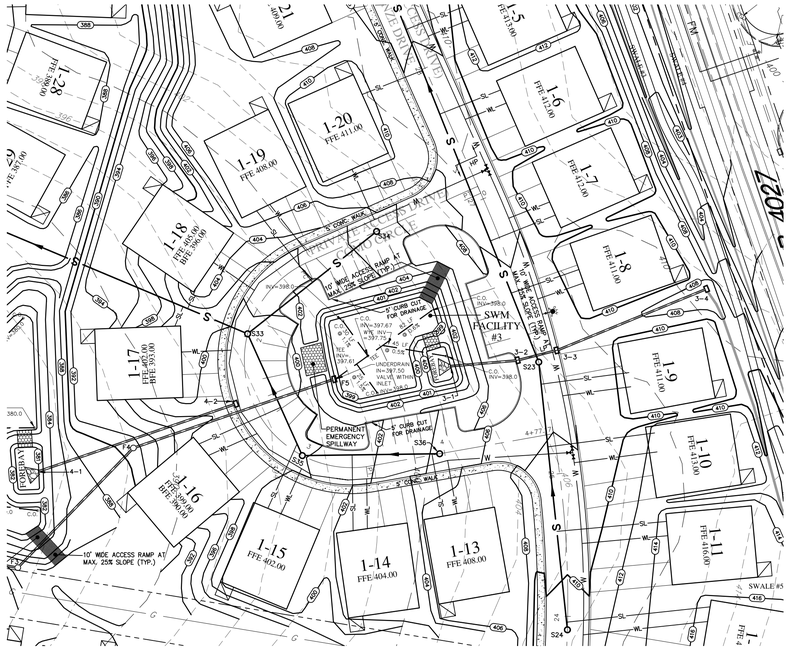
3.68% 210.4 LF @ 3.05% 15" HDPE
130.9 LF @ 2.57% 8" PVC
138.2 LF @ 3.66% 8" PVC
44.9 LF @ 5.75% 15" HDPE
S42 TOP 406.38 INV. IN 398.48 INV. OUT 398.38
S43 TOP 411.53 INV. IN 403.63 INV. OUT 403.53
8" PVC WATER MAIN
150.2 LF @ 1.82% 8" PVC
S44 TOP 414.99 INV. IN 407.09 INV. OUT 406.99
S54 TOP 414.33 INV. OUT 406.33
26.0 LF @ 1.00% 15" HDPE
S53 TOP 411.50 INV. IN 403.60 INV. OUT 403.50
87.1 LF @ 2.41% 8" PVC
35.3 LF @ 5.38% 15" HDPE
-1.85%
1.00%
131.1 LF @ 1.64% 15" HDPE
S52 TOP 410.14 INV. IN 401.40 INV. IN 401.40 INV. OUT 401.30
6" STEEL PIPELINE SURVEYED TOP OF PIPE ELEV. 406.48
S24 TOP 410.76 INV. OUT 402.76
-1.99%
1.39%
26.0 LF @ 0.50% 15" HDPE
188.2 LF @ 1.78% 8" PVC
S23 TOP 407.31 INV. IN 399.41 INV. OUT 399.31
-0.79%
27.0 LF @ 0.96% 15" HDPE
376.3 LF @ 1.21% 8" PVC
-4.85%
160.4 LF @ 4.86% 15" HDPE
8" PVC WATER MAIN
169.0 LF @ 4.35% 8" PVC
S22 TOP 402.66 INV. IN 394.76 INV. OUT 394.66
-2.00%
29.0 LF @ 1.00% 24" HDPE
S21 TOP 395.21 INV. IN 387.31 INV. OUT 387.21
12" DIP
PVI STA = 31+00.00 ELEV = 395.712
PVI STA = 31+50.00 ELEV = 394.712

PROPOSED WATERMAIN TO BE INSTALLED AT A DEPTH OF 48" TO 60" WHERE THERE IS NO VERTICAL OR HORIZONTAL CONFLICTS. A MINIMUM OF 42" OF COVER IS REQUIRED. USE PROPER FITTINGS TO ROUTE WATERMAIN AROUND CONFLICTING UTILITIES.

SCHIFANO DRIVE | PERUGIA CIRCLE | PERUGIA CIRCLE | COMO CIRCLE | COMO CIRCLE | SIENNA BOULEVARD

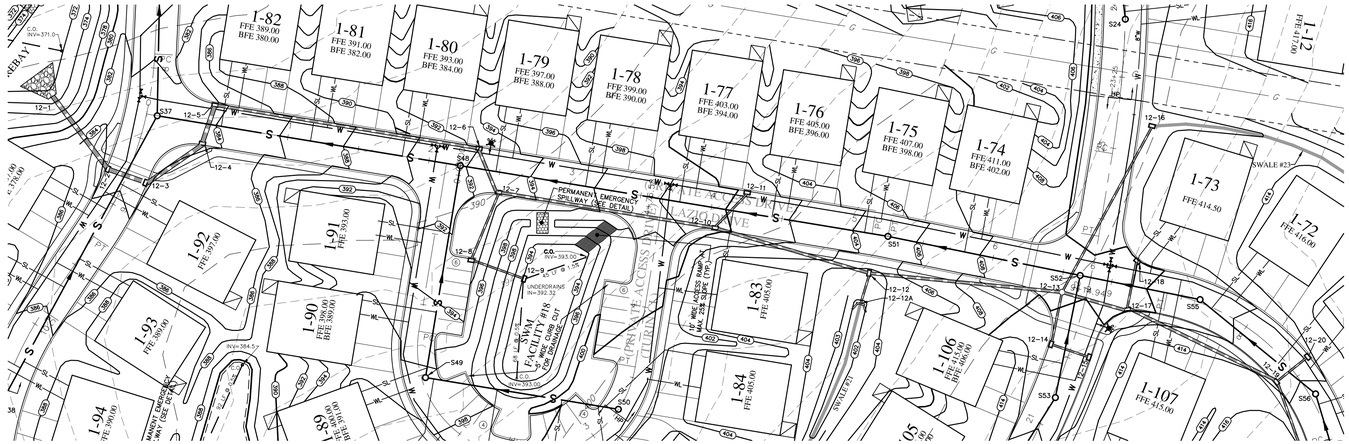
DATUM ELEV 340.00

| | | |



PLAN VIEW

SCALE: 1" = 50'

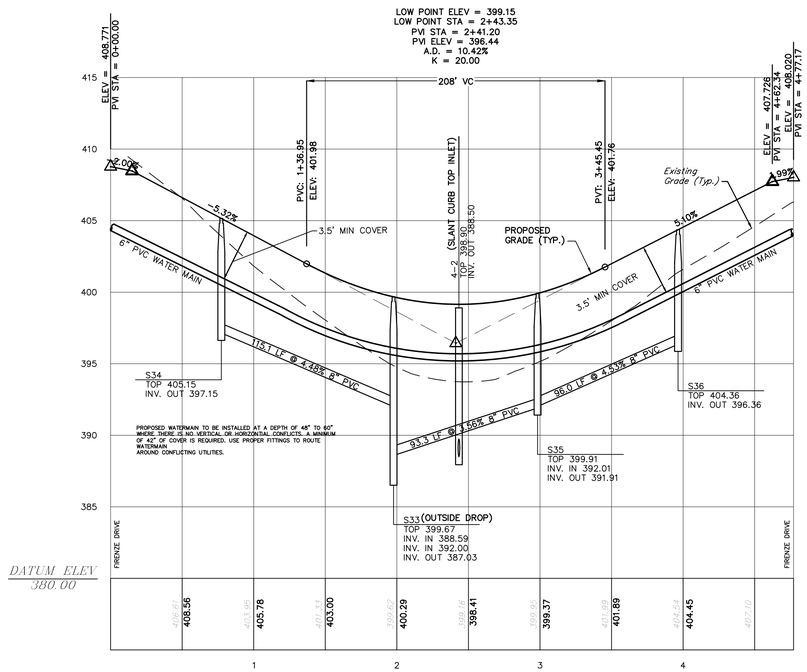


PLAN VIEW

SCALE: 1" = 50'

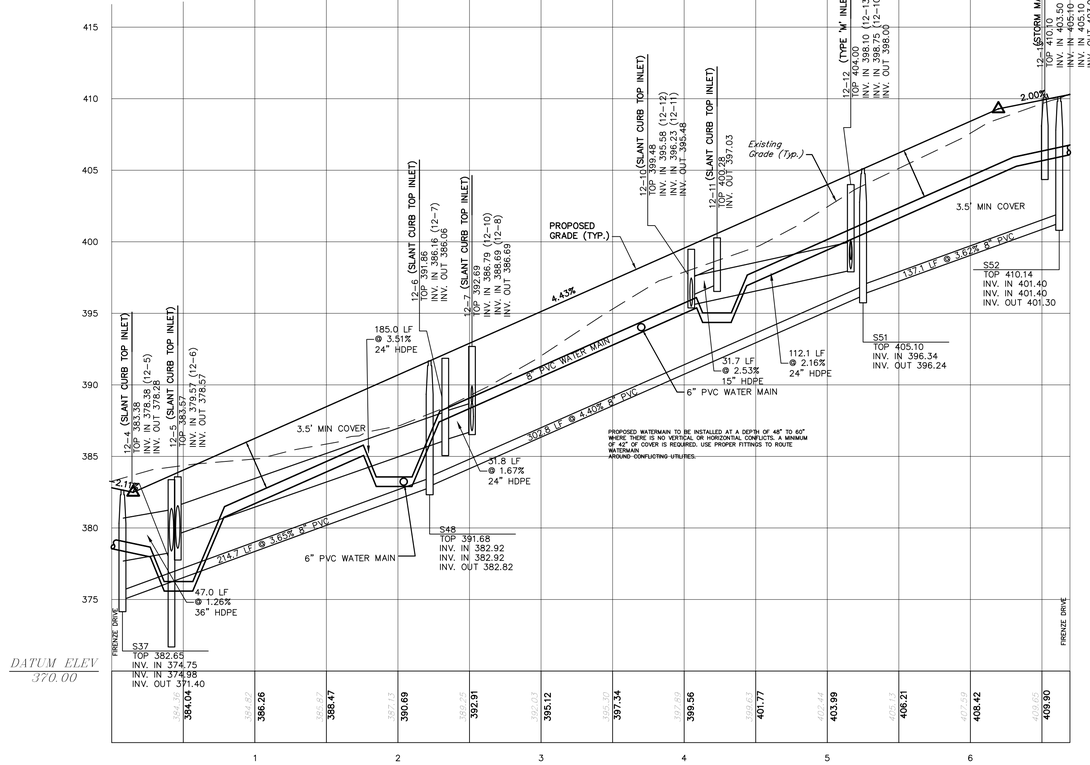
NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.



STREET PROFILE: TURIN CIRCLE

SCALES: 1"=50'H 1"=5'V



STREET PROFILE: LAZIO COURT

SCALES: 1"=50'H 1"=5'V

100 50 10 0 10 50 100
GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LAZIO DRIVE AND TURIN CIRCLE PROFILES

FOR

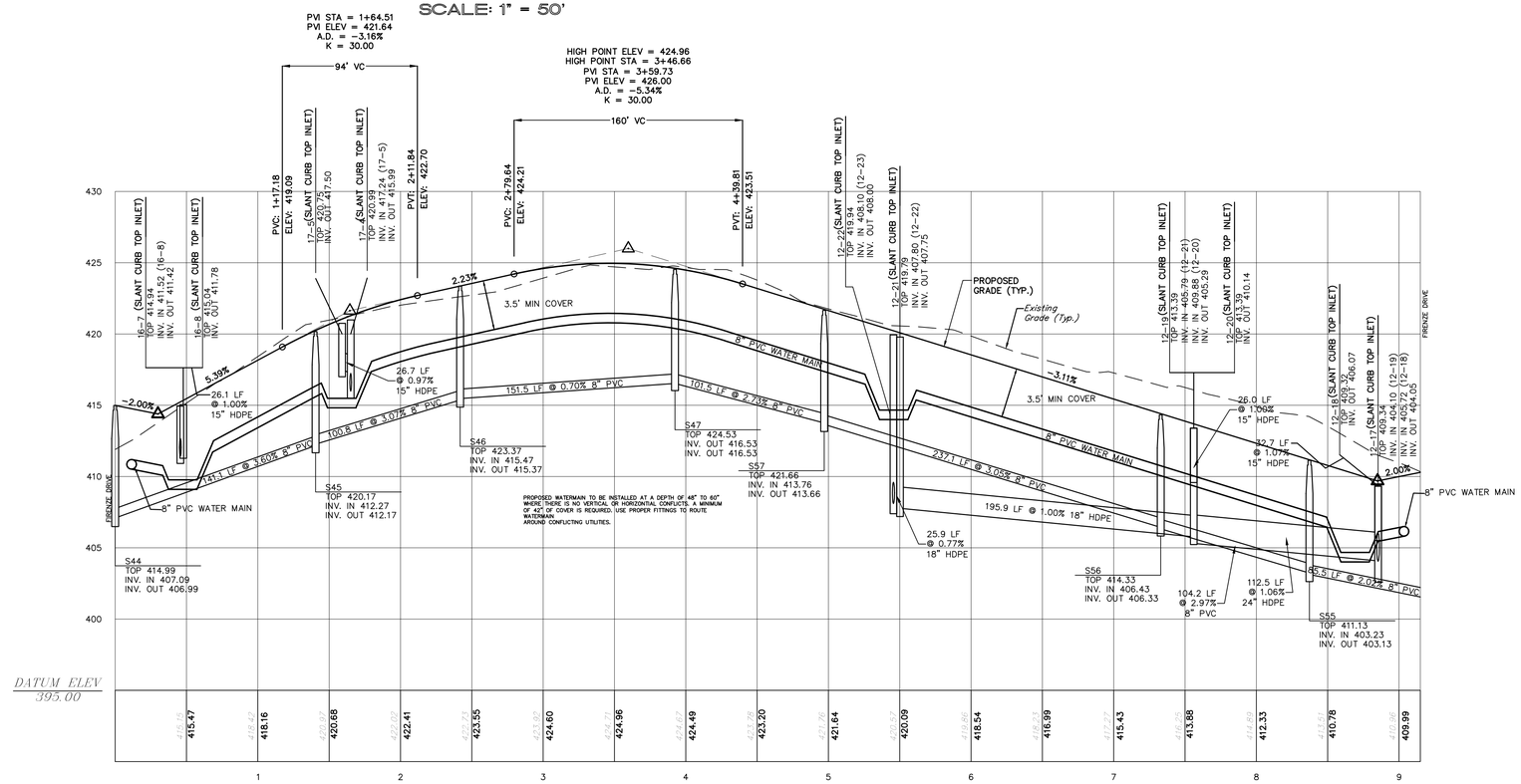
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Z:\2019\319582.sgh\319582\dwg\Plans\Pre-Final\44-PRC-ACCESS.dwg
FILE : 44-PRC-ACCESS.dwg

PLAN VIEW

SCALE: 1" = 50'



STREET PROFILE: PERUGIA CIRCLE

SCALES: 1"=50'H
1"=5'V

GRAPHIC SCALE
100 50 10 0 10 50 100
1" = 50'

NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
FLUME MEMBER AND PARTNER
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

PERUGIA CIRCLE PROFILE

FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.sph\319582\dwg\Plans\Pre-Final\45-PRO-ACCESS F Cond
FILE :

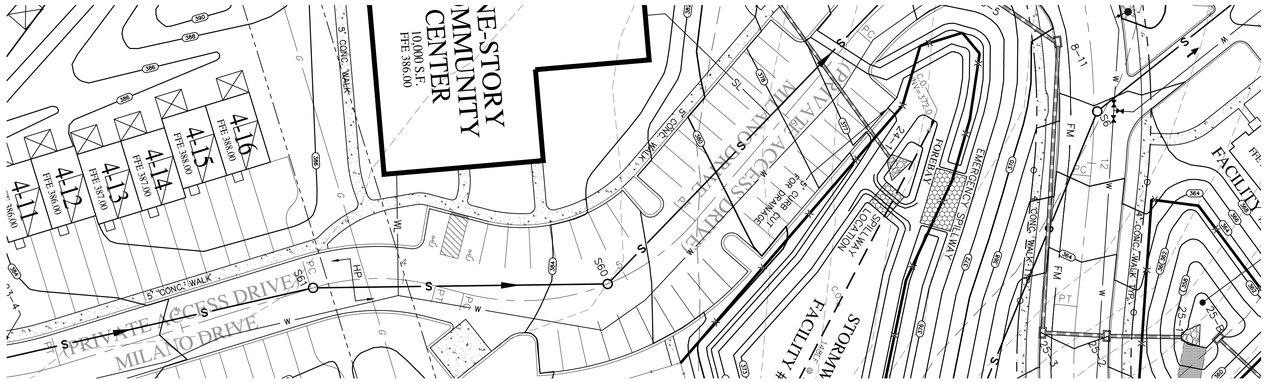
NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.

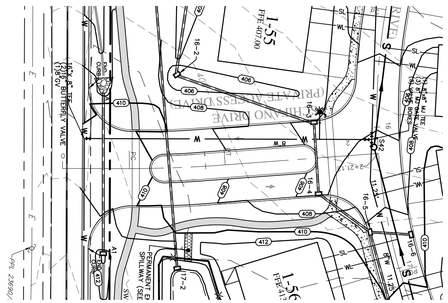
NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

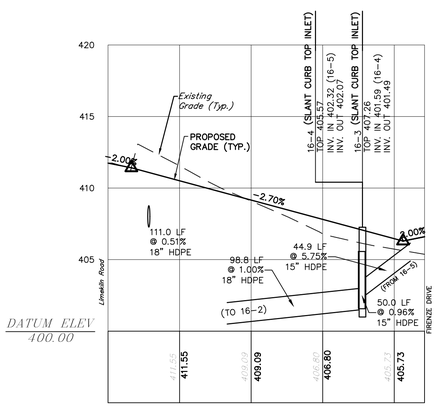
PLANNING • ENGINEERING • SURVEYING
FELLOWSHIP ROAD, P.O. BOX 6
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.



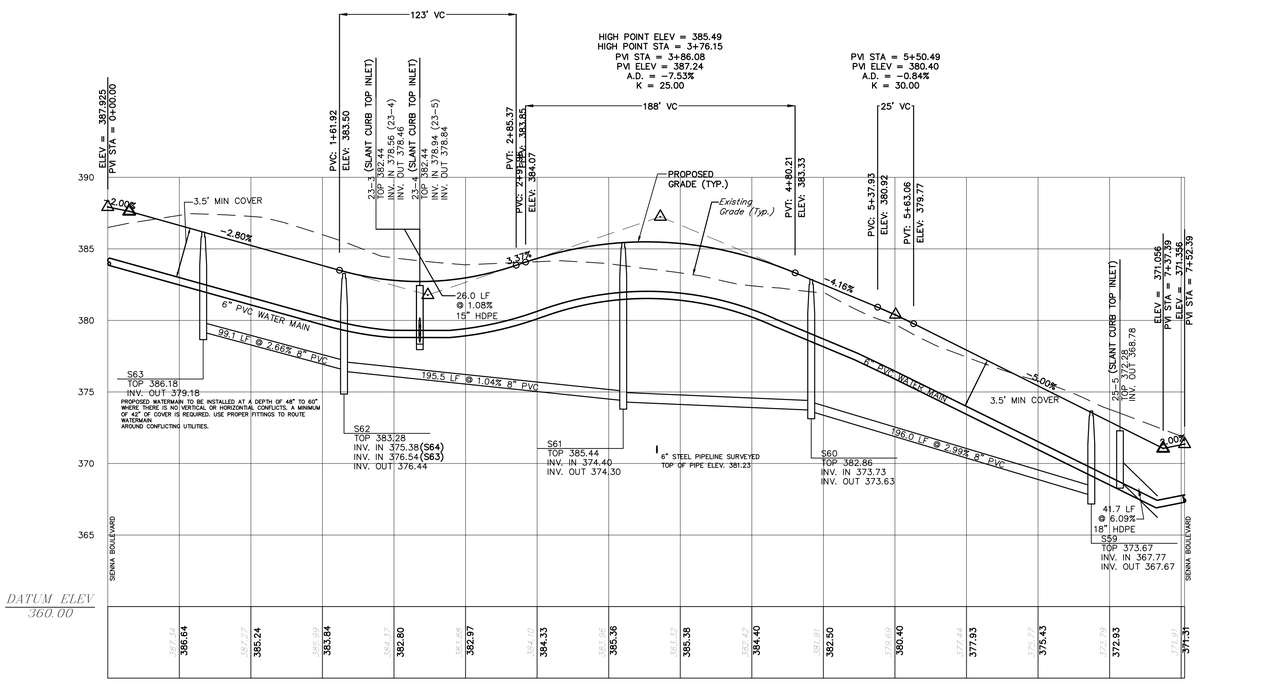
PLAN VIEW
SCALE: 1" = 50'



PLAN VIEW
SCALE: 1" = 50'



STREET PROFILE: SCHIFANO DRIVE
SCALES: 1"=50'H
1"=5'V



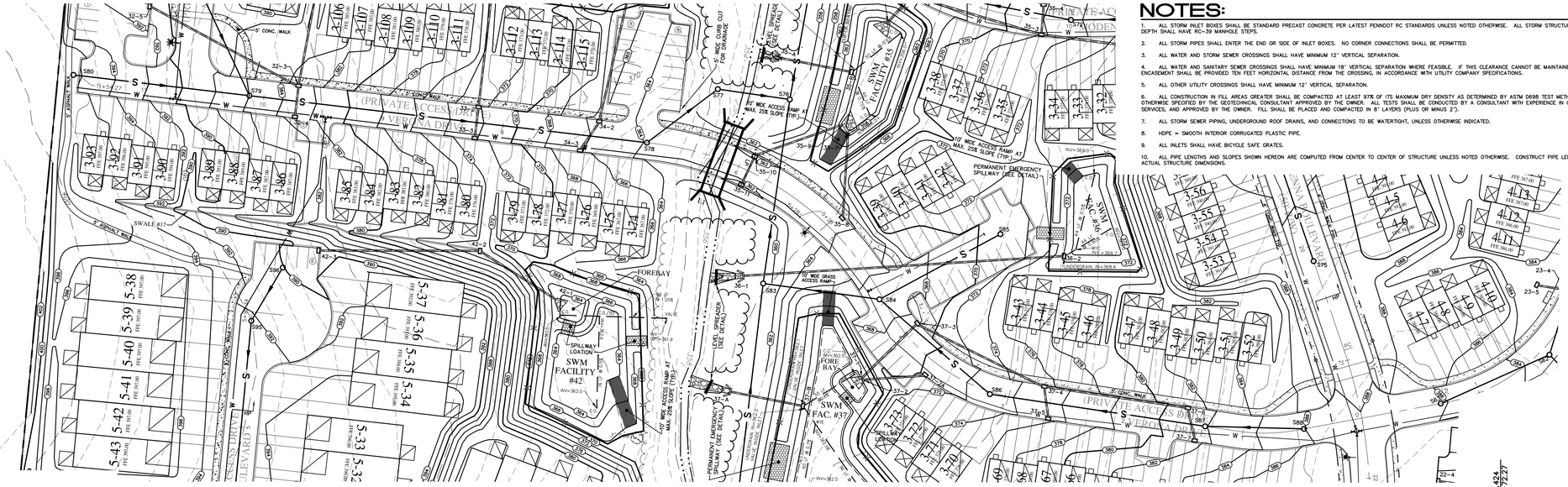
STREET PROFILE: MILANO DRIVE
SCALES: 1"=50'H
1"=5'V

GRAPHIC SCALE
1" = 50'

SEAL

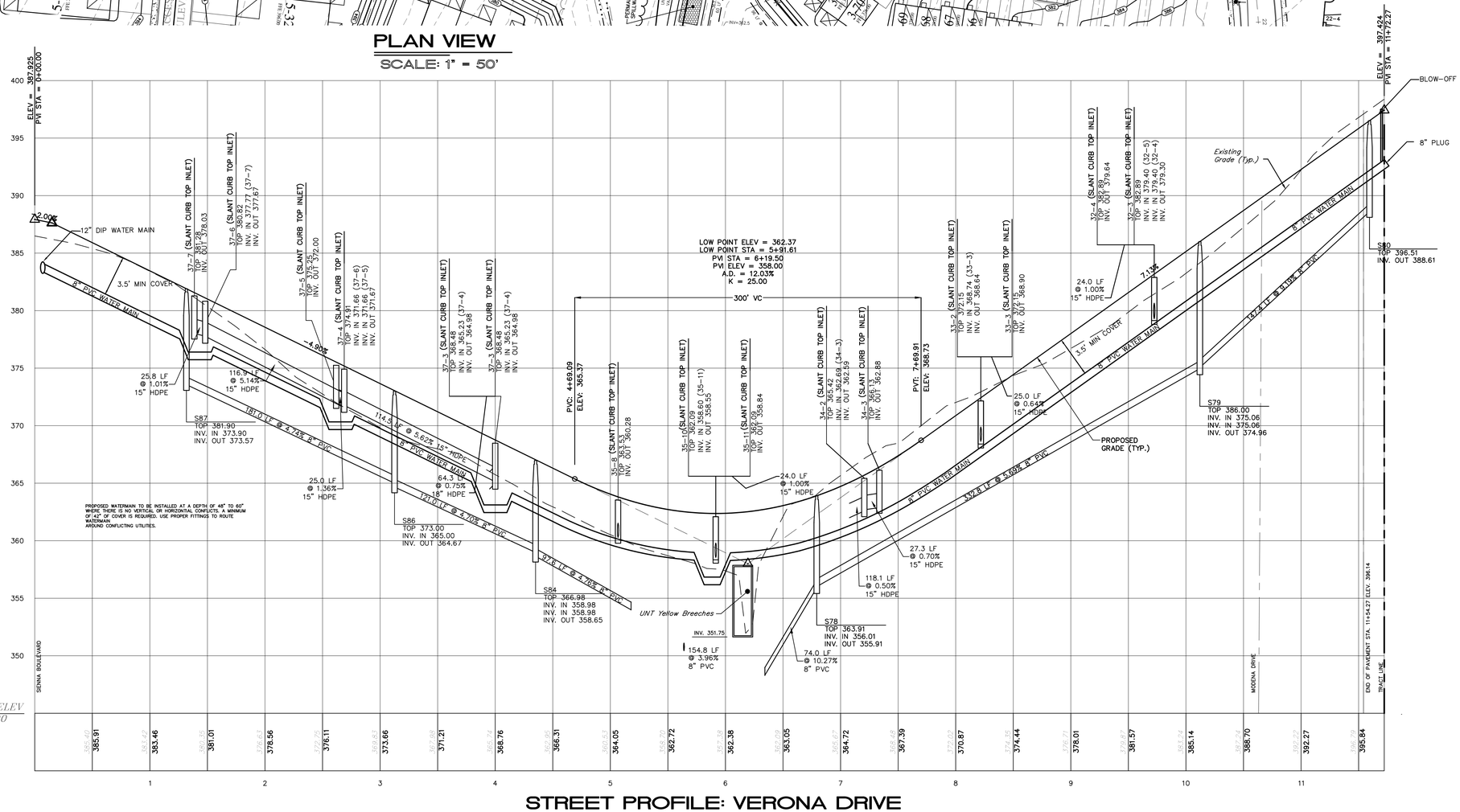
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
SCIFANO DRIVE AND MILANO DRIVE PROFILES
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\ 46-PRO-ACCESS R 1.dwg



PLAN VIEW

SCALE: 1" = 50'



STREET PROFILE: VERONA DRIVE

SCALES: 1"=50'H 1"=5'V

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
541 MEMORIAL AVE. P.O. BOX 510
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

VERONA DRIVE PROFILE

FOR

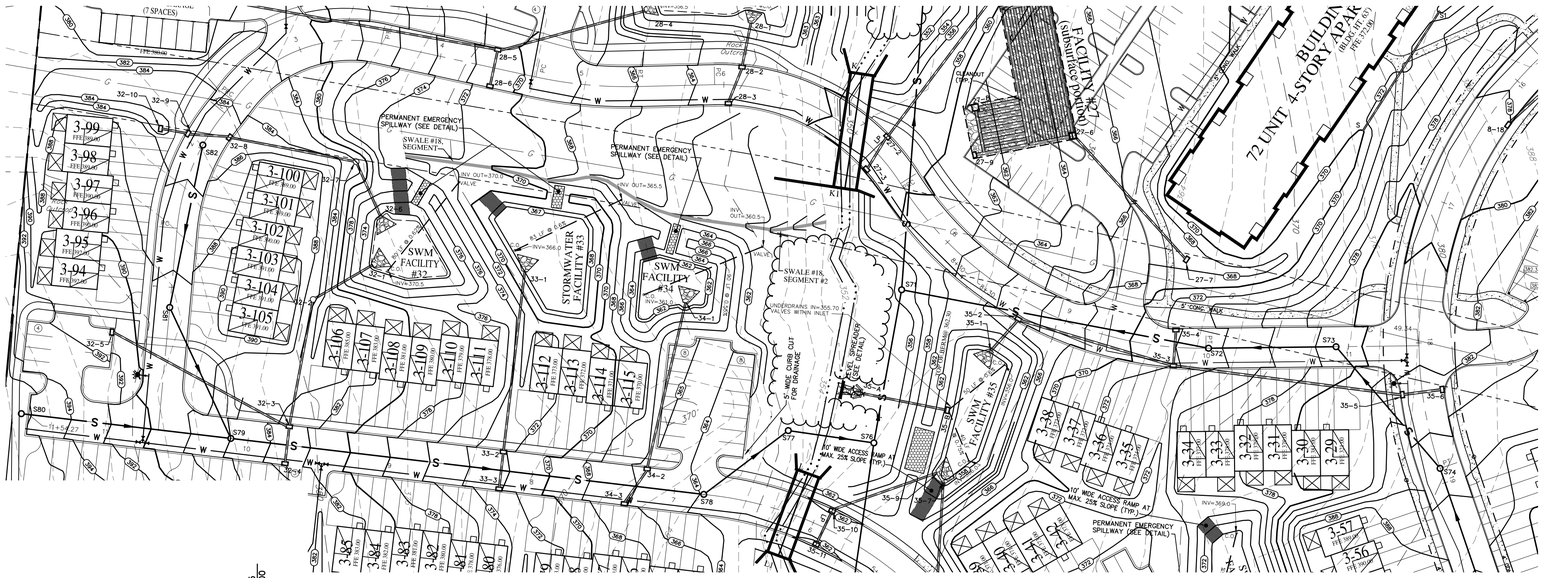
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Z:\2019\319582.sgn\319582\dwg\Plans\Pre-Final\FILE : 47-PRE-ACCESS R.dwg

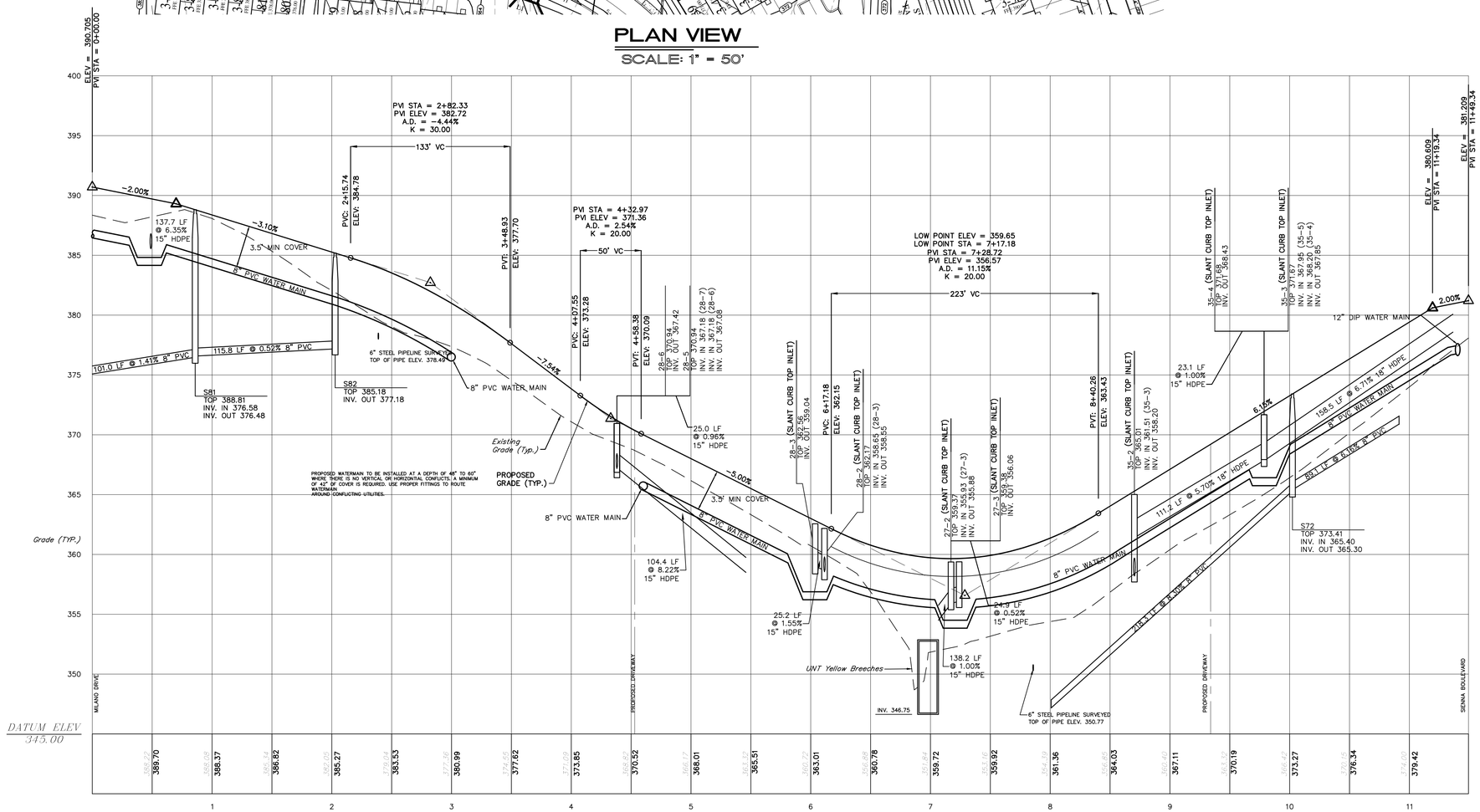
100 50 10 0 10 50 100
GRAPHIC SCALE 1" = 50'

SHEET 48 of 89



PLAN VIEW

SCALE: 1" = 50'



STREET PROFILE: MODENA DRIVE

SCALES: 1"=50'H
1"=5'V

NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, P.O. BOX 6
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

MODENA DRIVE PROFILE

FOR

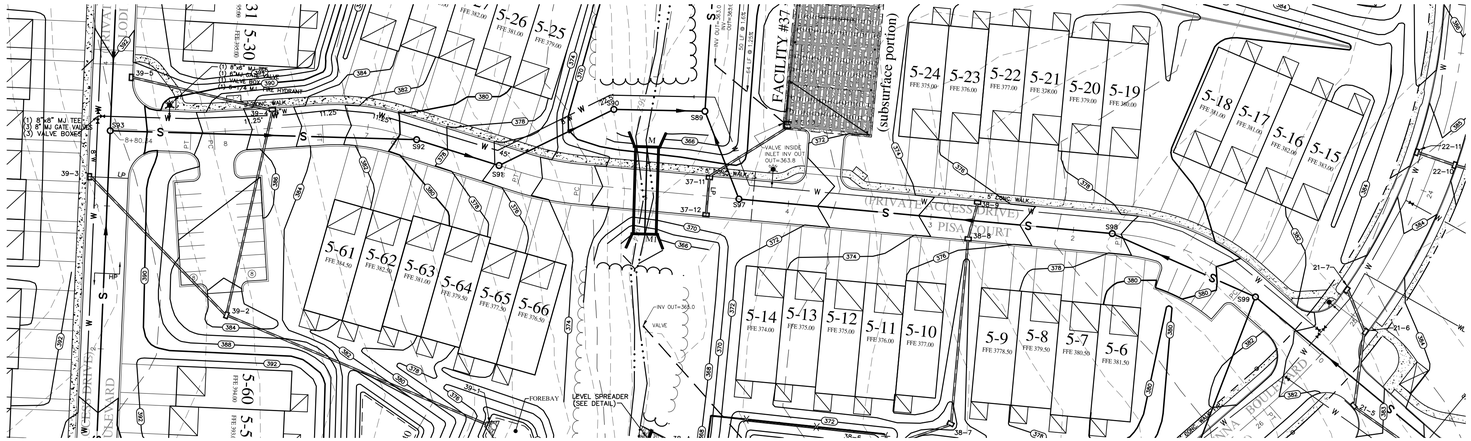
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : X:\2019\319582.dgn\319582\dwg\Plans\Pre-Final\47-PRO-ACCESS Lane
FILE : 47-PRO-ACCESS Lane

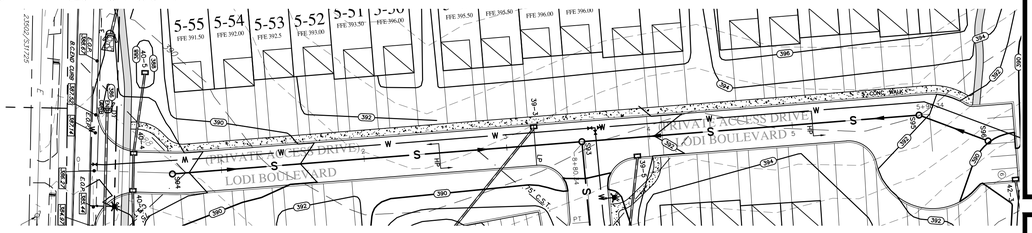
SHEET 49 of 89

100 50 10 0 10 50 100
GRAPHIC SCALE
1" = 50'



PLAN VIEW

SCALE: 1" = 50'



PLAN VIEW

SCALE: 1" = 50'

LOW POINT ELEV = 370.62
LOW POINT STA = 4+56.66
PVI STA = 4+86.14
PVI ELEV = 369.00
A.D. = 8.58%
K = 20.00

171' VC

ELEV = 390.859
PVI STA = 8+65.34
ELEV = 391.159
PVI STA = 8+80.34

ELEV = 382.573
PVI STA = 0+00.00

12" DIP WATER MAIN

2.01%

8" PVC WATER MAIN

-2.82%

3.5' MIN COVER

201.0 LF @ 0.45% 8" PVC

109.4 LF @ 0.50% 8" PVC

262.0 LF @ 1.61% 8" PVC

24.4 LF @ 0.98% 15" HDPE

38-9 (SLANT CURB TOP INLET) TOP 374.85 INV. OUT 371.60

38-8 (SLANT CURB TOP INLET) TOP 374.73 INV. IN 371.36 (38-9) INV. OUT 371.26

PVC: 4+00.32 ELEV: 371.42

37-11 (SLANT CURB TOP INLET) TOP 370.34 INV. IN 368.46 (37-12) INV. OUT 368.75

37-12 (SLANT CURB TOP INLET) TOP 370.53 INV. OUT 367.09

25.0 LF @ 0.96% 15" HDPE

63.9 LF @ 2.74% 15" HDPE

65.8 LF @ 8.39% 8" PVC

S97 TOP 370.78 INV. IN 362.87 INV. OUT 362.77

S98 TOP 377.83 INV. IN 367.18 INV. OUT 367.08

S99 TOP 380.98 INV. IN 367.83 INV. IN 371.52 INV. OUT 367.73

UNT Yellow Breeches

INV. 360.00

PROPOSED GRADE (TYP.)

Existing Grade (Typ.)

5.76%

3.5' MIN COVER

8" PVC WATER MAIN

144.1 LF @ 1.39% 15" HDPE

39-4 TOP 384.86 INV. IN 381.61 (39-5) INV. OUT 381.51

PVT: 5+71.95 ELEV: 373.95

1.00%

S93 TOP 391.32 INV. IN 377.97 INV. IN 377.97 INV. OUT 377.87

60.3 LF @ 4.99% 8" PVC

S92 TOP 379.30 INV. IN 371.13 INV. OUT 371.03

89.3 LF @ 11.45% 8" PVC

S91 TOP 375.82 INV. IN 368.02 INV. OUT 367.92

PROPOSED WATERMAIN TO BE INSTALLED AT A DEPTH OF 48" TO 60" WHERE THERE IS NO VERTICAL OR HORIZONTAL CONFLICTS. A MINIMUM OF 42" OF COVER IS REQUIRED. USE PROPER FITTINGS TO ROUTE WATERMAIN AROUND CONFLICTING UTILITIES.

SIENNA BOULEVARD

LODI BOULEVARD

DATUM ELEV 350.00

381.29 379.88 378.47 377.06 375.65 374.24 372.83 371.43 370.63 371.09 372.22 372.80 374.38 375.56 376.39 378.45 381.33 384.21 386.81 387.09 388.98

1 2 3 4 5 6 7 8

STREET PROFILE: PISA COURT

SCALES: 1"=50'H 1"=5'V

HIGH POINT ELEV = 391.51
HIGH POINT STA = 2+52.81
PVI STA = 2+29.41
PVI ELEV = 391.90
A.D. = -3.57%
K = 30.00

LOW POINT ELEV = 391.14
LOW POINT STA = 3+19.86
PVI STA = 3+25.20
PVI ELEV = 390.94
A.D. = 2.36%
K = 30.00

HIGH POINT ELEV = 393.23
HIGH POINT STA = 5+14.20
PVI STA = 5+08.52
PVI ELEV = 393.43
A.D. = -2.34%
K = 30.00

107' VC

70' VC

70' VC

ELEV = 386.515
PVI STA = 0+00.00

40-4 (SLANT CURB TOP INLET) TOP 386.71 INV. IN 383.46 (40-5) INV. OUT 383.36

40-3 (SLANT CURB TOP INLET) TOP 386.71 INV. IN 383.12 (40-4) INV. OUT 383.02

24.0 LF @ 1.00% 15" HDPE

PVC: 1+75.88 ELEV: 390.53

PVT: 2+82.93 ELEV: 391.29

PVC: 2+89.24 ELEV: 391.29

PVT: 3+60.65 ELEV: 391.42

39-3 (SLANT CURB TOP INLET) TOP 390.88 INV. OUT 387.61

PVC: 4+73.41 ELEV: 392.95

PVT: 5+43.63 ELEV: 393.09

ELEV = 392.000
PVI STA = 6+54.34

PROPOSED GRADE (TYP.)

Existing Grade (Typ.)

2.56%

-2.98%

1.36%

-1.00%

-0.98%

3.5' MIN COVER

8" PVC WATER MAIN

134.4 LF @ 6.0% 15" HDPE

287.0 LF @ 0.60% 8" PVC

236.3 LF @ 1.44% 8" PVC

16" DIP WATER MAIN

S94 TOP 387.69 INV. OUT 379.69

S93 TOP 391.32 INV. IN 377.97 INV. IN 377.97 INV. OUT 377.87

S95 TOP 392.12 INV. IN 381.48 INV. OUT 381.38

S-96 TOP 392.18 INV. OUT 382.00

51.5 LF @ 1.01% 8" PVC

PROPOSED WATERMAIN TO BE INSTALLED AT A DEPTH OF 48" TO 60" WHERE THERE IS NO VERTICAL OR HORIZONTAL CONFLICTS. A MINIMUM OF 42" OF COVER IS REQUIRED. USE PROPER FITTINGS TO ROUTE WATERMAIN AROUND CONFLICTING UTILITIES.

PISA COURT

DATUM ELEV 370.00

387.30 388.58 389.86 391.05 391.51 391.21 391.29 391.96 392.64 393.20 393.02 392.53 392.04

1 2 3 4 5 6

STREET PROFILE: LODI BOULEVARD

SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE 1" = 50'

NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

LODI BOULEVARD AND PISA COURT PROFILE

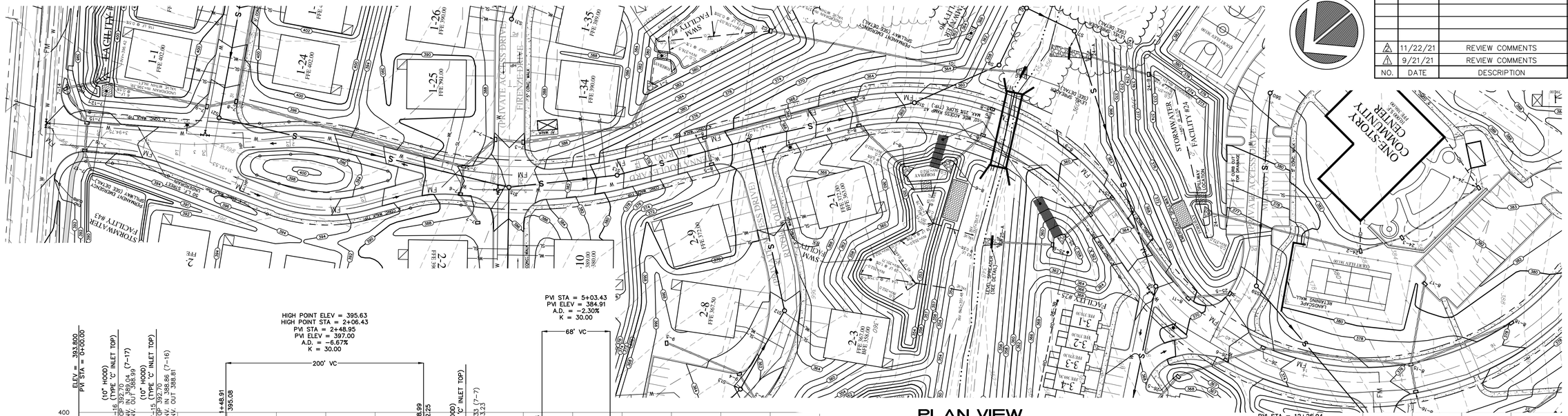
FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : X:\2019\319582.sph\319582\dwg\Plans\Pre-Final\49-PRC-ACCESS M R.dwg
FILE :

SHEET 50 of 89

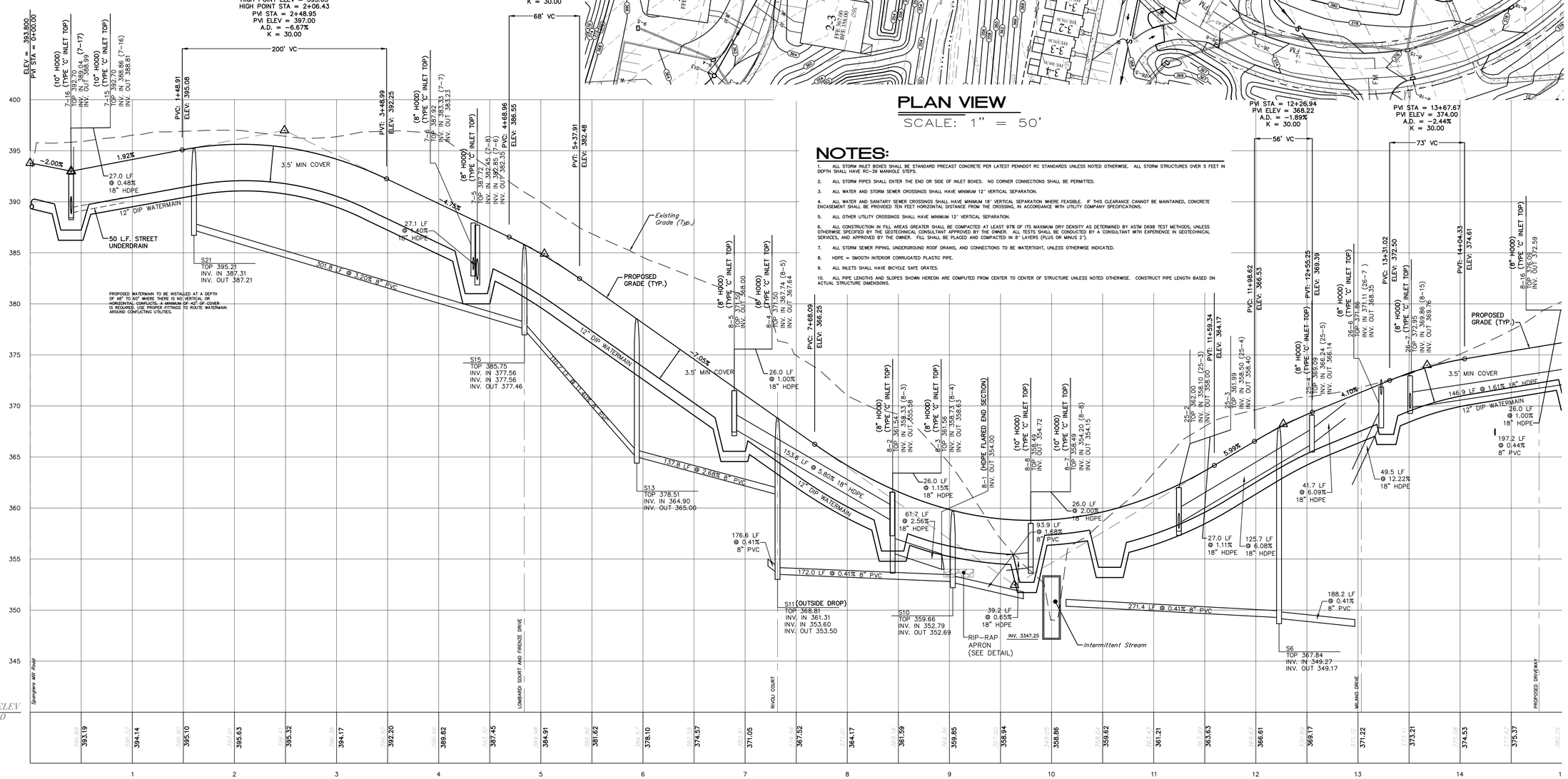


PLAN VIEW

SCALE: 1" = 50'

NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2').
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.



STREET PROFILE: SIENNA BOULEVARD

SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE 1" = 50'

SEE SHEET 52

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

SEAL

SEAL

ALPHA
PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

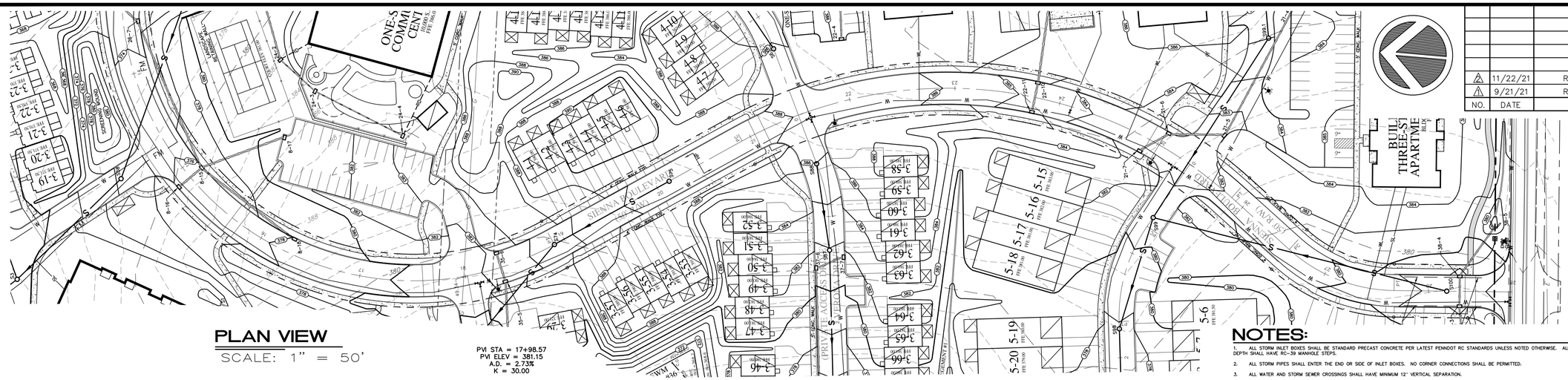
SIENNA BOULEVARD PROFILE

FOR SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur_319582sur\field
SCALE : 1" = 50'
DWG : K:\2019\319582.sph\319582\dwg\Plans\Pre-Final\50-PRO-SIENNA.dwg
FILE : 50-PRO-SIENNA.dwg

SEE SHEET 51

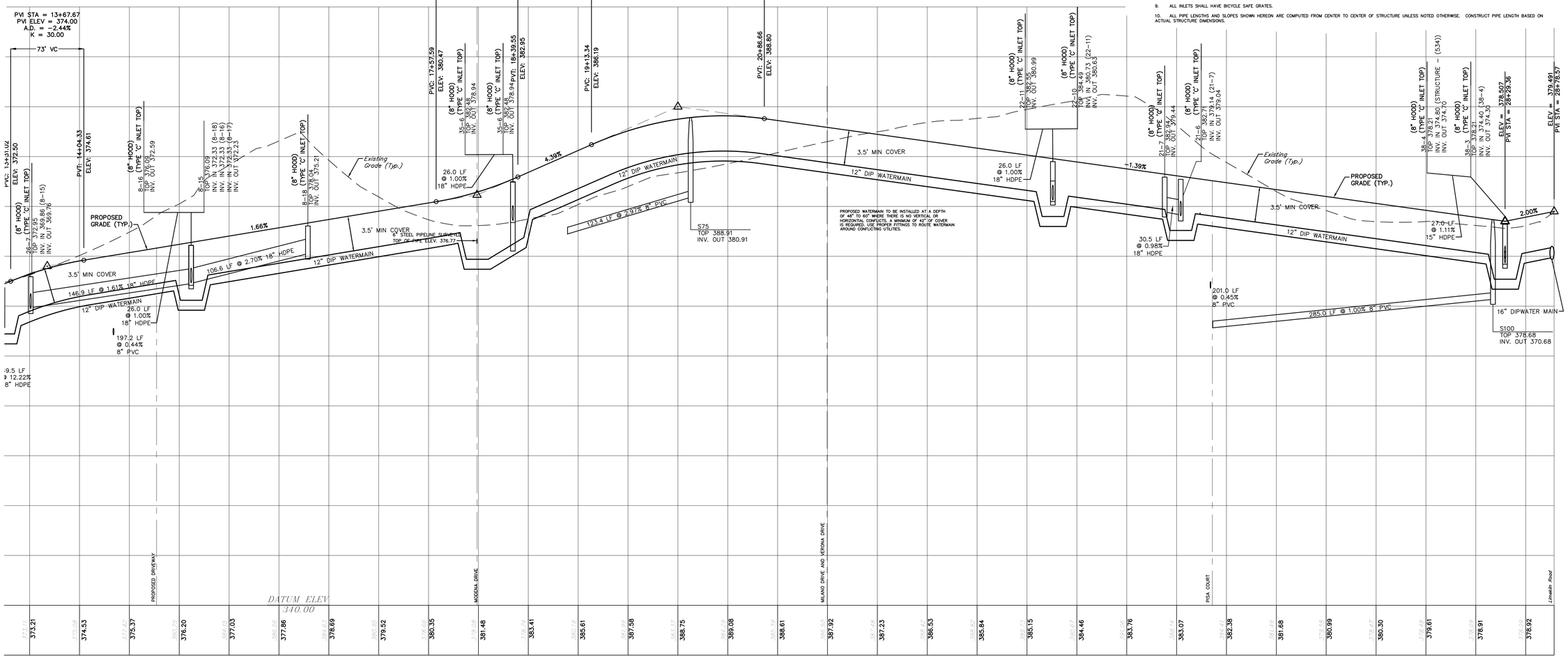


PLAN VIEW

SCALE: 1" = 50'

NOTES:

1. ALL STORM INLET BOXES SHALL BE STANDARD PRECAST CONCRETE PER LATEST PENNDOT RC STANDARDS UNLESS NOTED OTHERWISE. ALL STORM STRUCTURES OVER 5 FEET IN DEPTH SHALL HAVE RC-39 MANHOLE STEPS.
2. ALL STORM PIPES SHALL ENTER THE END OR SIDE OF INLET BOXES. NO CORNER CONNECTIONS SHALL BE PERMITTED.
3. ALL WATER AND STORM SEWER CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
4. ALL WATER AND SANITARY SEWER CROSSINGS SHALL HAVE MINIMUM 18" VERTICAL SEPARATION WHERE FEASIBLE. IF THIS CLEARANCE CANNOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE PROVIDED TEN FEET HORIZONTAL DISTANCE FROM THE CROSSING, IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS.
5. ALL OTHER UTILITY CROSSINGS SHALL HAVE MINIMUM 12" VERTICAL SEPARATION.
6. ALL CONSTRUCTION IN FILL AREAS GREATER SHALL BE COMPACTED AT LEAST 97% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 TEST METHODS, UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL CONSULTANT APPROVED BY THE OWNER. ALL TESTS SHALL BE CONDUCTED BY A CONSULTANT WITH EXPERIENCE IN GEOTECHNICAL SERVICES, AND APPROVED BY THE OWNER. FILL SHALL BE PLACED AND COMPACTED IN 8" LAYERS (PLUS OR MINUS 2").
7. ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATERTIGHT, UNLESS OTHERWISE INDICATED.
8. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
9. ALL INLETS SHALL HAVE BICYCLE SAFE GRATES.
10. ALL PIPE LENGTHS AND SLOPES SHOWN HEREON ARE COMPUTED FROM CENTER TO CENTER OF STRUCTURE UNLESS NOTED OTHERWISE. CONSTRUCT PIPE LENGTH BASED ON ACTUAL STRUCTURE DIMENSIONS.



STREET PROFILE: SIENNA BOULEVARD

SCALES: 1"=50'H
1"=5'V

100 50 10 0 10 50 100
GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
1 MEMORIAL AVE., P.O. BOX 67
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

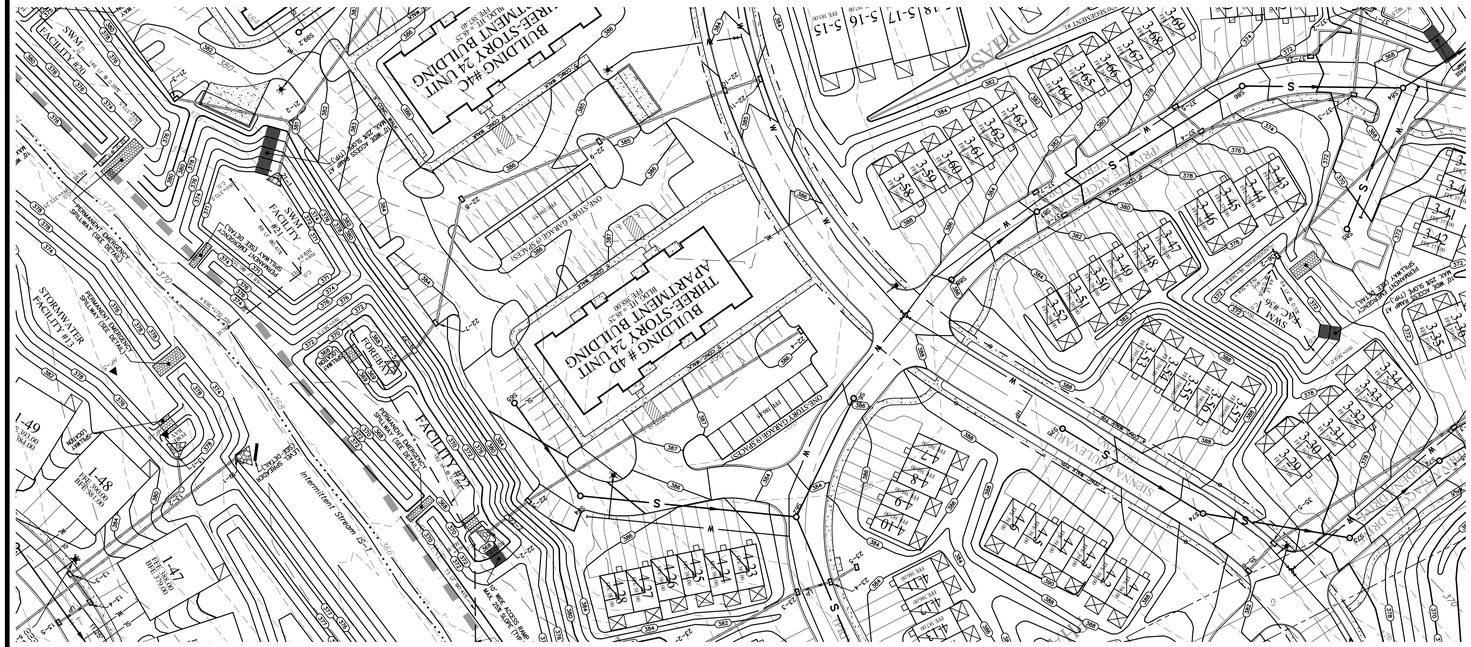
SIENNA BOULEVARD PROFILE

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\
52-PRO-SIENNA.dwg
SHEET 52 of 89



PLAN VIEW

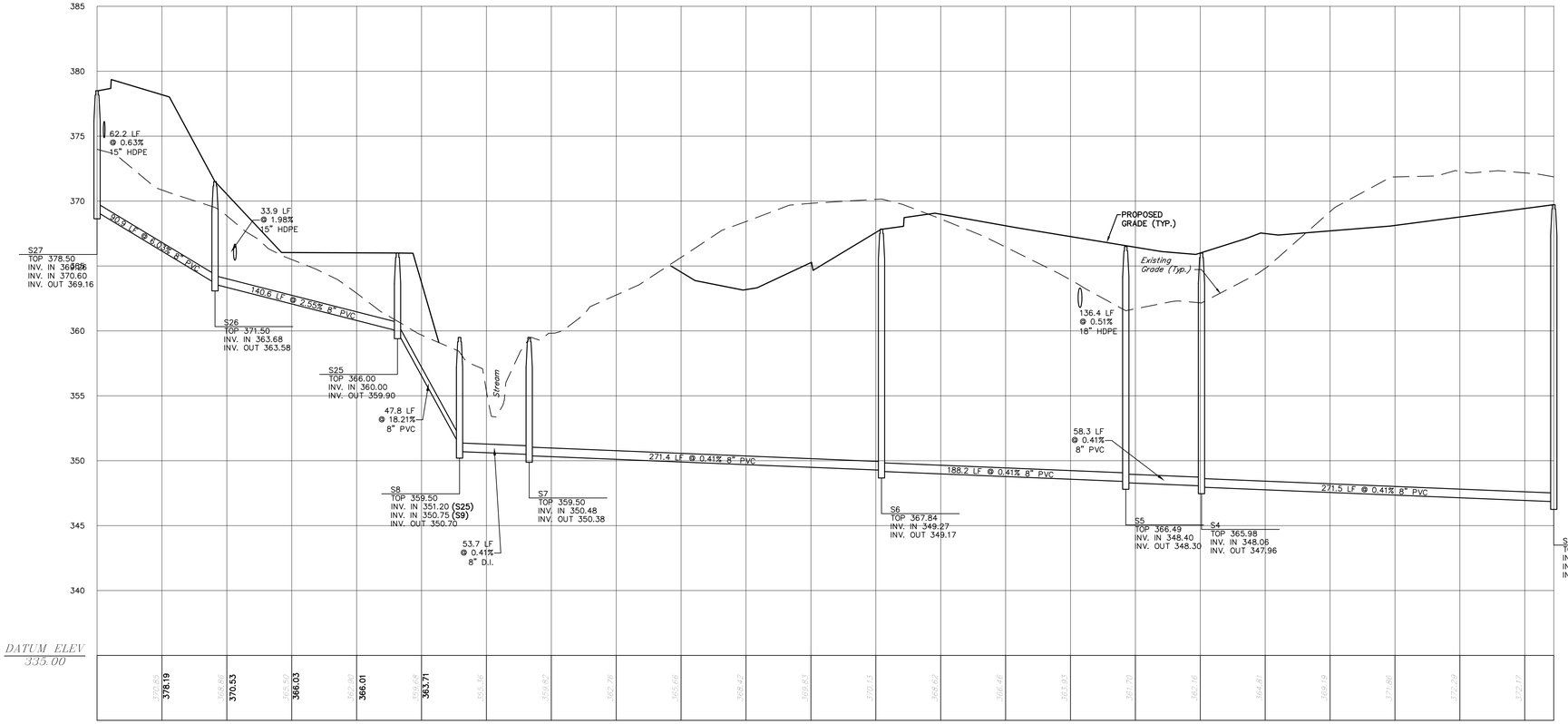
SCALE: 1" = 50'

S10 TO S8

SCALES: 1"=50'H 1"=5'V

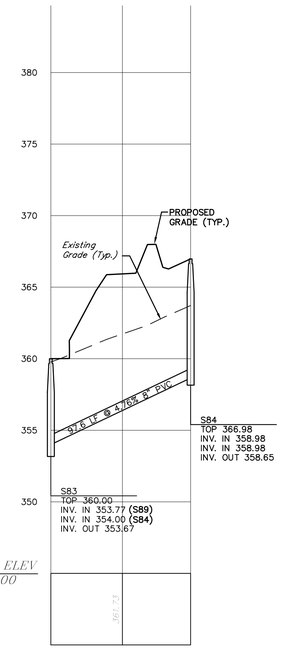
PLAN VIEW

SCALE: 1" = 50'



S27 TO S3

SCALES: 1"=50'H 1"=5'V



S83 TO S84

SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
NEW KINGSTOWN, PA
NEW CUMBERLAND, PA
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

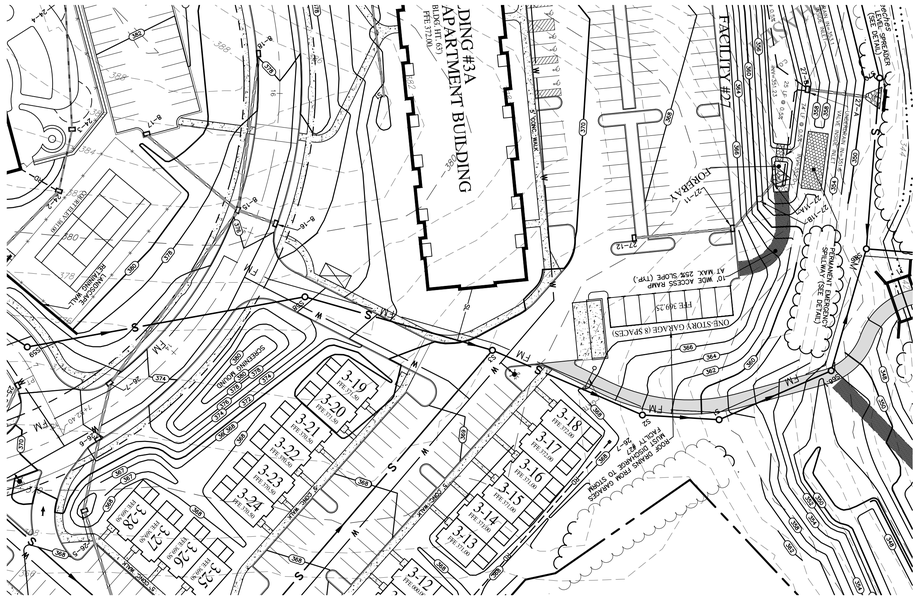
SANITARY SEWER PROFILES

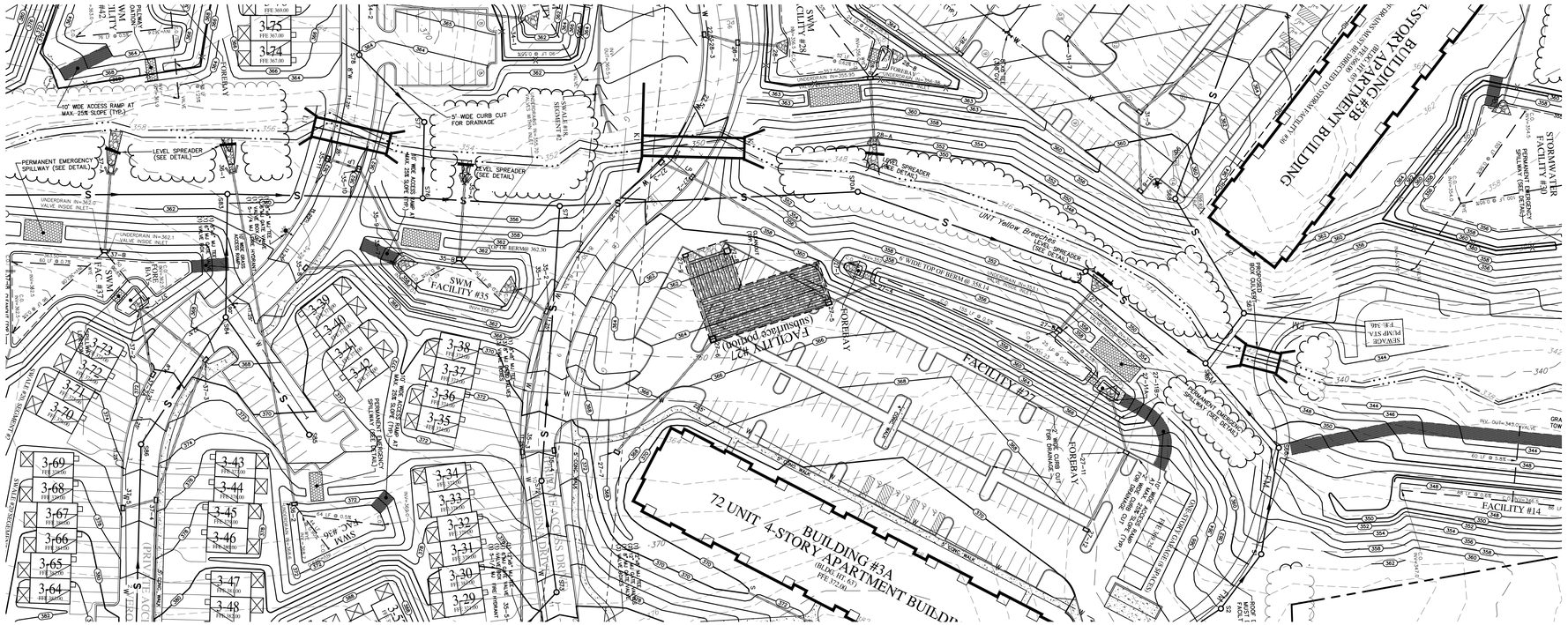
FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.sph\319582\Dwg\Plans\Pre-Final\02-PRO-SANITARY 1.dwg
FILE :
SHEET 53 of 89


BUILDING #3A
APARTMENT BUILDING
FFE 372.00
FACILITY #27
FOREBAY
3-19
3-20
3-21
3-22
3-23
3-24
3-25
3-26
3-27
3-28
3-18
3-17
3-16
3-15
3-14
3-13
3-12
ONE-STORY GARAGE (8 SPACES)
FFE 369.25
10' WIDE ACCESS RAMP
AT MAX 25% SLOPE (TYP.)
MAJOR BUILDING PRIOR CLEARED TREE SECURITY BUFFER
30'-0" MIN. BUILDING SETBACK
SIENNA BOULEVARD
(50' R/W)
PROPOSED 8" PVC SEWER LATERAL
PROPOSED 8" PVC SEWER MAIN
PROPOSED 8" DUCTILE IRON WATERLINE
PROPOSED FIRE HYDRANT ASSEMBLY
PROPOSED 6" WATER SERVICE
PROPOSED 1" WATER SERVICE
PROPOSED 2" WATER SERVICE
PROPOSED 4" WATER SERVICE
PROPOSED 6" WATER SERVICE
PROPOSED 8" WATER SERVICE
PROPOSED 10" WATER SERVICE
PROPOSED 12" WATER SERVICE
PROPOSED 16" WATER SERVICE
PROPOSED 20" WATER SERVICE
PROPOSED 24" WATER SERVICE
PROPOSED 30" WATER SERVICE
PROPOSED 36" WATER SERVICE
PROPOSED 42" WATER SERVICE
PROPOSED 48" WATER SERVICE
PROPOSED 54" WATER SERVICE
PROPOSED 60" WATER SERVICE
PROPOSED 66" WATER SERVICE
PROPOSED 72" WATER SERVICE
PROPOSED 78" WATER SERVICE
PROPOSED


10' WIDE ACCESS RAMP AT MAX. 25% SLOPE (TYP.)
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
LEVEL SPREADER (SEE DETAIL)
5' WIDE CURB CUT FOR DRAINAGE
SWALE RPR SEGMENT B
SWM FACILITY #35
SWM FACILITY #36
SWM FACILITY #37
SWM FACILITY #34
FACILITY #37 (substitute position)
FACILITY #14
FOREBAY
BUILDING #3A
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. FFE 60)
FFE=372.00
BUILDING #3B
72 UNIT 4-STORY APARTMENT BUILDING
(BLDG. FFE 60)
FFE=368.00
STORMWATER FACILITY #30
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
UNDERDRAIN IN=362.0' VALVE INSIDE INLET
UNDERDRAIN IN=362.3' VALVE INSIDE INLET
UNDERDRAIN IN=362.5' VALVE INSIDE INLET
UNDERDRAIN IN=362.7' VALVE INSIDE INLET
UNDERDRAIN IN=362.9' VALVE INSIDE INLET
UNDERDRAIN IN=363.1' VALVE INSIDE INLET
UNDERDRAIN IN=363.3' VALVE INSIDE INLET
UNDERDRAIN IN=363.5' VALVE INSIDE INLET
UNDERDRAIN IN=363.7' VALVE INSIDE INLET
UNDERDRAIN

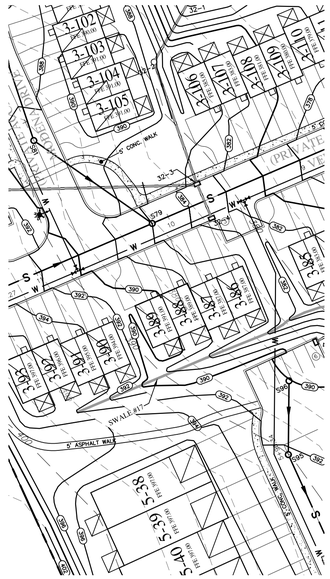
NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
ALPHA CONSULTING ENGINEERS, INC.
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM

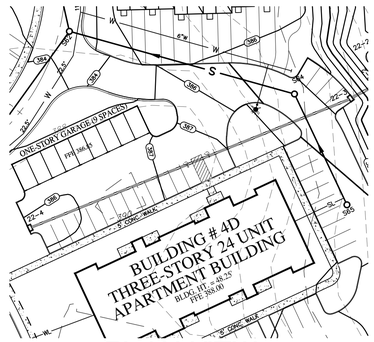
SEAL

PLAN VIEW
SCALE: 1" = 50'

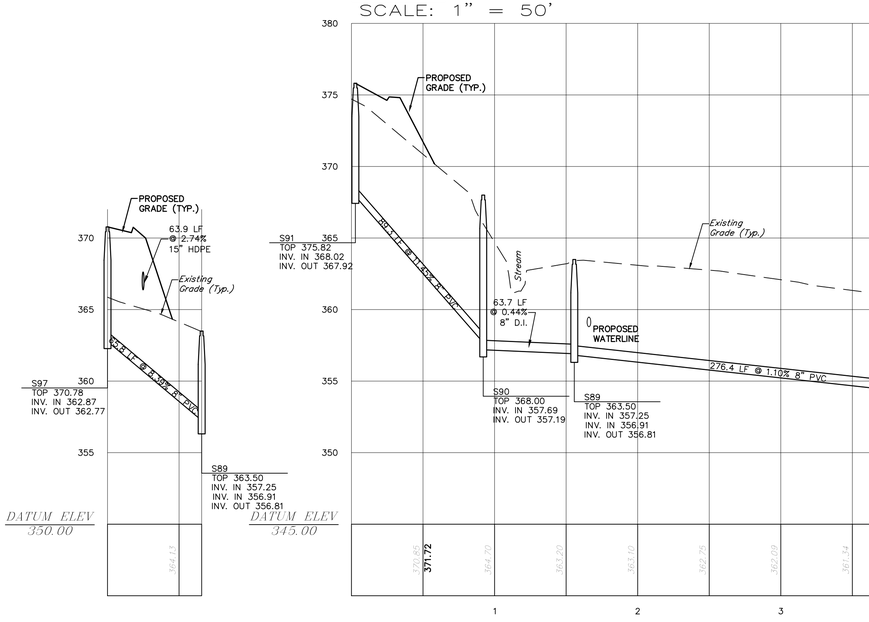


PLAN VIEW
SCALE: 1" = 50'

PLAN VIEW
SCALE: 1" = 50'

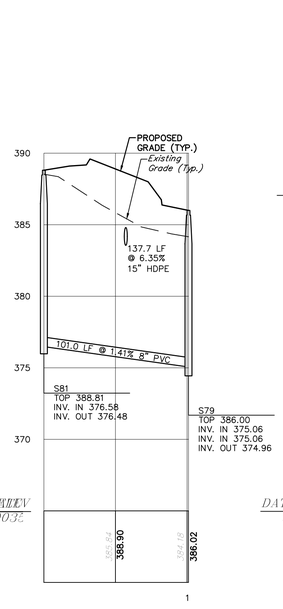


PLAN VIEW
SCALE: 1" = 50'

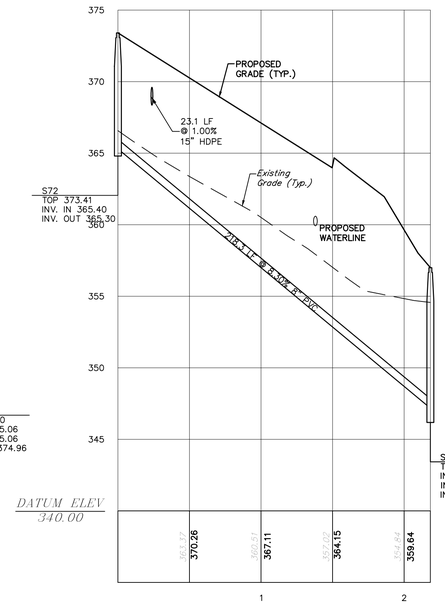


S97 TO S89
SCALES: 1"=50'H 1"=5'V

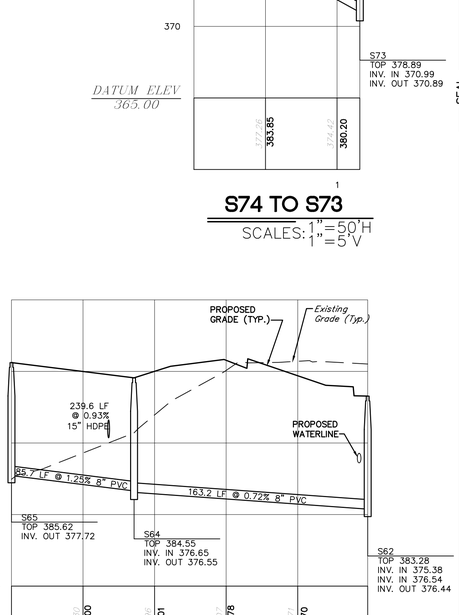
S91 TO S83
SCALES: 1"=50'H 1"=5'V



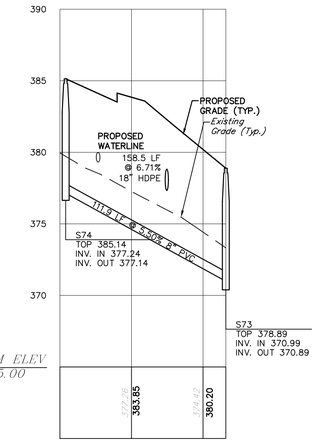
S81 TO S79
SCALES: 1"=50'H 1"=5'V



S72 TO S71
SCALES: 1"=50'H 1"=5'V



S65 TO S62
SCALES: 1"=50'H 1"=5'V



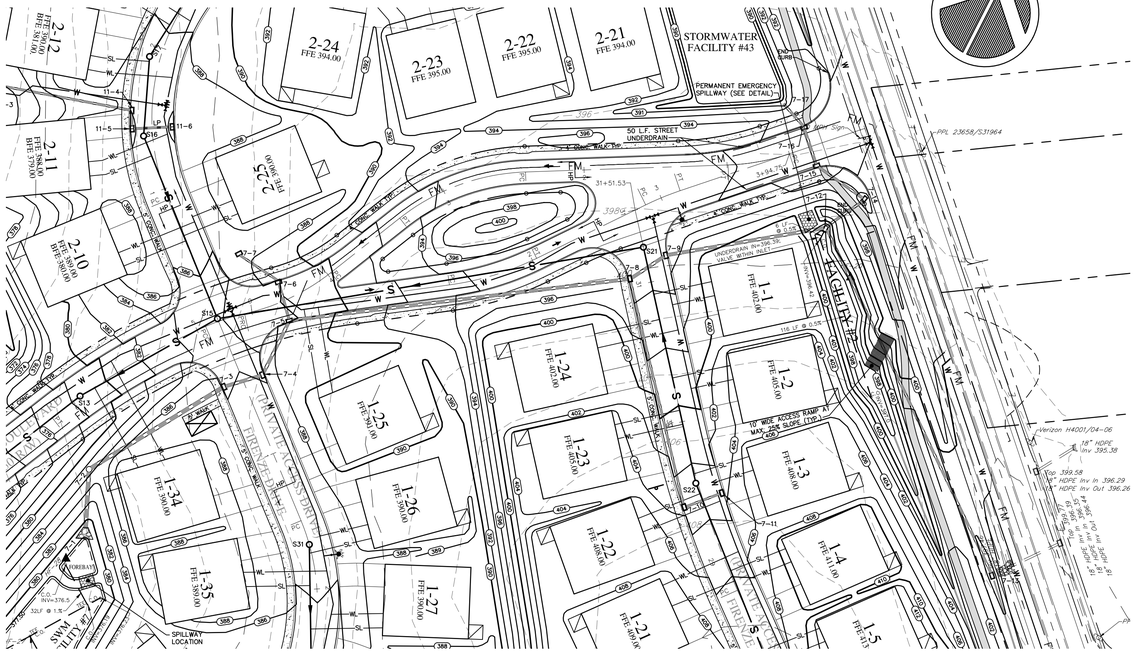
S74 TO S73
SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE
1" = 50'

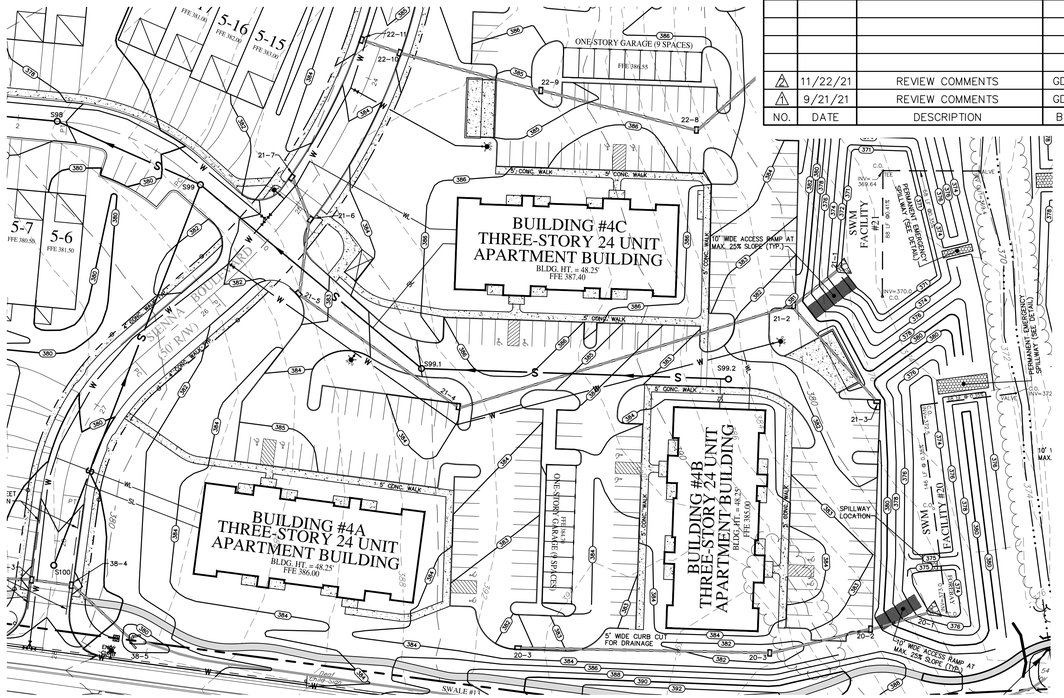
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
SANITARY SEWER PROFILES
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : 2:\2019\319582.ea\319582eaxr\field
SCALE : 1" = 50'
DWG : X:\2019\319582.qph\319582\dwg\Plans\Pre-Final\55-PRO-SANITARY 4.dwg
FILE :

SHEET 56 & 89



PLAN VIEW
SCALE: 1" = 50'



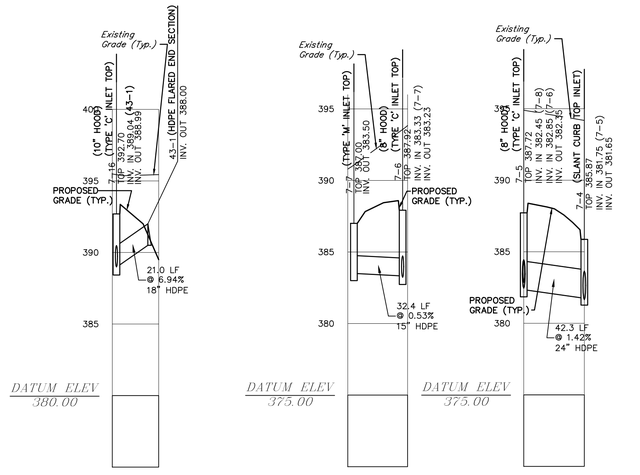
PLAN VIEW
SCALE: 1" = 50'

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

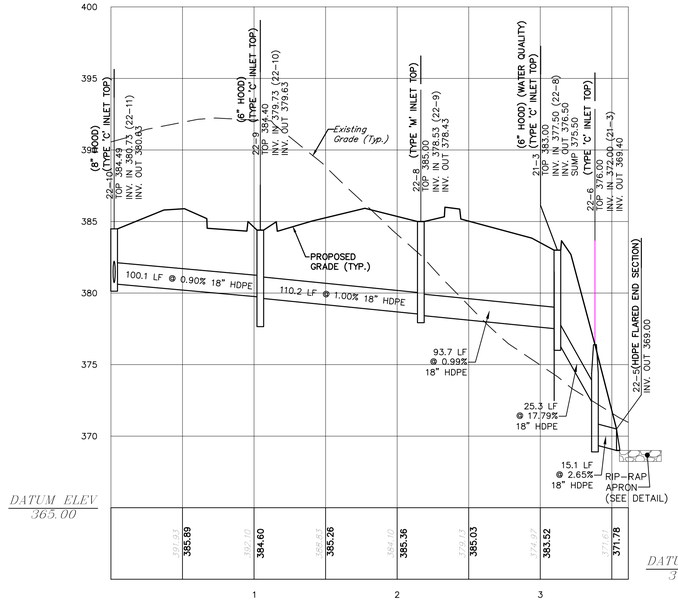
SEAL



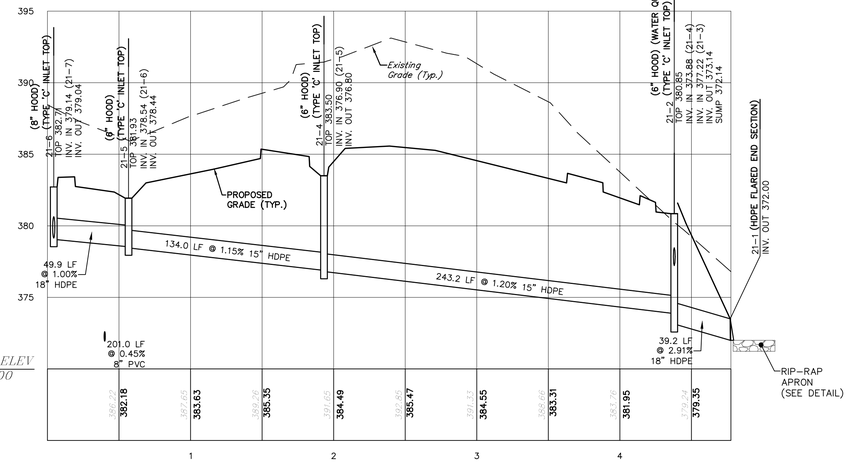
43-2 TO 43-1
SCALES: 1"=50'H 1"=5'V

7-7 TO 7-6
SCALES: 1"=50'H 1"=5'V

7-5 TO 7-4
SCALES: 1"=50'H 1"=5'V



21-6 TO 21-1
SCALES: 1"=50'H 1"=5'V



21-14 TO 21-8
SCALES: 1"=50'H 1"=5'V

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

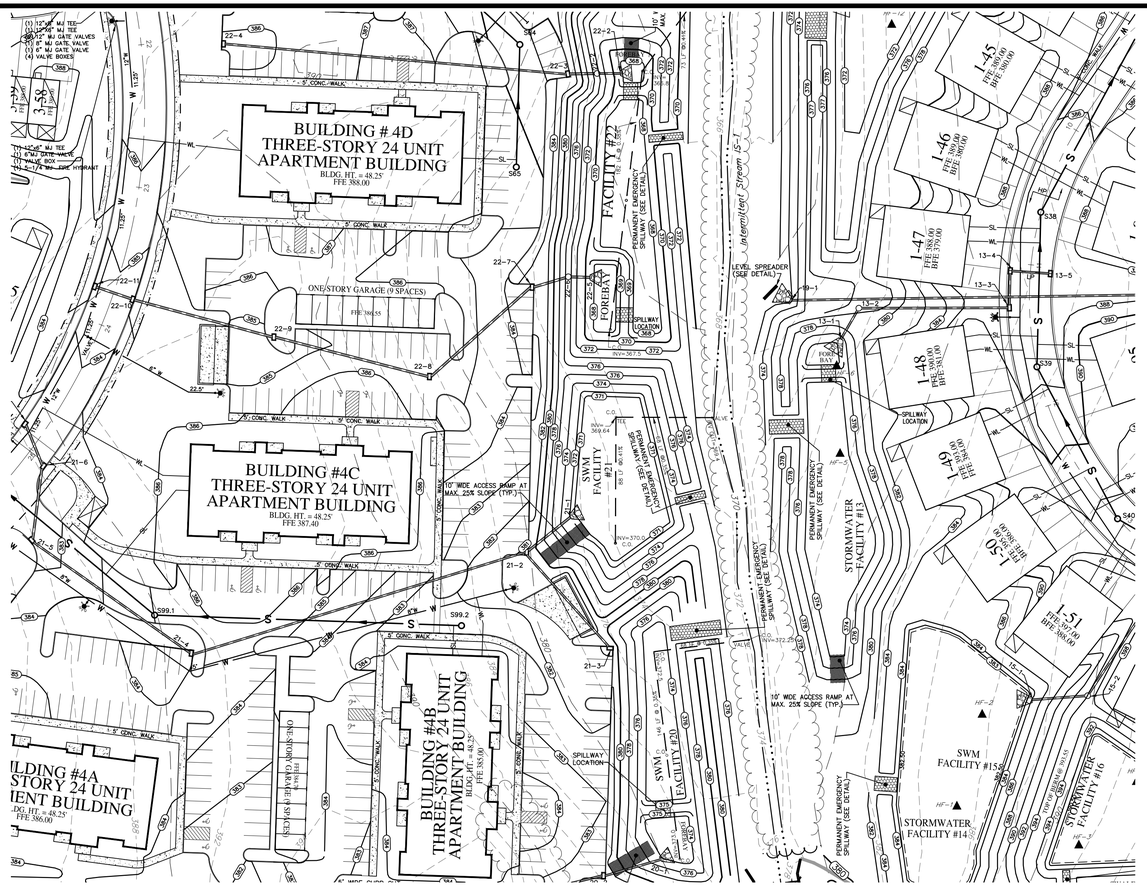
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

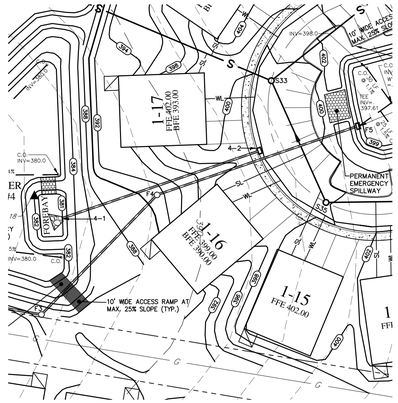
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : N:\2019\319582.dgn\319582\Dwg\Plans\Pre-Fina\56-PRO-STORM 1.dwg
FILE :

GRAPHIC SCALE 1" = 50'

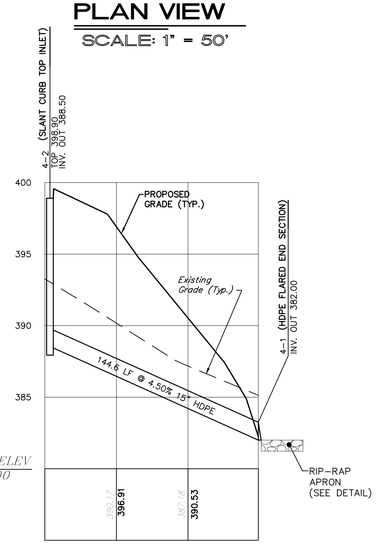
SHEET 57 of 89



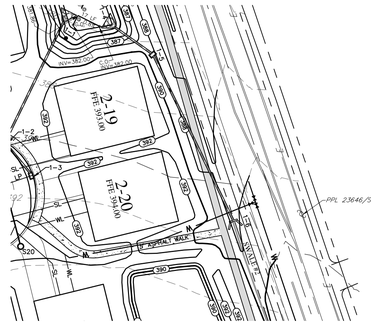
PLAN VIEW
SCALE: 1" = 50'



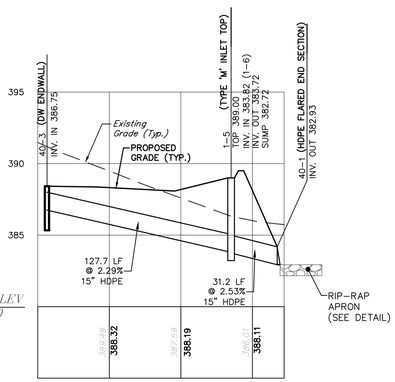
PLAN VIEW
SCALE: 1" = 50'



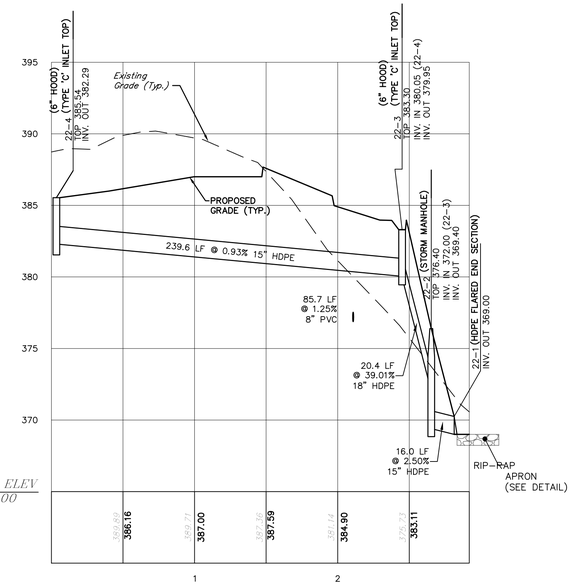
4-2 TO 4-1
SCALES: 1"=50'H 1"=5'V



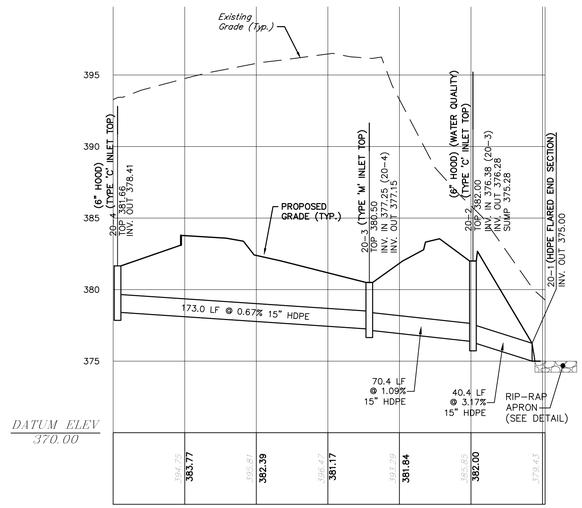
PLAN VIEW
SCALE: 1" = 50'



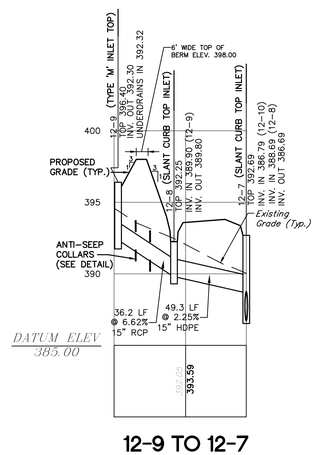
1-6 TO 1-4
SCALES: 1"=50'H 1"=5'V



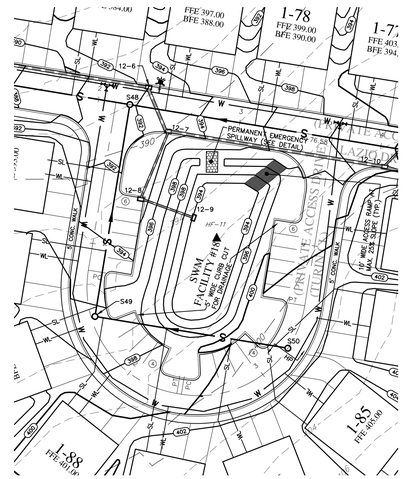
22-4 TO 22-1
SCALES: 1"=50'H 1"=5'V



20-4 TO 20-1
SCALES: 1"=50'H 1"=5'V



12-9 TO 12-7
SCALES: 1"=50'H 1"=5'V



PLAN VIEW
SCALE: 1" = 50'

GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

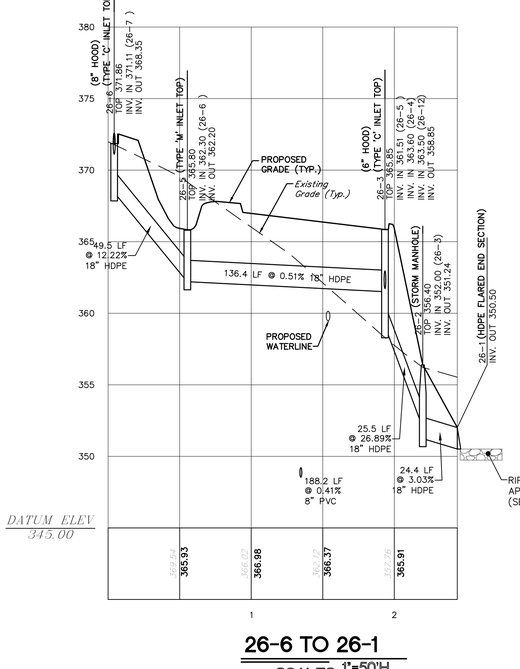
SIENNA

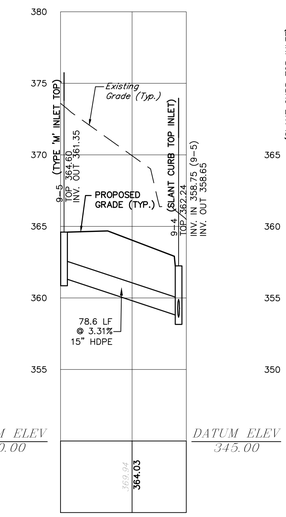
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

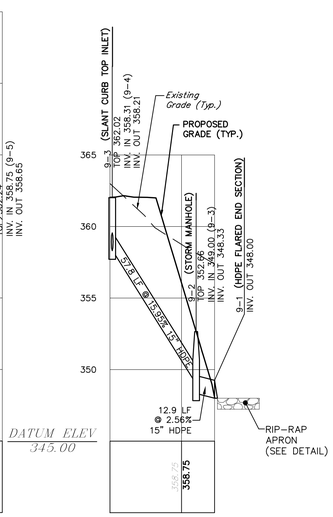
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. Y:\2019\319582.dgn\319582\STORM SEWER PROFILES.dwg
FILE : Y:\2019\319582\Final\STORM SEWER PROFILES 2.dwg

PLAN VIEW

SCALE: 1" = 50'







100 50 10 0 10 50 100
GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.sph\319582\ FILE : dwg\Plans\Pre-Fina\ 58-PRO-STORM 3.dwg
SHEET 59 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
ALPHA CONSULTING ENGINEERS, INC.
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM

SEAL

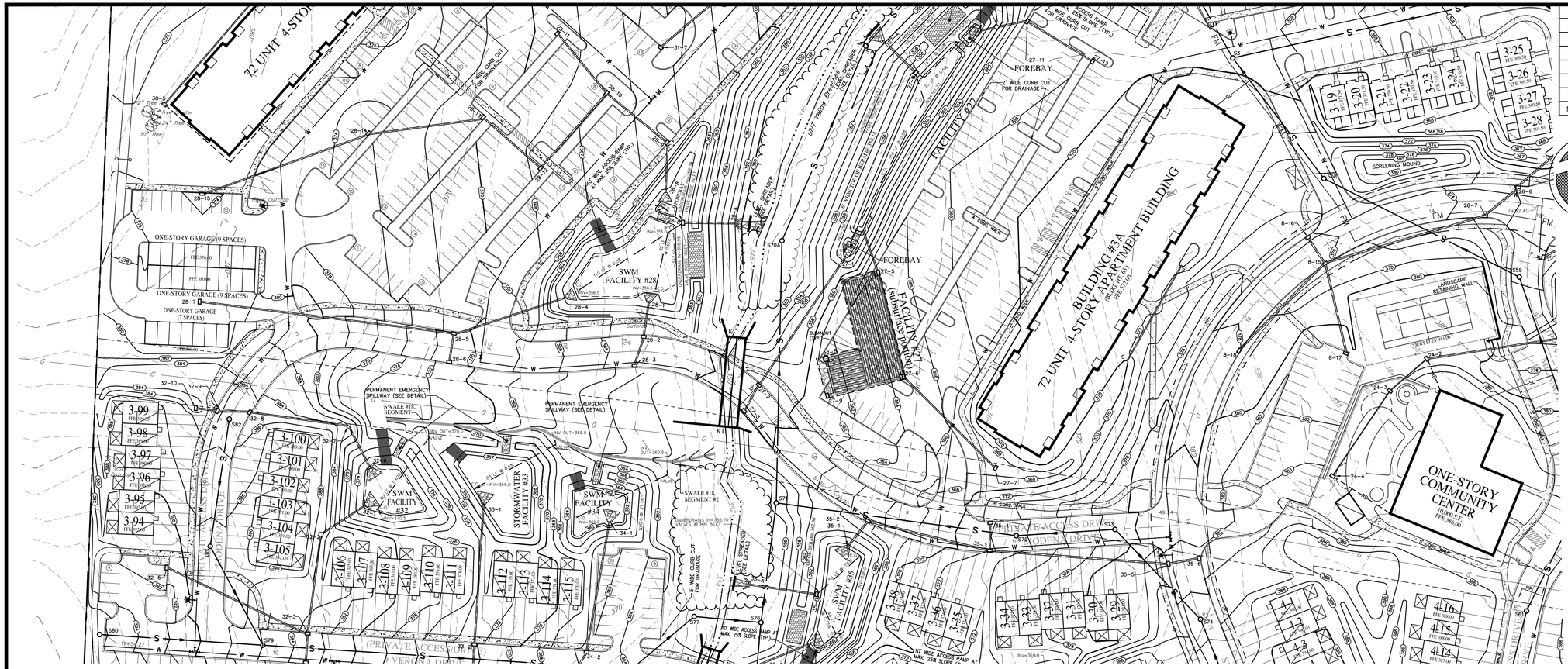
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

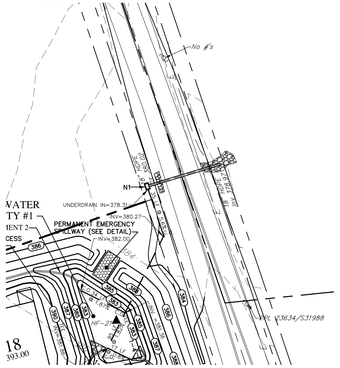
STORM SEWER PROFILES

FOR

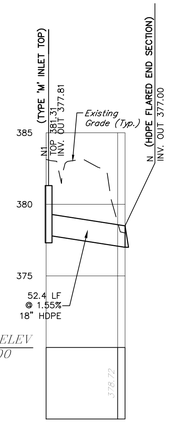
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

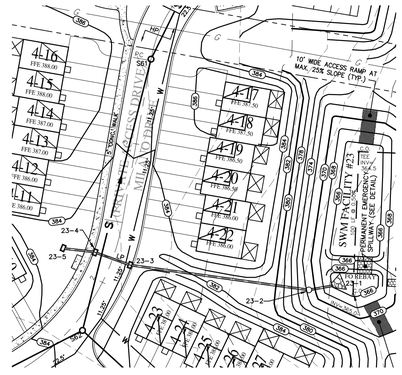

72 UNIT 4-STORY APARTMENT BUILDING
BUILDING #3A
(BUILDING #3 OMITTED)
FFE 372.00
FACILITY #27
(substitute portion)
FOREBAY
SWM FACILITY #28
SWM FACILITY #32
SWM FACILITY #33
SWM FACILITY #34
SWM FACILITY #35
STORMWATER FACILITY #31
ONE-STORY COMMUNITY CENTER
(10,000 S.F.)
FFE 380.00
ONE-STORY GARAGE (9 SPACES)
FFE 376.00
FFE 380.00
ONE-STORY GARAGE (9 SPACES)
ONE-STORY GARAGE (7 SPACES)
FFE 380.00
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
SWALE #18, SEGMENT 1
SWALE #18, SEGMENT #2
(UNDERDRAIN: INV=355.75 - 4" PVC W/ VALVES WITHIN INLET)
PRIVATE ACCESS DRIVE
(PRIVATE ACCESS DRIVE)
VERONA DRIVE
GARDEN DRIVE
5' WIDE CURB CUT FOR DRAINAGE
2' WIDE CURB CUT FOR DRAINAGE
10' WIDE ACCESS RAMP AT MAX. 25% SLOPE (TYP.)
10' WIDE ACCESS RAMP AT MAX. 25% SLOPE
4" CONC. WALK
6" CONC. WALK
SCREENING MOUND
LANDSCAPE RETAINING WALL
CULVERT ELEV 361.00
CLEANOUT (TYP.)
UNIT HEAVY BROOMED
3-99 FFE 376.00
3-98 FFE 376.00
3-97 FFE 376.00
3-96 FFE 376.00
3-95 FFE 376.00
3-94 FFE 376.00
3-100 FFE 380.00
3-101 FFE 380.00
3-102 FFE 380.00
3-103 FFE 380.00
3-104 FFE 380.00
3-105 FFE 380.00
3-106 FFE 369.00
3-107 FFE 369.00
3-108 FFE 369.00
3-109 FFE 369.00
3-110 FFE 369.00
3-111 FFE 369.00
3-112 FFE 372.00
3-113 FFE 372.00
3-114 FFE 372.00
3-115 FFE 372.00
3-38 FFE 369.00
3-37 FFE 369.00
3-36 FFE 369.00
3-35 FFE 369.00
3-34 FFE 369.00
3-33 FFE 369.00
3-32 FFE 369.00
3-31 FFE 369.00
3-30 FFE 369.00
3-29 FFE 369.00
3-19 FFE 376.00
3-20 FFE 376.00
3-21 FFE 376.00
3-22 FFE 376.00
3-23 FFE 376.00
3-24 FFE 376.00
3-25 FFE 369.70
3-26 FFE 369.70
3-27 FFE 369.70
3-28 FFE 369.70
4-1 FFE 380.00
4-2 FFE 380.00
4-3 FFE 380.00
4-16 FFE 380.00
4-15 FFE 380.00
4-14 FFE 380.00
S70
S71
S72
S73
S74
S75
S76
S77
S78
S79
S80
S81
S82
K1
K2
K3
K4
K5
K6
K7
K8
K9
K10
K11
K12
K13
K14
K15
K16
K17
K18
K19
K20
K21
K22
K23
K24
K25
K26
K27
K28
K29
K30
K31
K32
K33
K34
K35
K36
K37
K38
K39
K40



PLAN VIEW
SCALE: 1" = 50'

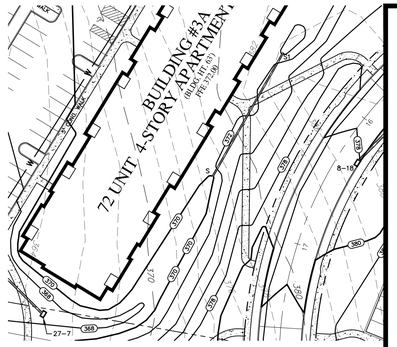


N1 TO N
SCALES: 1"=50'H 1"=5'V

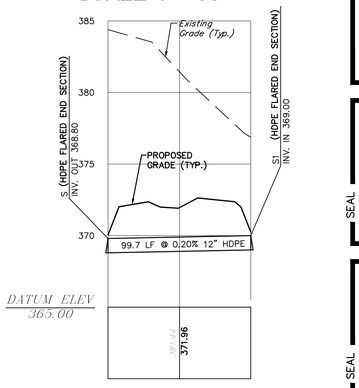


PLAN VIEW
SCALE: 1" = 50'

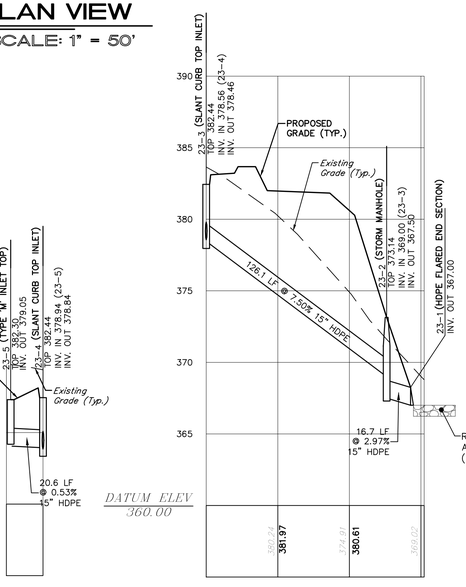
PLAN VIEW
SCALE: 1" = 50'



PLAN VIEW
SCALE: 1" = 50'

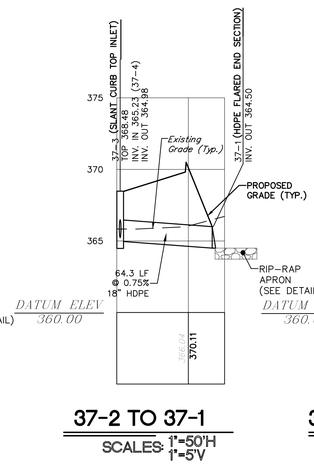


S1 TO S
SCALES: 1"=50'H 1"=5'V

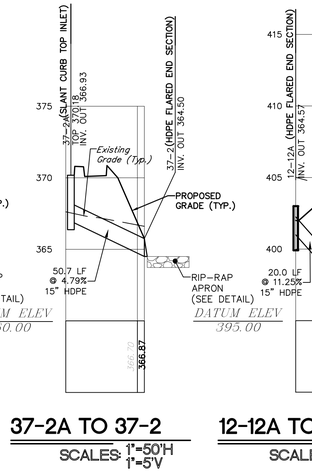


23-5 TO 23-4
SCALES: 1"=50'H 1"=5'V

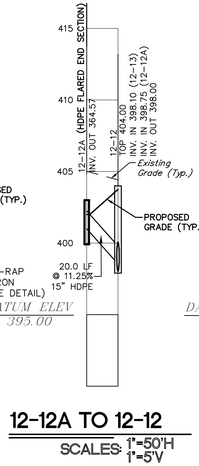
23-3 TO 23-2
SCALES: 1"=50'H 1"=5'V



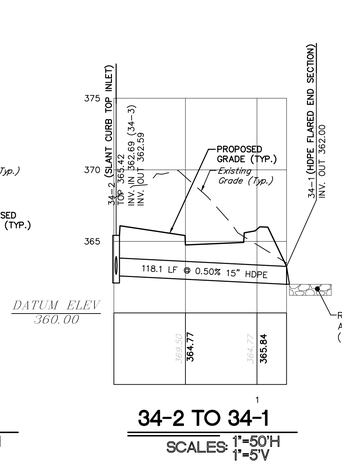
37-2 TO 37-1
SCALES: 1"=50'H 1"=5'V



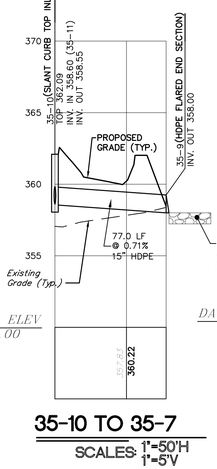
37-2A TO 37-2
SCALES: 1"=50'H 1"=5'V



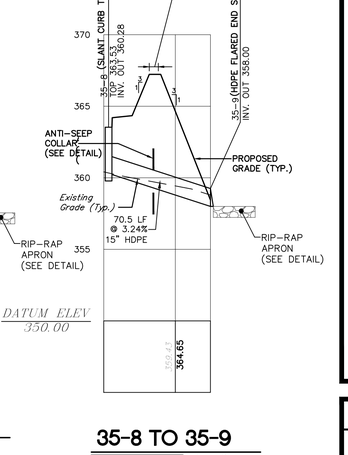
12-12A TO 12-12
SCALES: 1"=50'H 1"=5'V



34-2 TO 34-1
SCALES: 1"=50'H 1"=5'V



35-10 TO 35-7
SCALES: 1"=50'H 1"=5'V



35-8 TO 35-9
SCALES: 1"=50'H 1"=5'V

100 50 10 0 10 50 100
GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
ALPHA CONSULTING ENGINEERS, INC.
WWW.ALPHAGEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. : Y:\2019\319582.sph\319582\dwg\Plans\Pre-Final\60-PRO-STORM S.dwg
FILE :
SHEET 61 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

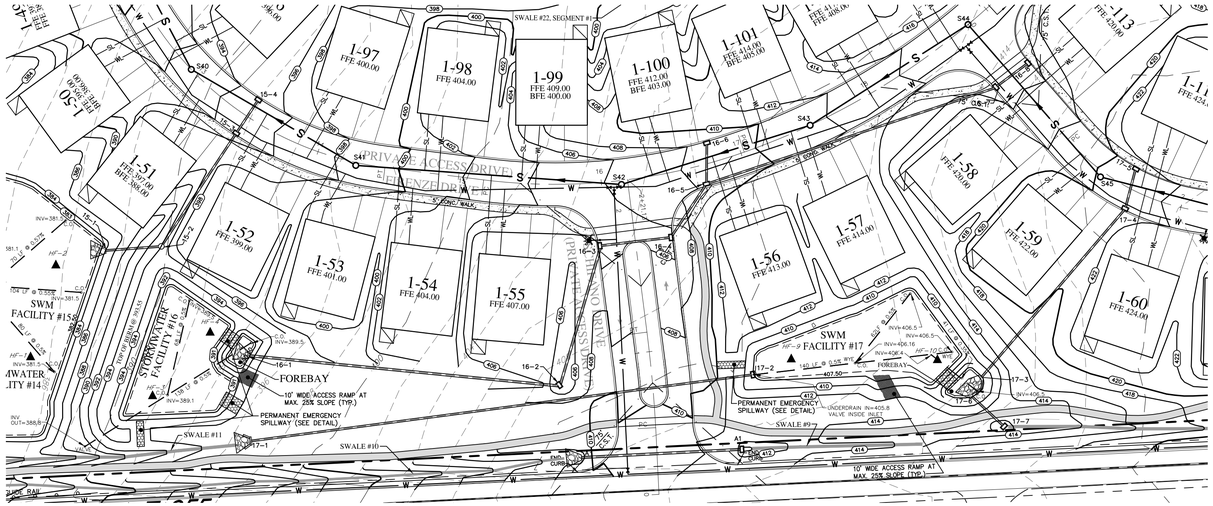
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

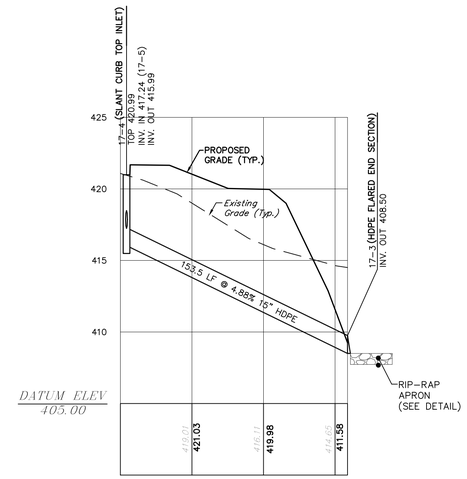
FOR

SIENNA

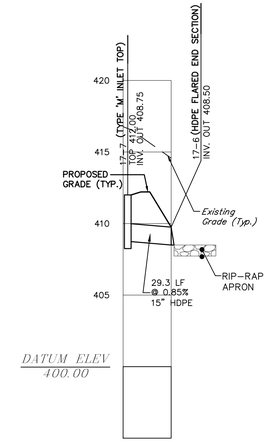
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA



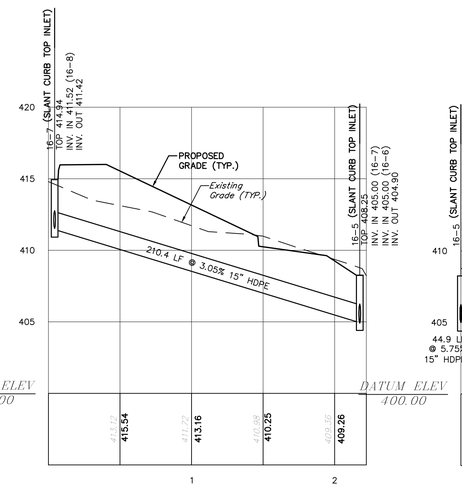
PLAN VIEW
SCALE: 1" = 50'



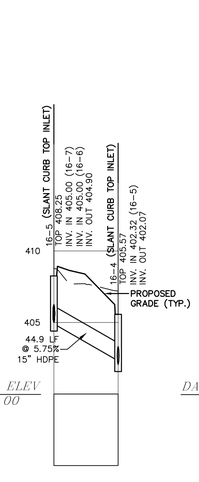
17-4 TO 17-3
SCALES: 1"=50'H 1"=5'V



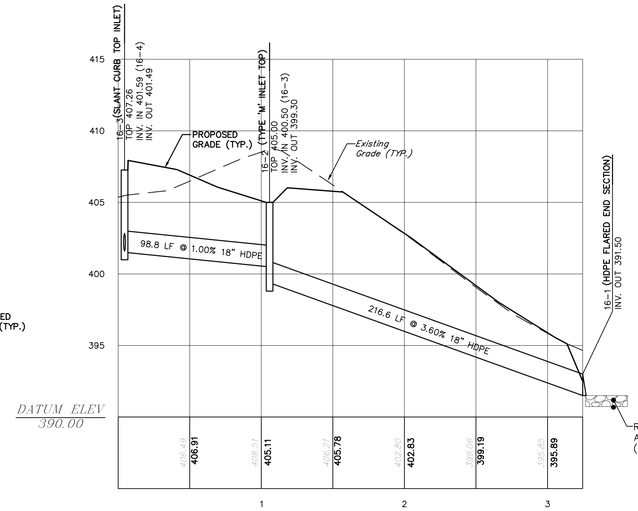
17-7 TO 17-6
SCALES: 1"=50'H 1"=5'V



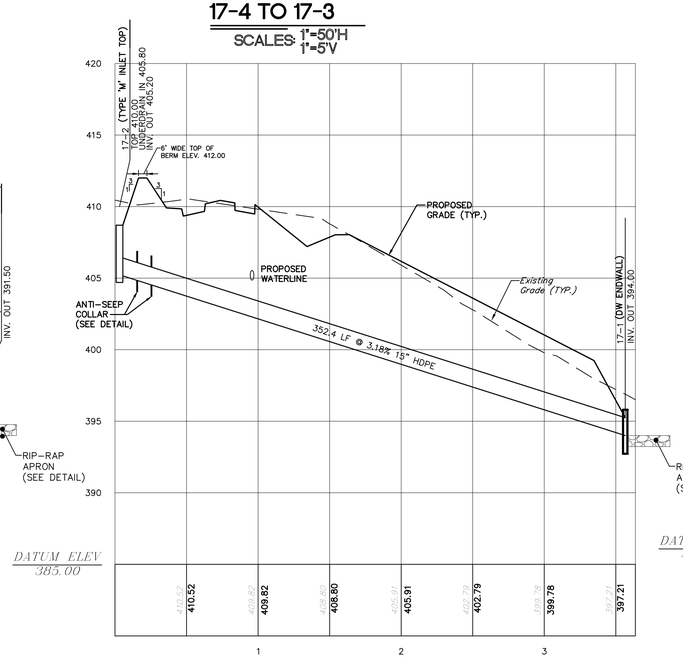
16-7 TO 16-5
SCALES: 1"=50'H 1"=5'V



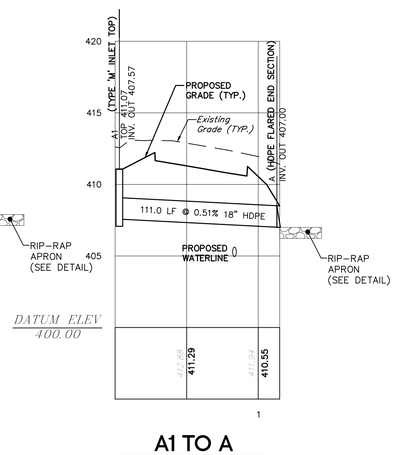
16-5 TO 16-4
SCALES: 1"=50'H 1"=5'V



16-3 TO 16-1
SCALES: 1"=50'H 1"=5'V



17-2 TO 17-1
SCALES: 1"=50'H 1"=5'V



A1 TO A
SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE
100 50 10 0 10 50 100
1" = 50'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sv1.fwd
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\dwg\Plans\Final\61-PRO-STORM_6.dwg
FILE :

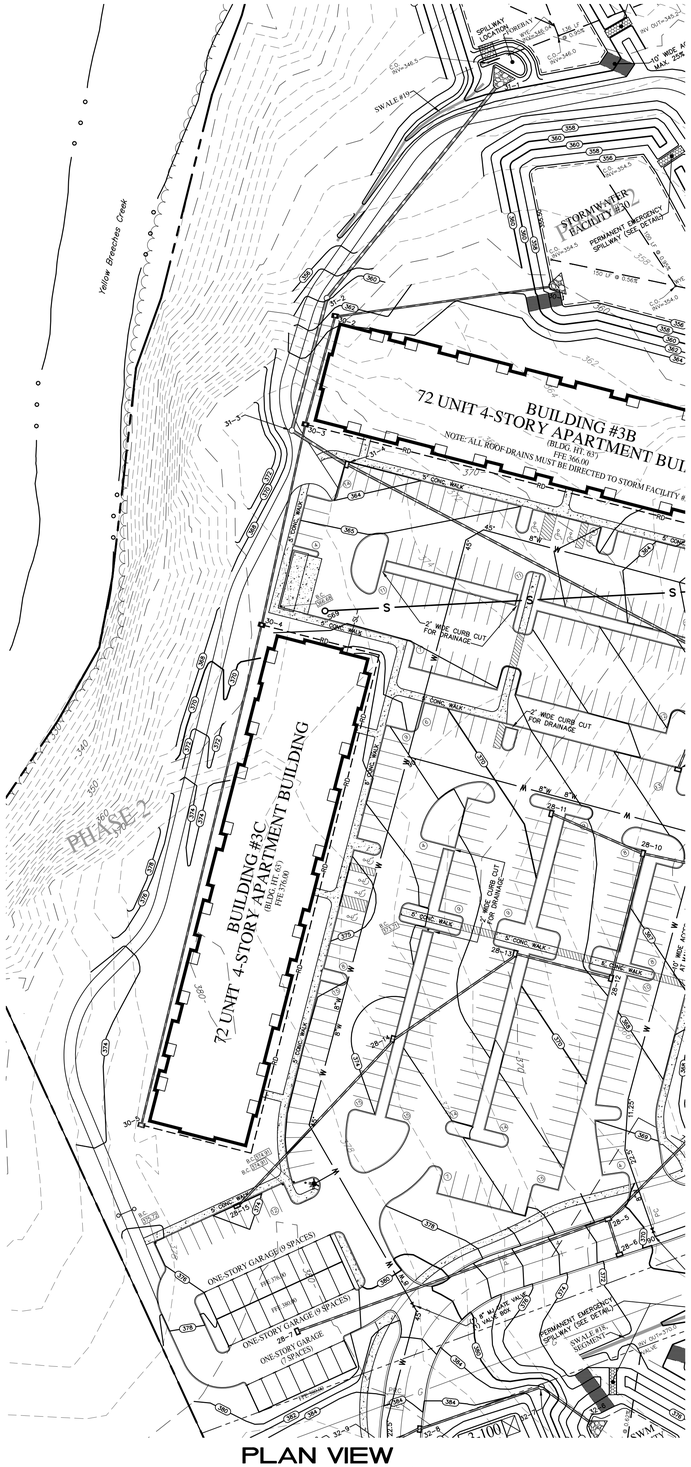
SHEET 62 of 89

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

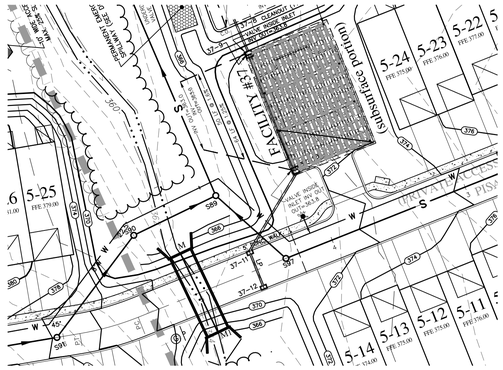
DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

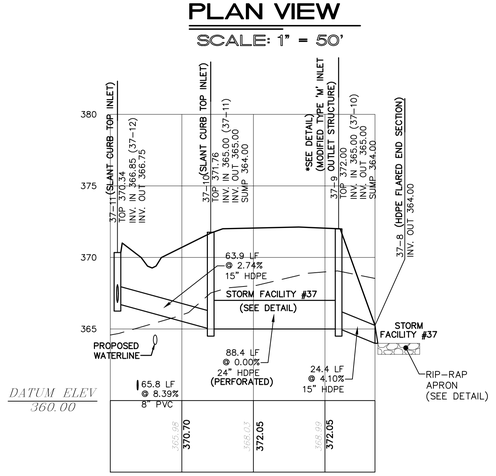
SEAL



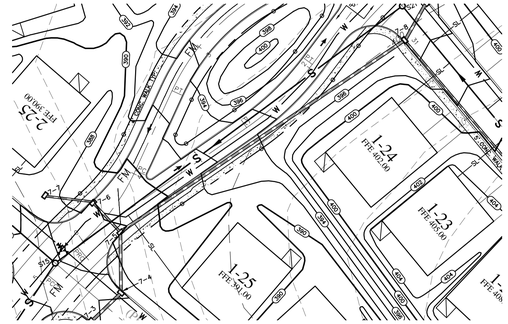
PLAN VIEW
SCALE: 1" = 50'



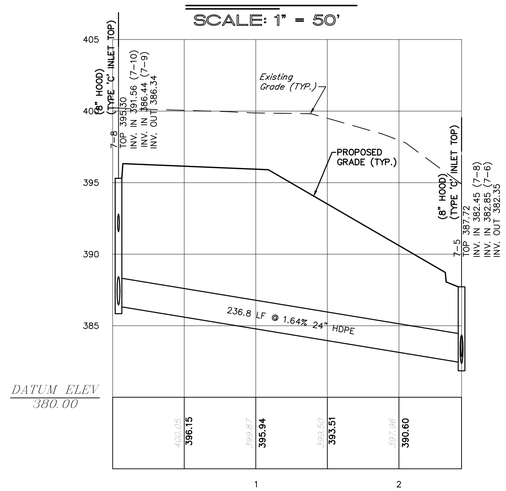
PLAN VIEW
SCALE: 1" = 50'



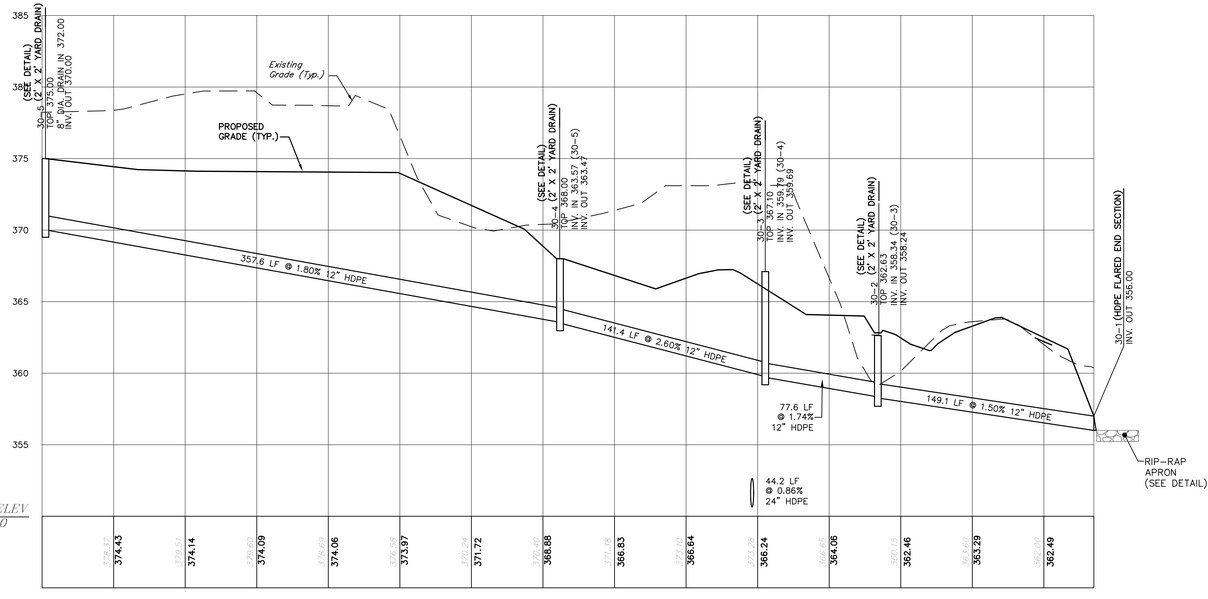
37-11 to 37-8
SCALE: 1" = 50'



PLAN VIEW
SCALE: 1" = 50'



7-8 to 7-5
SCALE: 1" = 50'



30-5 TO 30-1 (ROOF DRAINS COLLECTOR)
SCALES: 1"=50'H
1"=5'V

GRAPHIC SCALE
100 50 10 0 10 50 100
1" = 50'

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. Y:\2019\319582.sgn\319582\FILE: dwg\Plans\Pre-Prel\62-PRE-STORM 7.dwg
SHEET 63 of 89

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

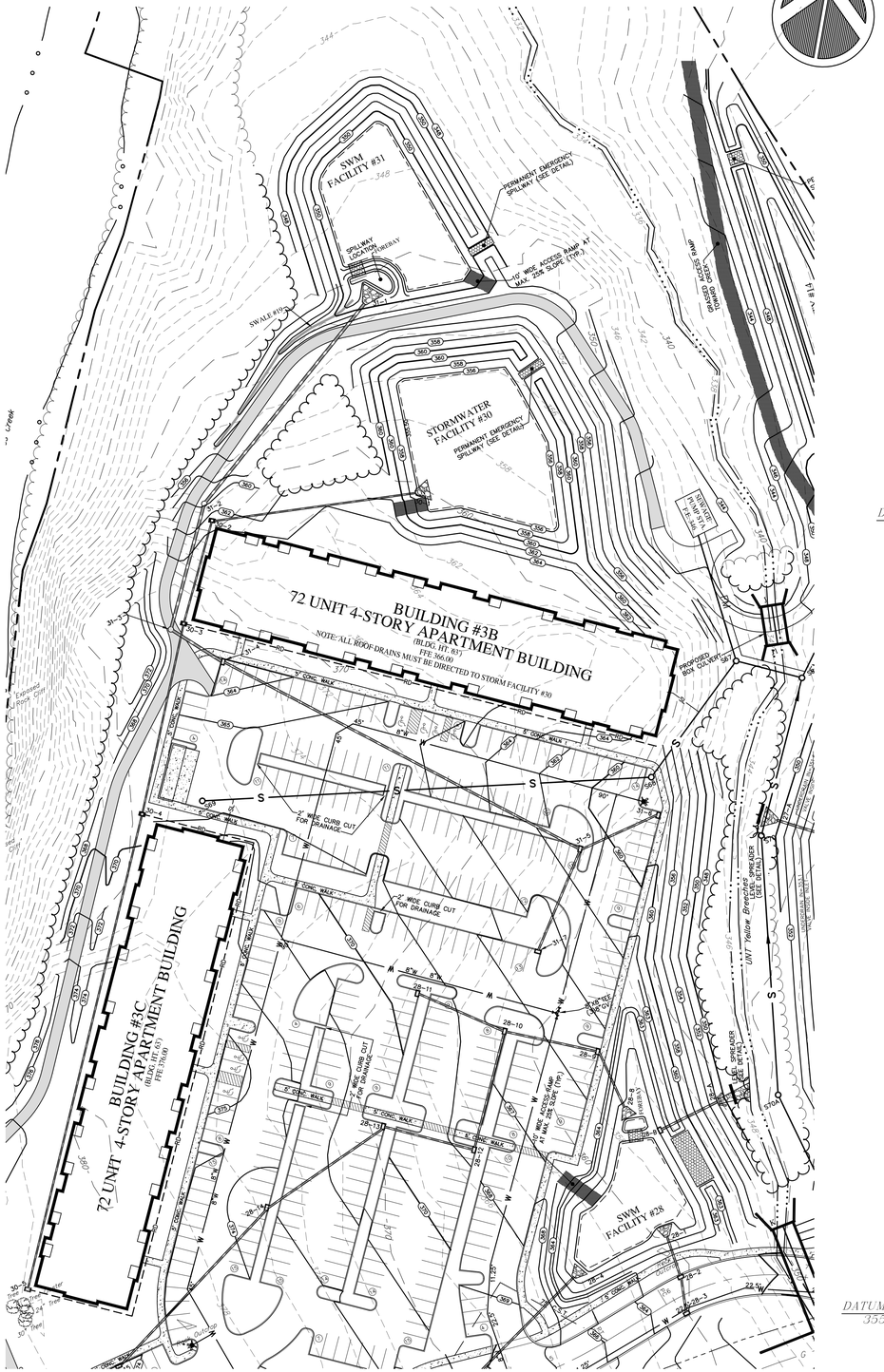
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

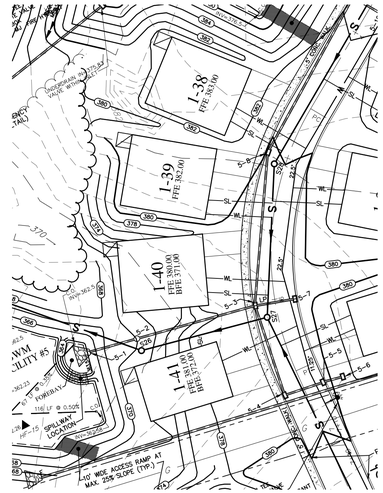
FOR

SIENNA

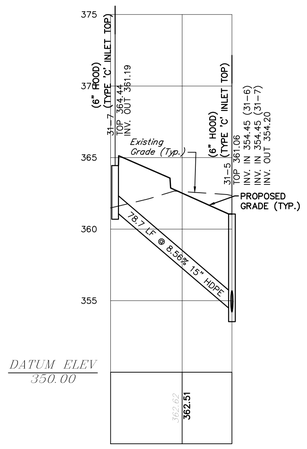
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA



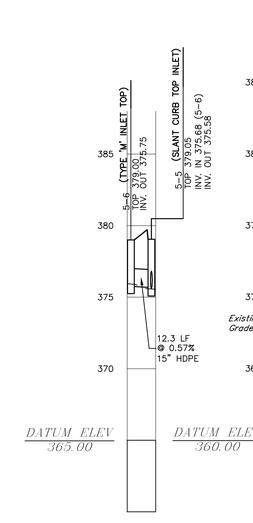
PLAN VIEW
SCALE: 1" = 50'



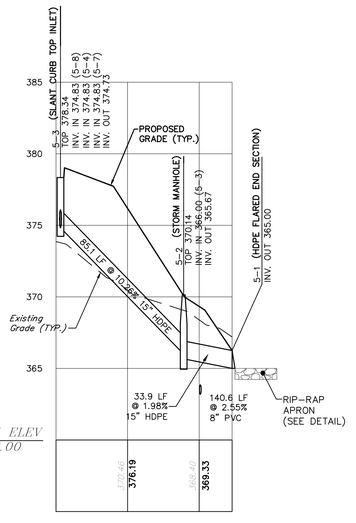
PLAN VIEW
SCALE: 1" = 50'



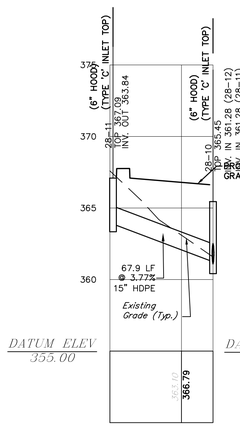
31-7 TO 31-5
SCALES: 1"=50'H 1"=5'V



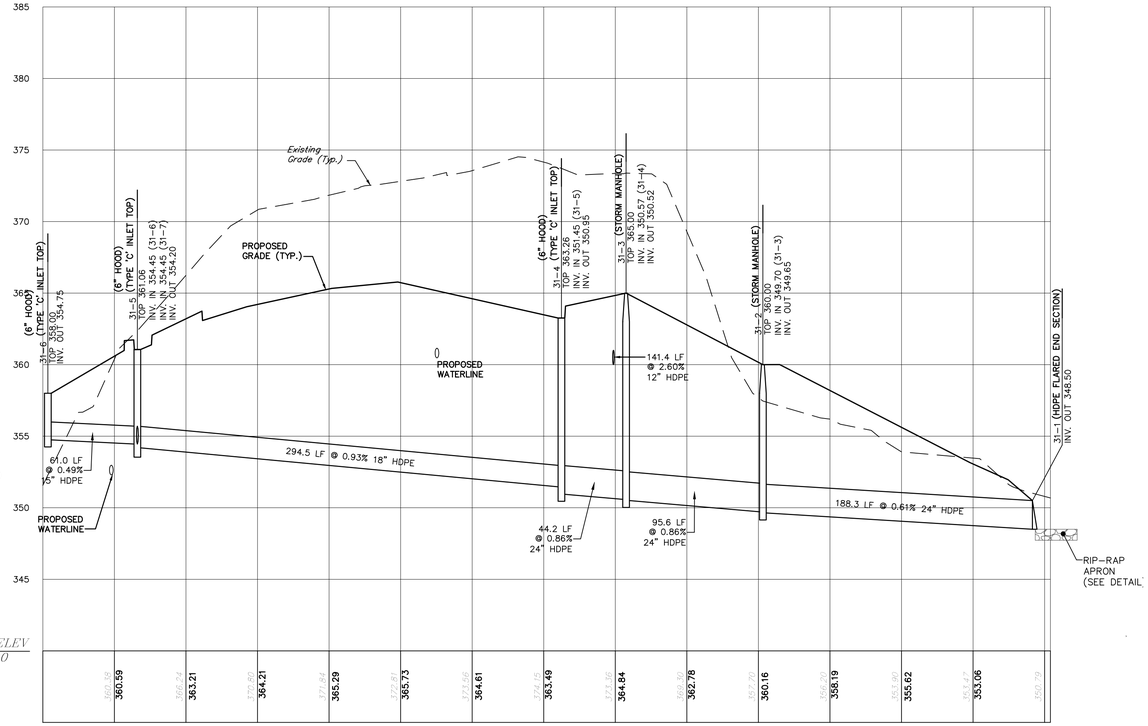
5-6 TO 5-5
SCALES: 1"=50'H 1"=5'V



5-3 TO 5-1
SCALES: 1"=50'H 1"=5'V



28-11 TO 28-10
SCALES: 1"=50'H 1"=5'V

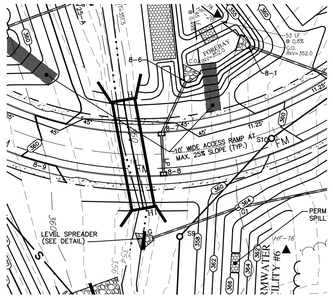


31-6 TO 31-1
SCALES: 1"=50'H 1"=5'V

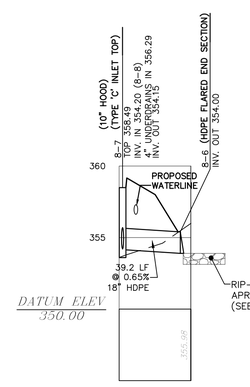
GRAPHIC SCALE
1" = 50'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. Z:\2019\319582.dgn\319582\
FILE : dwg\Plans\Pre-Final\ 64-PRO-STORM P.dwg
SHEET 64 of 89

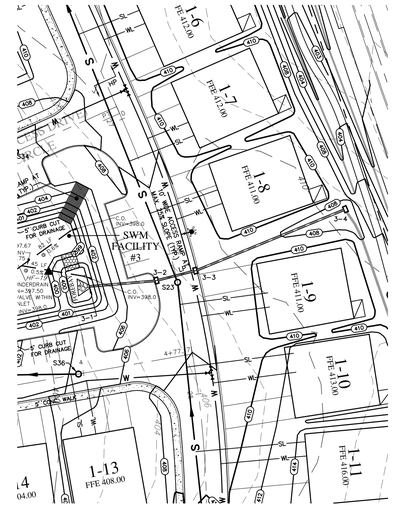
PLAN VIEW
SCALE: 1" = 50'



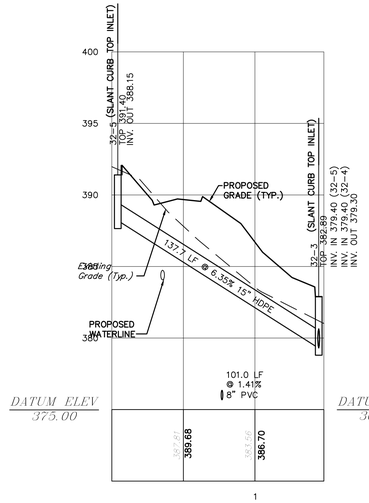
PLAN VIEW
SCALE: 1" = 50'



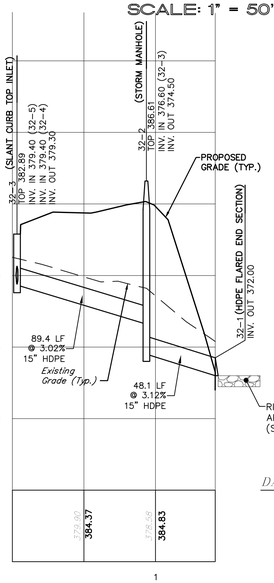
8-7 TO 8-6
SCALES: 1"=50'H 1"=5'V



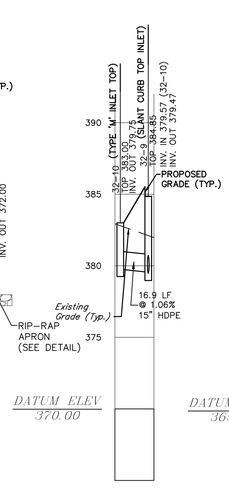
PLAN VIEW
SCALE: 1" = 50'



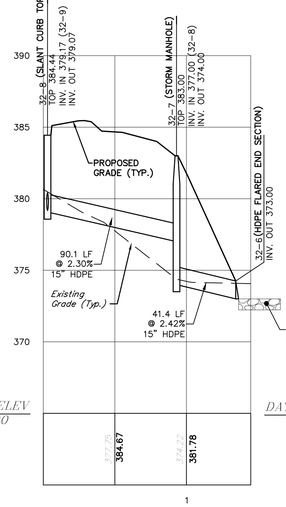
32-5 TO 32-3
SCALES: 1"=50'H 1"=5'V



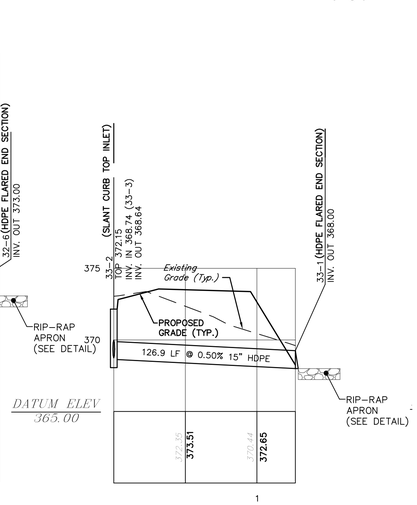
32-3 TO 32-1
SCALES: 1"=50'H 1"=5'V



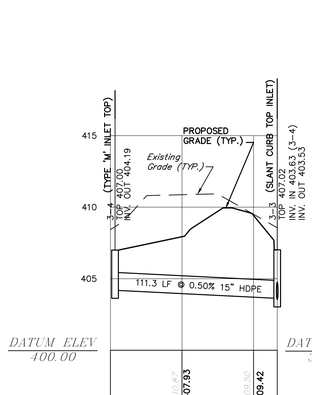
32-10 TO 32-9
SCALES: 1"=50'H 1"=5'V



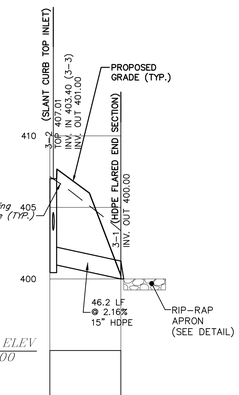
32-8 TO 32-6
SCALES: 1"=50'H 1"=5'V



33-2 TO 33-1
SCALES: 1"=50'H 1"=5'V



3-4 TO 3-3
SCALES: 1"=50'H 1"=5'V



3-2 TO 3-1
SCALES: 1"=50'H 1"=5'V

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

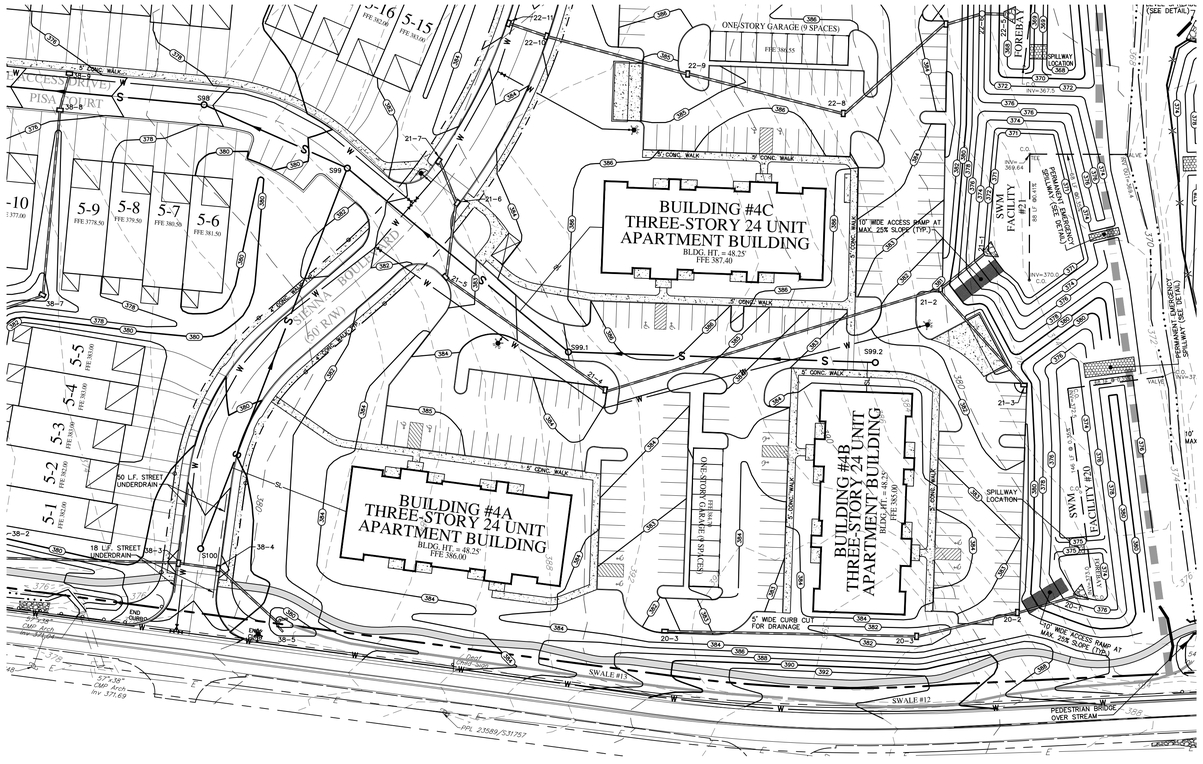
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. Y:\2019\319582.sdn\319582\64-PRO-STORM 2.dwg
FILE : dwg Vitars\Pro-Final\

SHEET 65 & 89

GRAPHIC SCALE 1" = 50'

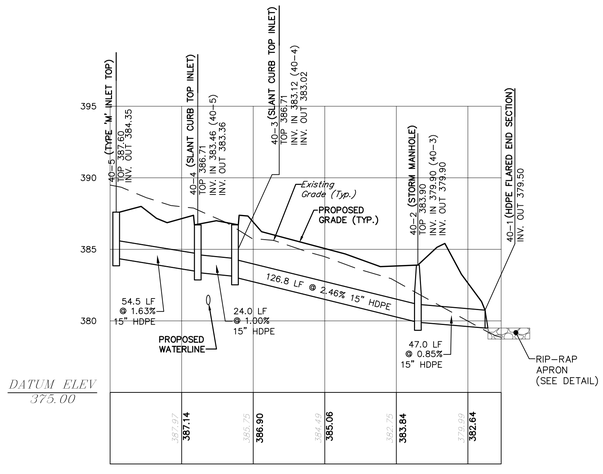


PLAN VIEW

SCALE: 1" = 50'

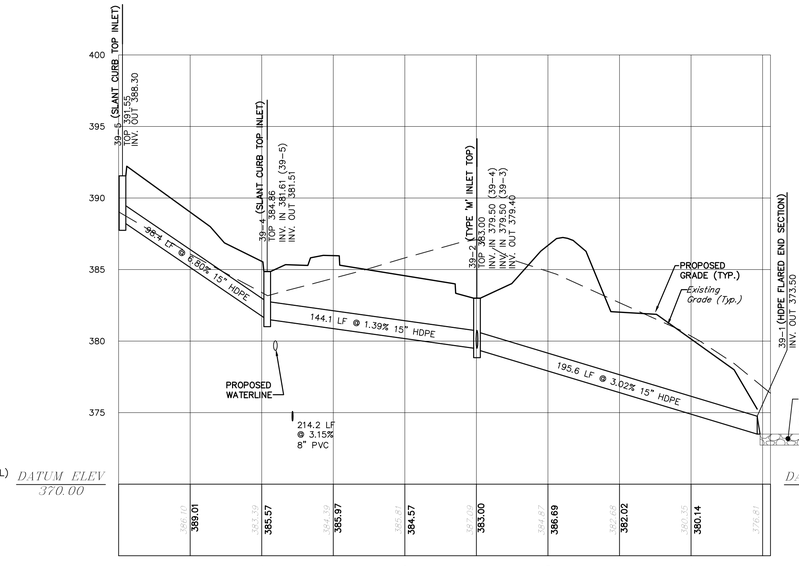
PLAN VIEW

SCALE: 1" = 50'



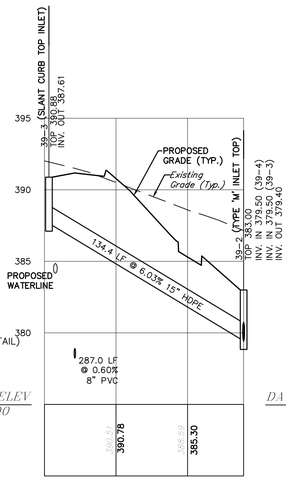
40-5 TO 40-1

SCALES: 1"=50'H 1"=5'V



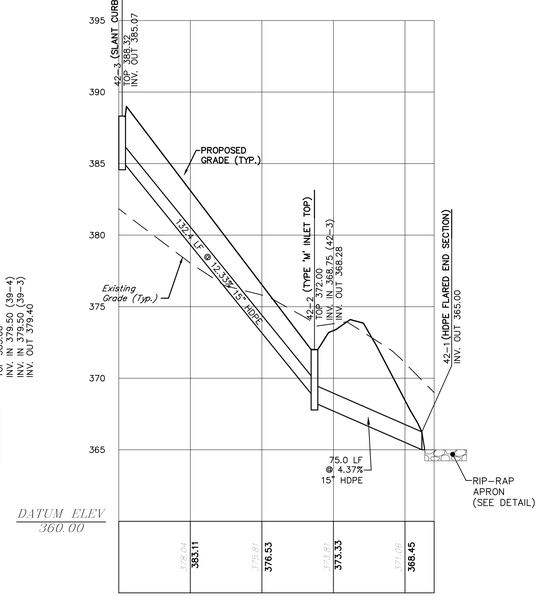
39-5 TO 39-1

SCALES: 1"=50'H 1"=5'V



39-3 TO 39-2

SCALES: 1"=50'H 1"=5'V



42-3 TO 42-1

SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD. P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

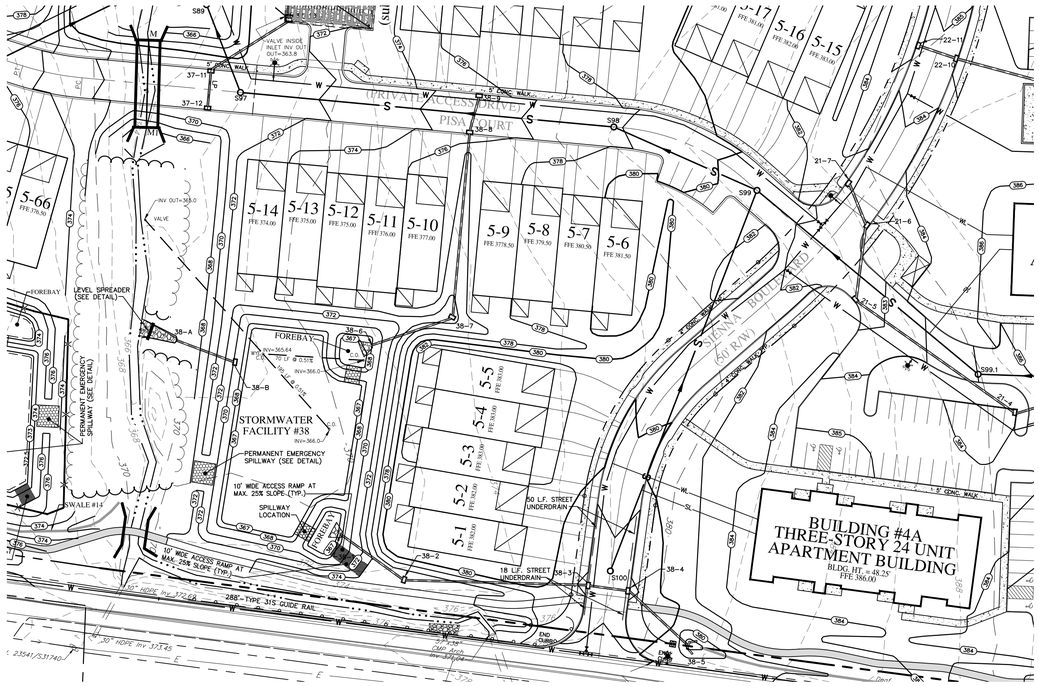
STORM SEWER PROFILES

FOR

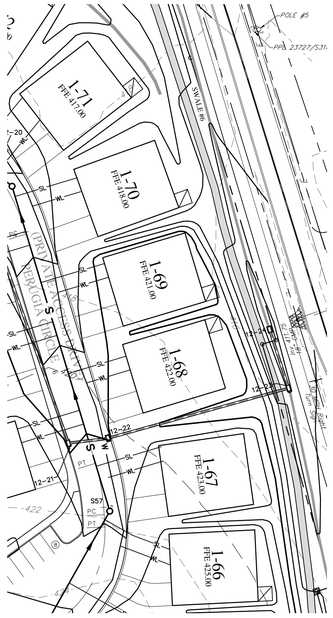
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

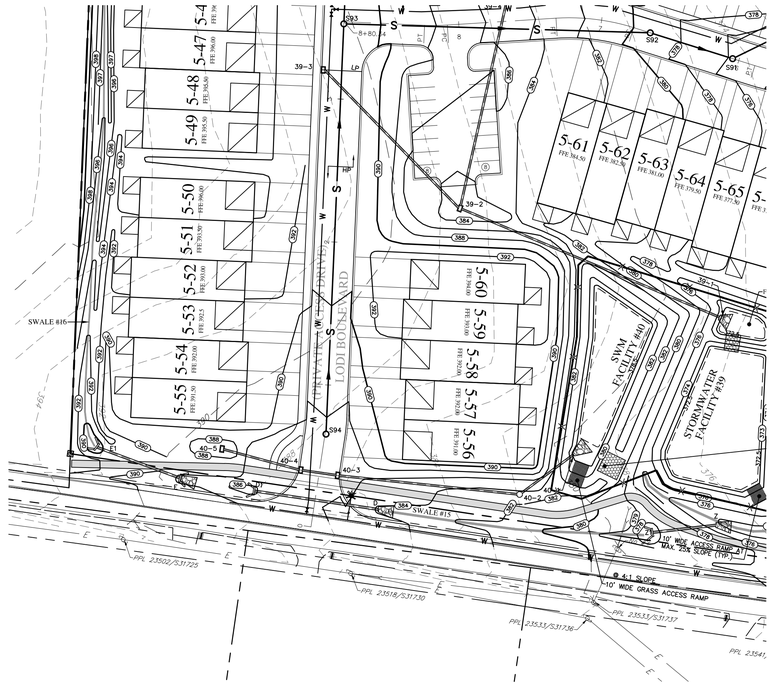
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.spf\319582\dwg\Plans\Pre-Fin\65-PRO STORM 14.dwg
FILE :

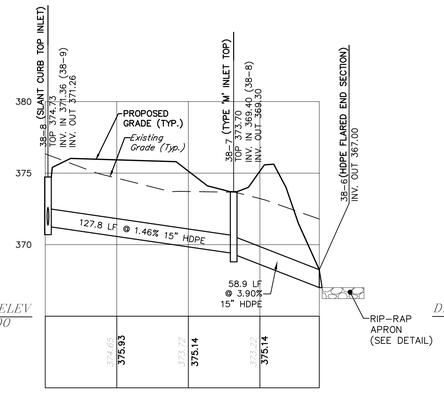


PLAN VIEW
SCALE: 1" = 50'

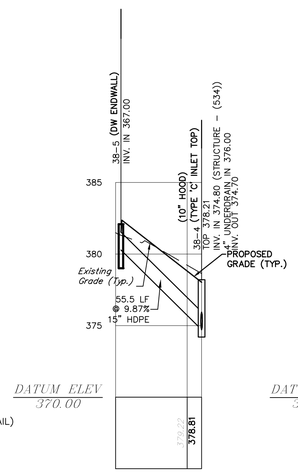


PLAN VIEW
SCALE: 1" = 50'

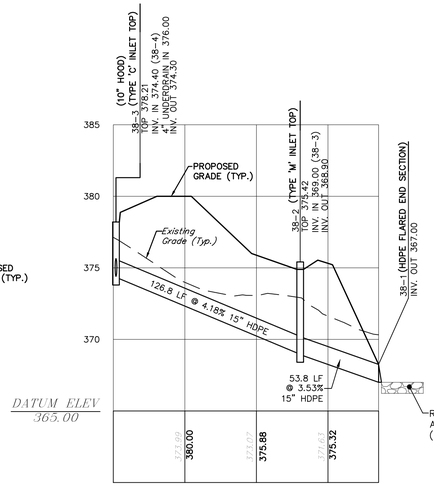




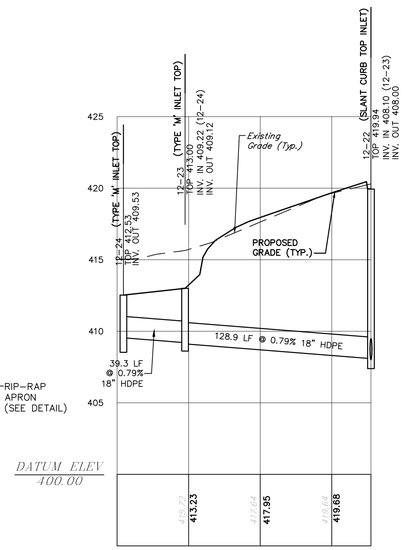
38-8 TO 38-6
SCALES: 1"=50'H
1"=5'V



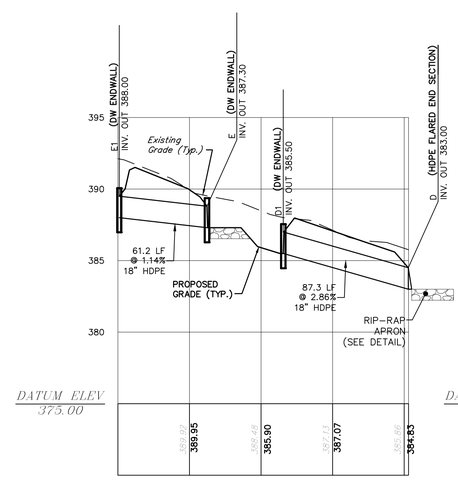
38-5 TO 38-4
SCALES: 1"=50'H
1"=5'V



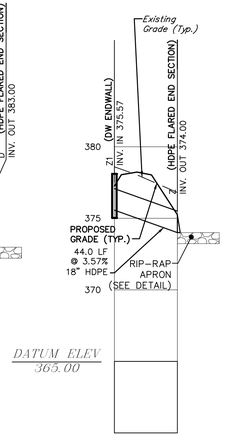
38-3 TO 38-1
SCALES: 1"=50'H
1"=5'V



12-24 TO 12-22
SCALES: 1"=50'H
1"=5'V



E1 TO D
SCALES: 1"=50'H
1"=5'V



Z1 TO Z
SCALES: 1"=50'H
1"=5'V

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sub\319582sur\field
SCALE : 1" = 50'
DWG. FILE : Y:\2019\319582.dgn\319582\66-PRO-STORM 11.dwg
SHEET 67 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

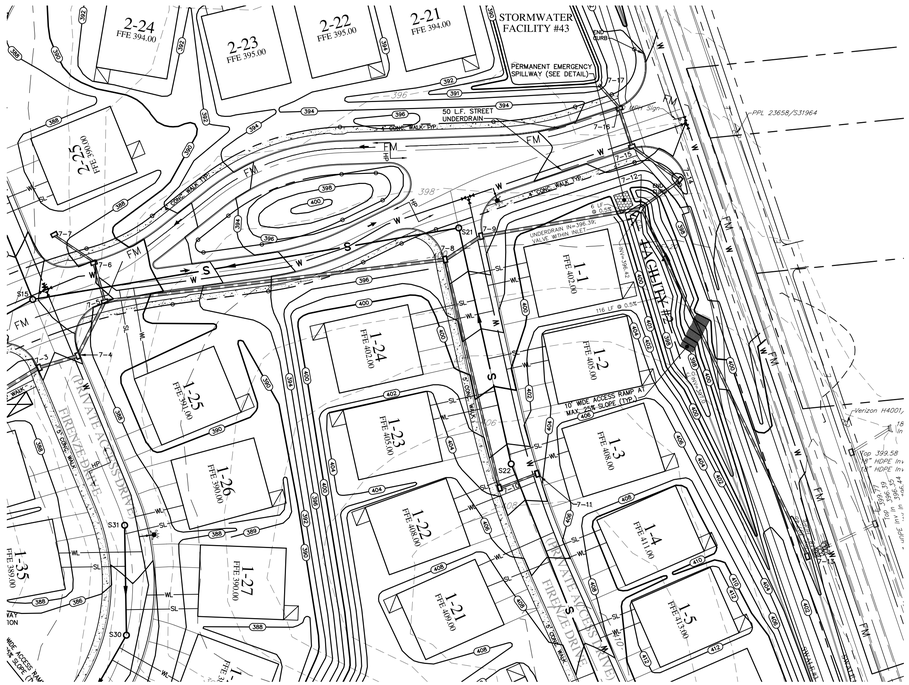
DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

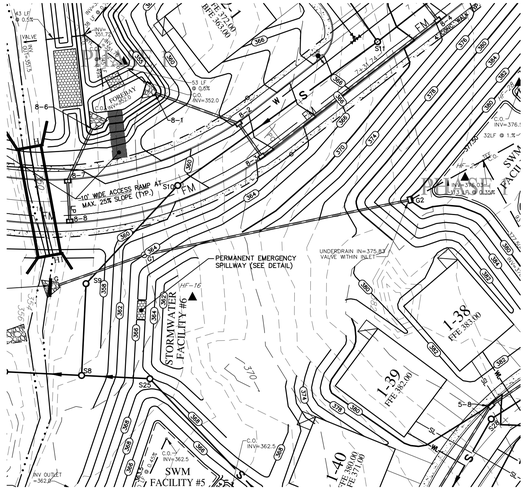
SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
STORM SEWER PROFILES
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

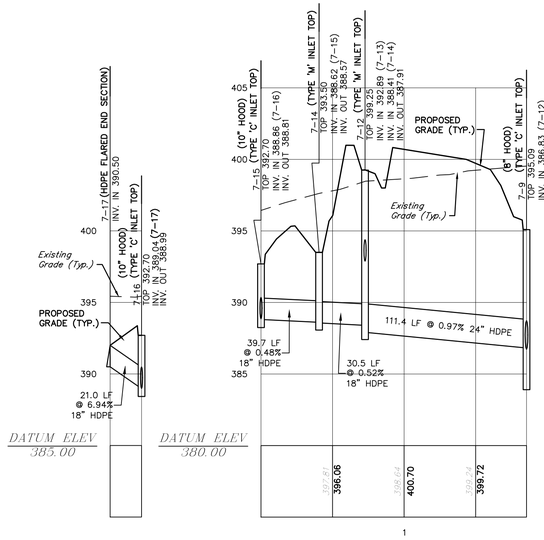


PLAN VIEW
SCALE: 1" = 50'

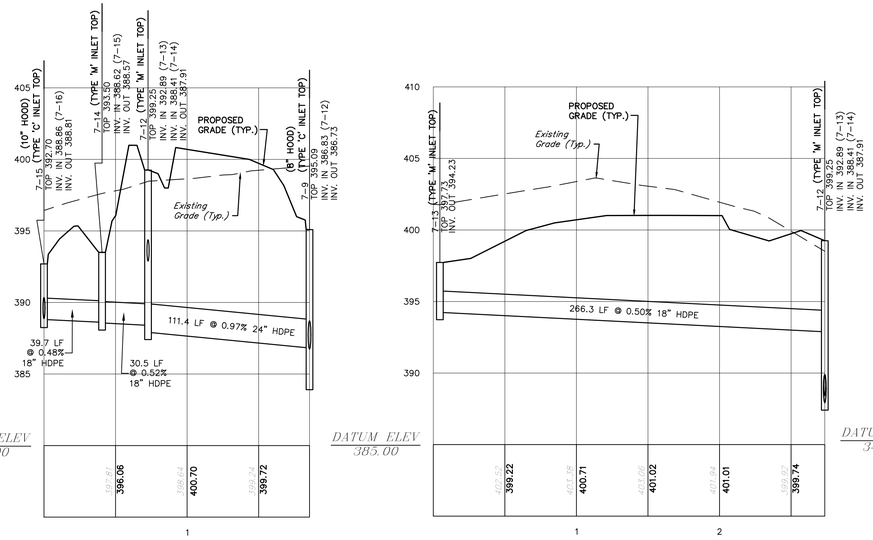


PLAN VIEW
SCALE: 1" = 50'

PLAN VIEW
SCALE: 1" = 50'

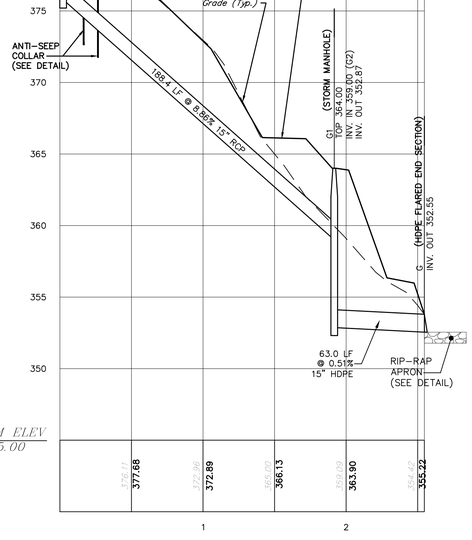


7-17 TO 7-16
SCALES: 1"=50'H 1"=5'V

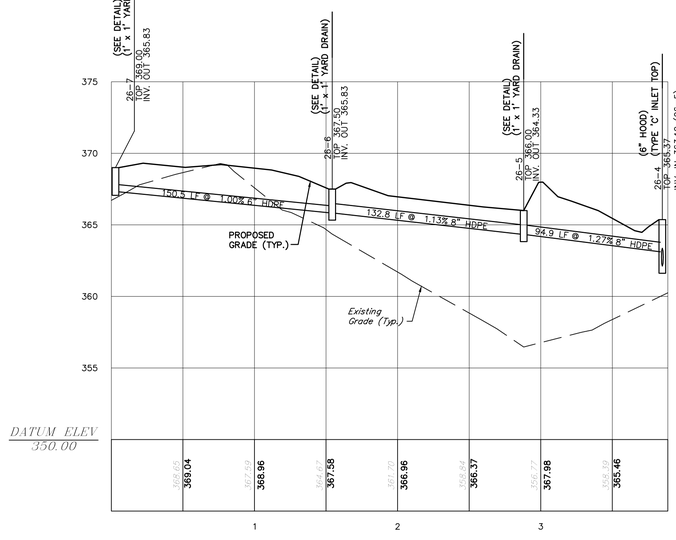


7-15 TO 7-9
SCALES: 1"=50'H 1"=5'V

7-13 TO 7-12
SCALES: 1"=50'H 1"=5'V



G2 TO G
SCALES: 1"=50'H 1"=5'V

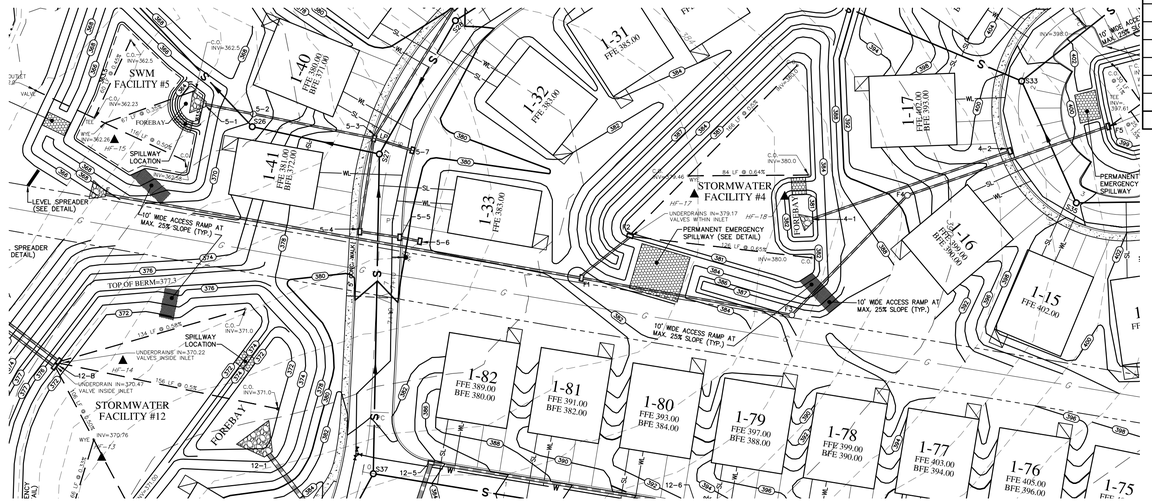


26-7 TO 26-4
SCALES: 1"=50'H 1"=5'V

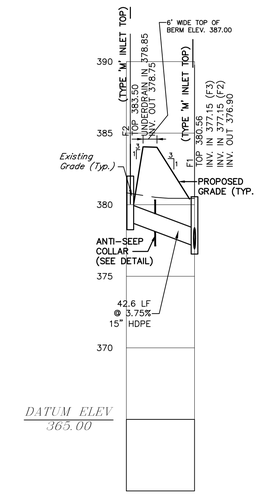
GRAPHIC SCALE
100 50 10 0 10 50 100
1" = 50'

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\FILE : dwg\Plans\Pre-Final\67-PRO-STORM 12.dwg

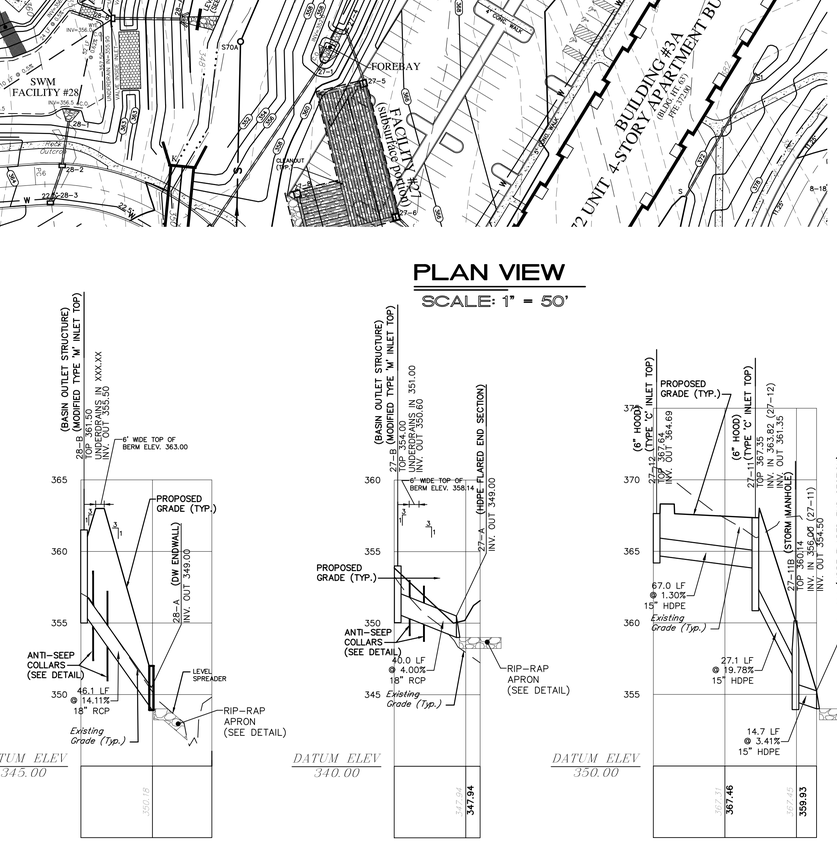
SHEET 68 of 89



PLAN VIEW
SCALE: 1" = 50'



F2 TO F
SCALES: 1"=50'H 1"=5'V

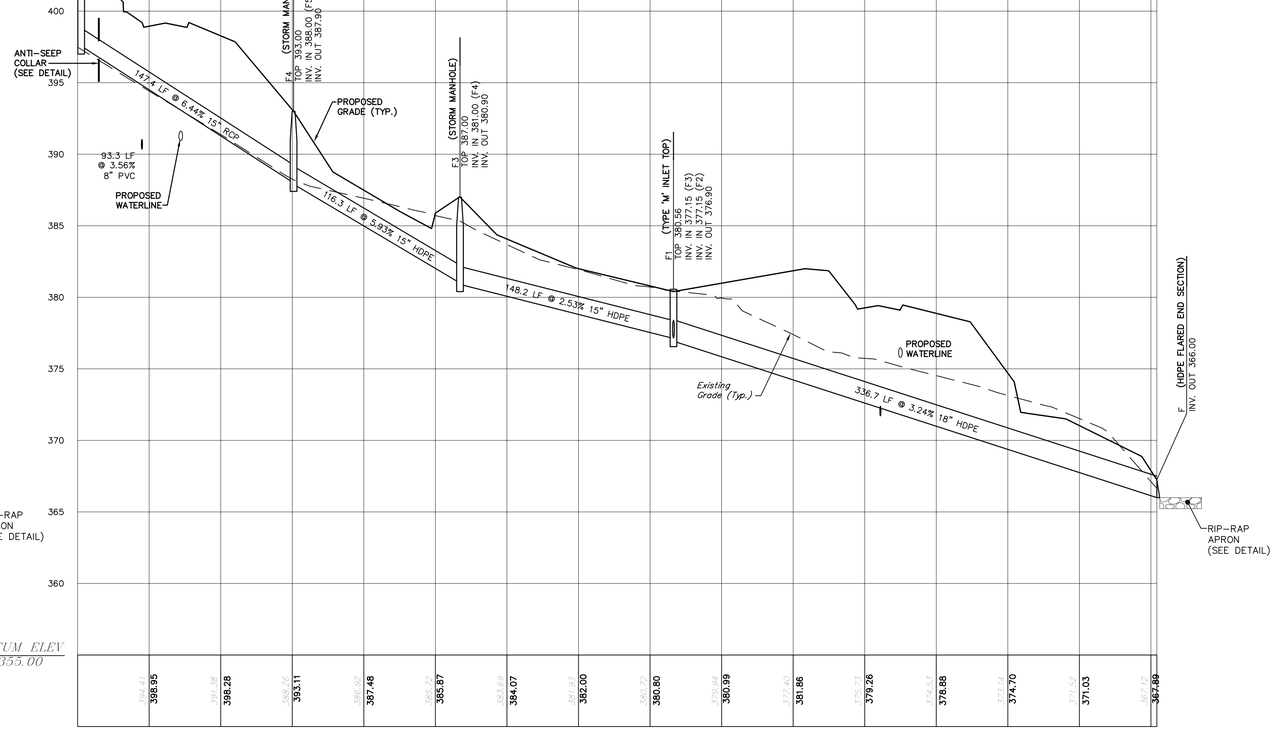


PLAN VIEW
SCALE: 1" = 50'

28-B TO 28-A
SCALES: 1"=50'H 1"=5'V

27-B TO 27-A
SCALES: 1"=50'H 1"=5'V

27-12 TO 27-11A
SCALES: 1"=50'H 1"=5'V



F5 TO F
SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING●ENGINEERING●SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
ALPHA CONSULTING ENGINEERS, INC.
WWW.ALPHAGEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.su\319582su\field
SCALE : 1" = 50'
DWG. Y:\2019\319582.sp\319582\Engineering\Plans\Pre-Plan\68-PRE-STORM 13.dwg
FILE :
SHEET 69 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

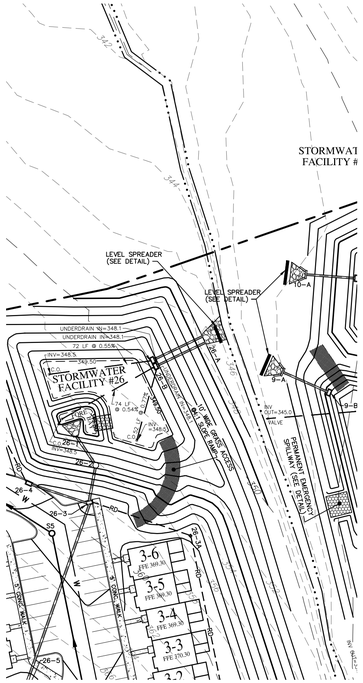
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORM SEWER PROFILES

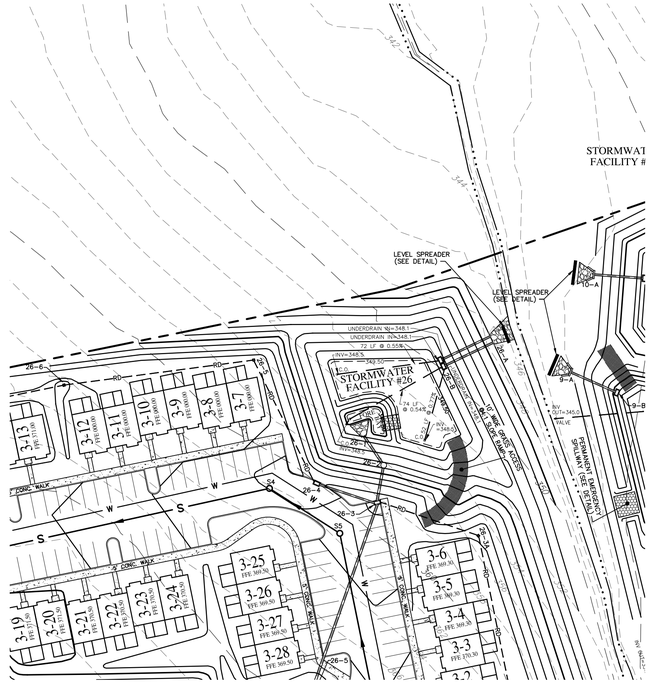
FOR

SIENNA

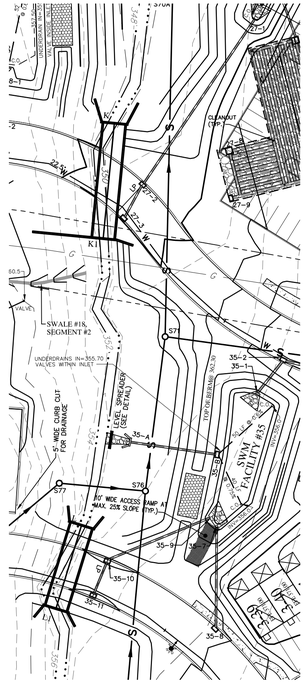
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA



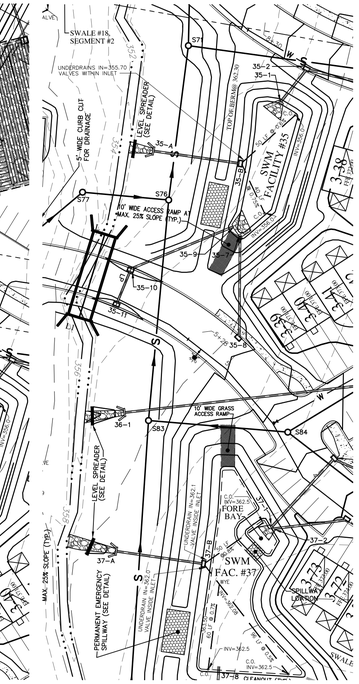
PLAN VIEW
SCALE: 1" = 50'



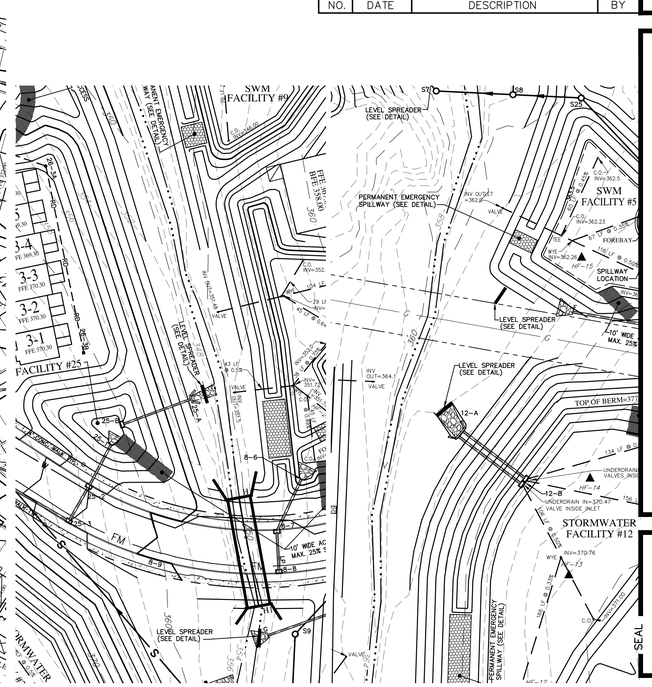
PLAN VIEW
SCALE: 1" = 50'

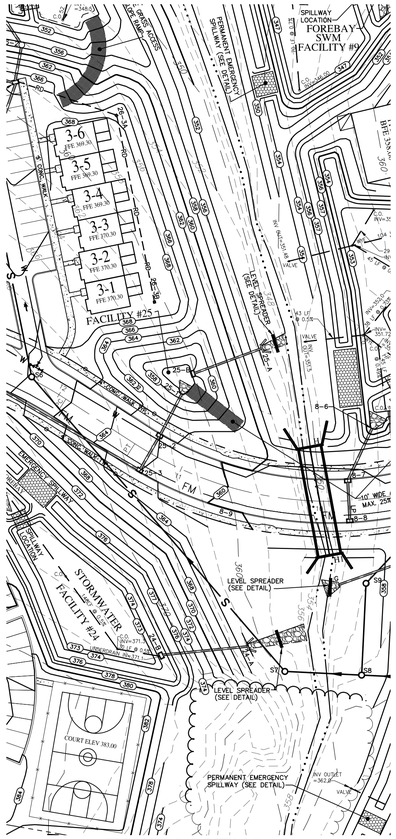


PLAN VIEW
SCALE: 1" = 50'



PLAN VIEW
SCALE: 1" = 50'


SWM FACILITY #5
LEVEL SPREADER (SEE DETAIL)
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
FOREBAY
SPILLWAY LOCATION
STORMWATER FACILITY #12
10' WIDE ACCESS RAMP AT MAX. 25% SLOPE (TYP.)
TOP OF BERM=377.30
UNDERDRAIN N=370.67
UNDERDRAIN IN=370.97
VALVE INSIDE INLET
INV OUT=364.1
VALVE
INV OUT=362.23
INV=362.23
INV=362.5
INV=362.9
INV=362.5
INV=362.5
INV=362.5

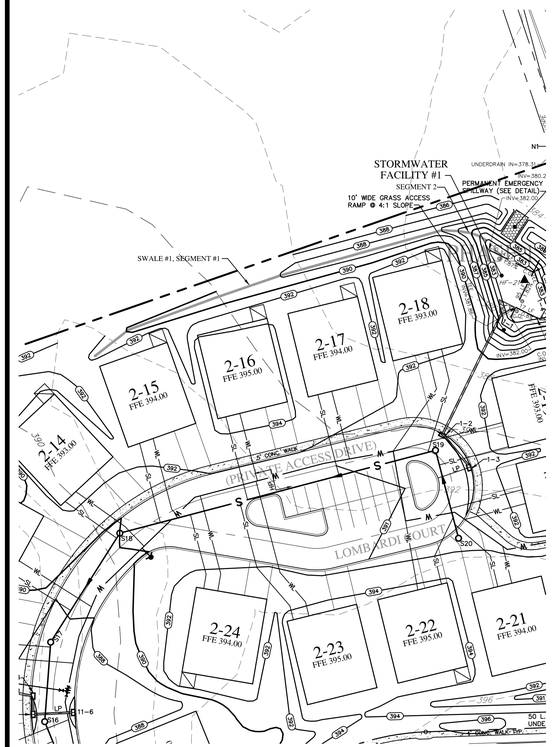

SPILLWAY LOCATION
FOREBAY
SWM FACILITY #9
3-6 FFE 369.30
3-5 FFE 366.30
3-4 FFE 363.30
3-3 FFE 360.30
3-2 FFE 357.30
3-1 FFE 354.30
FACILITY #25
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
LEVEL SPREADER (SEE DETAIL)
10' WIDE ACCESS RAMP AT MAX. 25% SLOPE (TYP.)
STORMWATER FACILITY #24
COURT ELEV 383.00
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
INV. OUT 381.50
INV. OUT 380.50
INV. OUT 379.50
INV. OUT 378.50
INV. OUT 377.50
INV. OUT 376.50
INV. OUT 375.50
INV. OUT 374.50
INV. OUT 373.50
INV. OUT 372.50
INV. OUT 371.50
INV. OUT 370.50
INV. OUT 369.50
INV. OUT 368.50
INV. OUT 367.50
INV. OUT 366.50
INV. OUT 365.50
INV. OUT 364.50
INV. OUT 363.50
INV. OUT 362.50
INV. OUT 361.50
INV. OUT 360.50
INV. OUT 359.50
INV. OUT 358.50
INV. OUT 357.50
INV. OUT 356.50
INV. OUT 355.50
INV. OUT 354.50
INV. OUT 353.50
INV. OUT 352.50
INV. OUT 351.50
INV. OUT 350.50
INV. OUT 349.50
INV. OUT 348.50
INV. OUT 347.50
INV. OUT 346.50
INV. OUT 345.50
INV. OUT 344.50
INV. OUT 343.50
INV. OUT 342.50
INV. OUT 341.50
INV. OUT 340.50
INV. OUT 339.50
INV. OUT 338.50
INV. OUT 337.50
INV. OUT 336.50
INV. OUT 335.50
INV. OUT 334.50
INV. OUT 333.50
INV. OUT 332.50
INV. OUT 331.50
INV. OUT 330.50
INV. OUT 329.50
INV. OUT 328.50
INV. OUT 327.50
INV. OUT 326.50
INV. OUT 325.50
INV. OUT 324.50
INV. OUT 323.50
INV. OUT 322.50
INV. OUT 321.50
INV. OUT 320.50
INV. OUT 319.50
INV. OUT 318.50
INV. OUT 317.50
INV. OUT 316.50
INV. OUT 315.50
INV. OUT 314.50
INV. OUT 313.50
INV. OUT 312.50
INV. OUT 311.50
INV. OUT 310.50
INV. OUT 309.50
INV. OUT 308.50
INV. OUT 307.50
INV. OUT 306.50
INV. OUT 305.50
INV. OUT 304.50
INV. OUT 303.50
INV. OUT 302.50
INV. OUT 301.50
INV. OUT 300.50
INV. OUT 299.50
INV. OUT 298.50
INV. OUT 297.50
INV. OUT 296.50
INV. OUT 295.50
INV. OUT 294.50
INV. OUT 293.50
INV. OUT 292.50
INV. OUT 291.50
INV. OUT 290.50
INV. OUT 289.50
INV. OUT 288.50
INV. OUT 287.50
INV. OUT 286.50
INV. OUT 285.50
INV. OUT 284.50
INV. OUT 283.50
INV. OUT 282.50
INV. OUT 281.50
INV. OUT 280.50
INV. OUT 279.50
INV. OUT 278.50
INV. OUT 277.50
INV. OUT 276.50
INV. OUT 275.50
INV. OUT 274.50
INV. OUT 273.50
INV. OUT 272.50
INV. OUT 271.50
INV. OUT 270.50
INV. OUT 269.50
INV. OUT 268.50
INV. OUT 267.50
INV. OUT 266.50
INV. OUT 265.50
INV. OUT 264.50
INV. OUT 263.50
INV. OUT 262.50
INV. OUT 261.50
INV. OUT 260.50
INV. OUT 259.50
INV. OUT 258.50
INV. OUT 257.50
INV. OUT 256.50
INV. OUT 255.50
INV. OUT 254.50
INV. OUT 253.50
INV. OUT 252.50
INV. OUT 251.50
INV. OUT 250.50
INV. OUT 249.50
INV. OUT 248.50
INV. OUT 247.50
INV. OUT 246.50
INV. OUT 245.50
INV. OUT 244.50
INV. OUT 243.50
INV. OUT 242.50
INV. OUT 241.50
INV. OUT 240.50
INV. OUT 239.50
INV. OUT 238.50
INV. OUT 237.50
INV. OUT 236.50
INV. OUT 235.50
INV. OUT 234.50
INV. OUT 233.50
INV. OUT 232.50
INV. OUT 231.50
INV. OUT 230.50
INV. OUT 229.50
INV. OUT 228.50
INV. OUT 227.50
INV. OUT 226.50
INV. OUT 225.50
INV. OUT 224.50
INV. OUT 223.50
INV. OUT 222.50
INV. OUT 221.50
INV. OUT 220.50
INV. OUT 219.50
INV. OUT 218.50
INV. OUT 217.50
INV. OUT 216.50
INV. OUT 215.50
INV. OUT 214.50
INV. OUT 213.50
INV. OUT 212.50
INV. OUT 211.50
INV. OUT 210.50
INV. OUT 209.50
INV. OUT 208.50
INV. OUT 207.50
INV. OUT 206.50
INV. OUT 205.50
INV. OUT 204.50
INV. OUT 203.50
INV. OUT 202.50
INV. OUT 201.50
INV. OUT 200.50
INV. OUT 199.50
INV. OUT 198.50
INV. OUT 197.50
INV. OUT 196.50
INV. OUT 195.50
INV. OUT 194.50
INV. OUT 193.50
INV. OUT 192.50
INV. OUT 191.50
INV. OUT 190.50
INV. OUT 189.50
INV. OUT 188.50
INV. OUT 187.50
INV. OUT 186.50
INV. OUT 185.50
INV. OUT 184.50
INV. OUT 183.50
INV. OUT 182.50
INV. OUT 181.50
INV. OUT 180.50
INV. OUT 179.50
INV. OUT 178.50
INV. OUT 177.50
INV. OUT 176.50
INV. OUT 175.50
INV. OUT 174.50
INV. OUT 173.50
INV. OUT 172.50
INV. OUT 171.50
INV. OUT 170.50
INV. OUT 169.50
INV. OUT 168.50
INV. OUT 167.50
INV. OUT 166.50
INV. OUT 165.50
INV. OUT 164.50
INV. OUT 163.50
INV. OUT 162.50
INV. OUT 161.50
INV. OUT 160.50
INV. OUT 159.50
INV. OUT 158.50
INV. OUT 157.50
INV. OUT 156.50
INV. OUT 155.50
INV. OUT 154.50
INV. OUT 153.50
INV. OUT 152.50
INV. OUT 151.50
INV. OUT 150.50
INV. OUT 149.50
INV. OUT 148.50
INV. OUT 147.50
INV. OUT 146.50
INV. OUT 145.50
INV. OUT 144.50
INV. OUT 143.50
INV. OUT 142.50
INV. OUT 141.50
INV. OUT 140.50
INV. OUT 139.50
INV. OUT 138.50
INV. OUT 137.50
INV. OUT 136.50
INV. OUT 135.50
INV. OUT 134.50
INV. OUT 133.50
INV. OUT 132.50
INV. OUT 131.50
INV. OUT 130.50
INV. OUT 129.50
INV. OUT 128.50
INV. OUT 127.50
INV. OUT 126.50
INV. OUT 125.50
INV. OUT 124.50
INV. OUT 123.50
INV. OUT 122.50
INV. OUT 121.50
INV. OUT 120.50
INV. OUT 119.50
INV. OUT 118.50
INV. OUT 117.50
INV. OUT 116.50
INV. OUT 115.50
INV. OUT 114.50
INV. OUT 113.50
INV. OUT 112.50
INV. OUT 111.50
INV. OUT 110.50
INV. OUT 109.50
INV. OUT 108.50
INV. OUT 107.50
INV. OUT 106.50
INV. OUT 105.50
INV. OUT 104.50
INV. OUT 103.50
INV. OUT 102.50
INV. OUT 101.50
INV. OUT 100.50
INV. OUT 99.50
INV. OUT 98.50
INV. OUT 97.50
INV. OUT 96.50
INV. OUT 95.50
INV. OUT 94.50
INV. OUT 93.50
INV. OUT 92.50
INV. OUT 91.50
INV. OUT 90.50
INV. OUT 89.50
INV. OUT 88.50
INV. OUT 87.50
INV. OUT 86.50
INV. OUT 85.50
INV. OUT 84.50
INV. OUT 83.50
INV. OUT 82.50
INV. OUT 81.50
INV. OUT 80.50
INV. OUT 79.50
INV. OUT 78.50
INV. OUT 77.50
INV. OUT 76.50
INV. OUT 75.50
INV. OUT 74.50
INV. OUT 73.50
INV. OUT 72.50
INV. OUT 71.50
INV. OUT 70.50
INV. OUT 69.50
INV. OUT 68.50
INV. OUT 67.50
INV. OUT 66.50
INV. OUT 65.50
INV. OUT 64.50
INV. OUT 63.50
INV. OUT 62.50
INV. OUT 61.50
INV. OUT 60.50
INV. OUT 59.50
INV. OUT 58.50
INV. OUT 57.50
INV. OUT 56.50
INV. OUT 55.50
INV. OUT 54.50
INV. OUT 53.50
INV. OUT 52.50
INV. OUT 51.50
INV. OUT 50.50
INV. OUT 49.50
INV. OUT 48.50
INV. OUT 47.50
INV. OUT 46.50
INV. OUT 45.50
INV. OUT 44.50
INV. OUT 43.50
INV. OUT 42.50
INV. OUT 41.50
INV. OUT 40.50
INV. OUT 39.50
INV. OUT 38.50
INV. OUT 37.50
INV. OUT 36.50
INV. OUT 35.50
INV. OUT 34.50
INV. OUT 33.50
INV. OUT 32.50
INV. OUT 31.50
INV. OUT 30.50
INV. OUT 29.50
INV. OUT 28.50
INV. OUT 27.50
INV. OUT 26.50
INV. OUT 25.50
INV. OUT 24.50
INV. OUT 23.50
INV. OUT 22.50
INV. OUT 21.50
INV. OUT 20.50
INV. OUT 19.50
INV. OUT 18.50
INV. OUT 17.50
INV. OUT 16.50
INV. OUT 15.50
INV. OUT 14.50
INV. OUT 13.50
INV. OUT 12.50
INV. OUT 11.50
INV. OUT 10.50
INV. OUT 9.50
INV. OUT 8.50
INV. OUT 7.50
INV. OUT 6.50
INV. OUT 5.50
INV. OUT 4.50
INV. OUT 3.50
INV. OUT 2.50
INV. OUT 1.50
INV. OUT 0.50
INV. OUT -0.50
INV. OUT -1.50
INV. OUT -2.50
INV. OUT -3.50
INV. OUT -4.50
INV. OUT -5.50
INV. OUT -6.50
INV. OUT -7.50
INV. OUT -8.50
INV. OUT -9.50
INV. OUT -10.50
INV. OUT -11.50
INV. OUT -12.50
INV. OUT

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

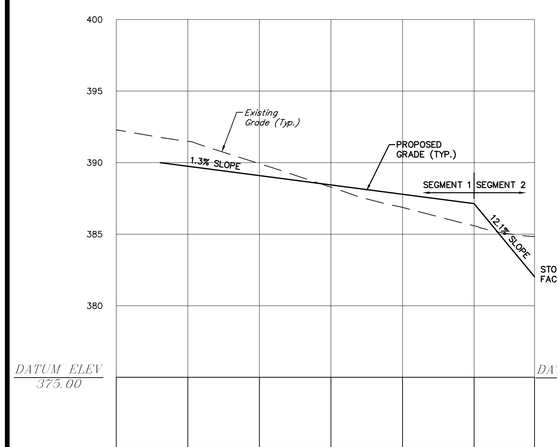
DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
1 MILL ROAD, P.O. BOX 5
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

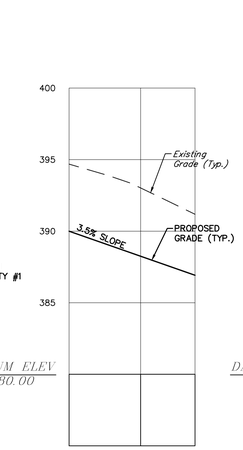


PLAN VIEW
SCALE: 1" = 50'



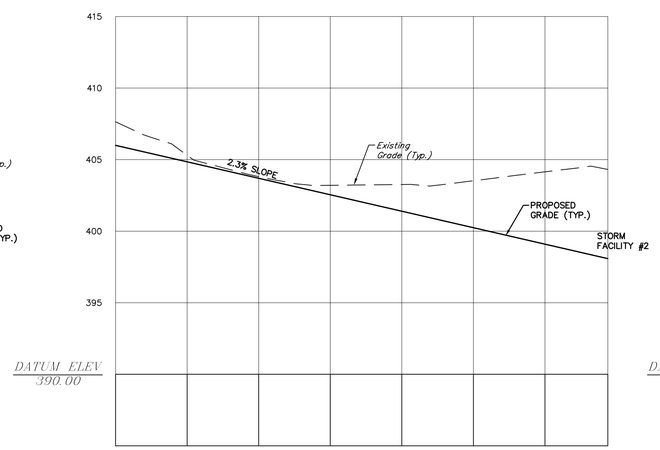
SWALE #1
SCALES: 1"=50'H 1"=5'V

PLAN VIEW
SCALE: 1" = 50'

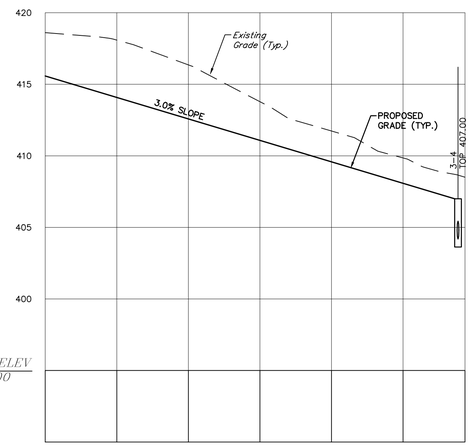


SWALE #2
SCALES: 1"=50'H 1"=5'V

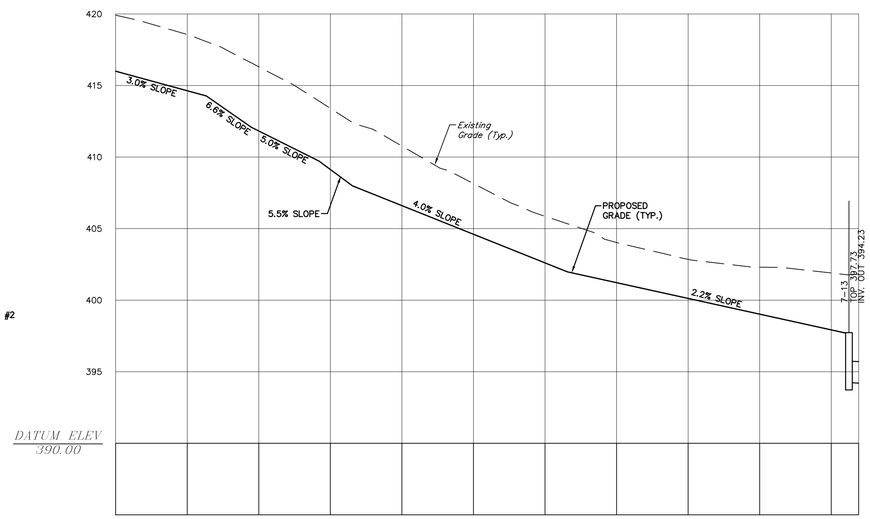
PLAN VIEW
SCALE: 1" = 50'



SWALE #3
SCALES: 1"=50'H 1"=5'V



SWALE #5
SCALES: 1"=50'H 1"=5'V



SWALE #4
SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE
1" = 50'

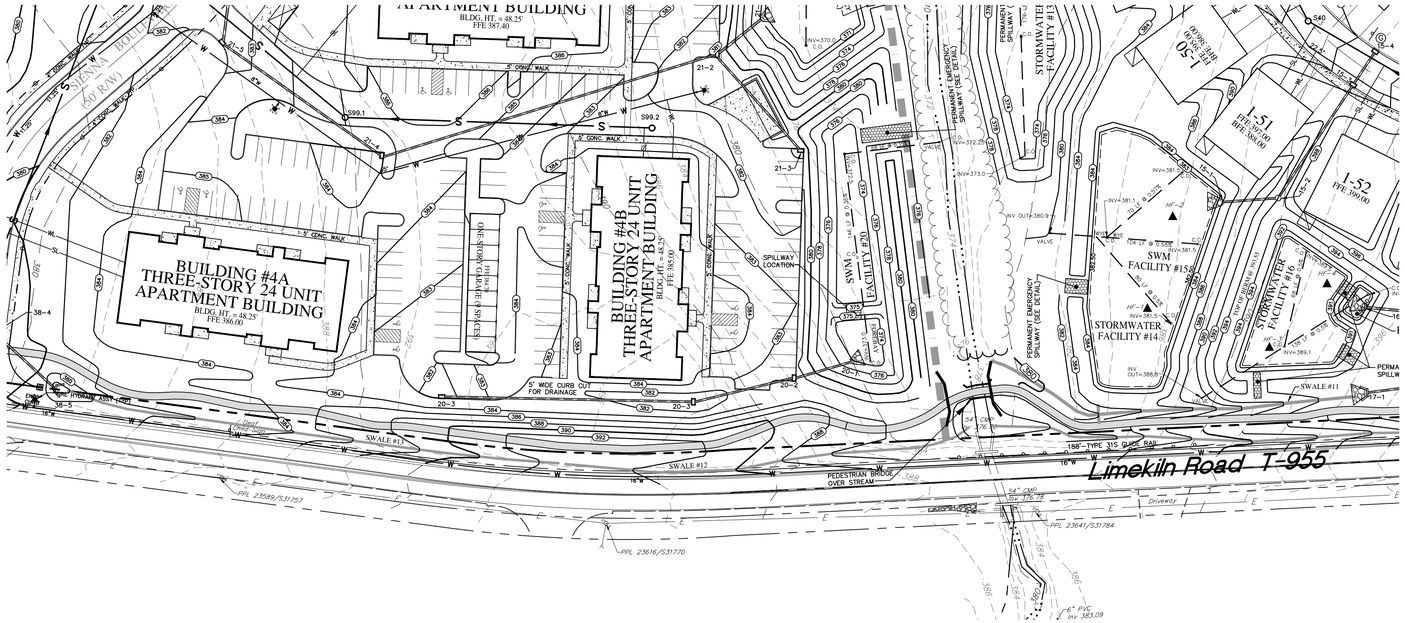
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
SWALE PROFILES
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\Field
SCALE : 1" = 50'
DWG. FILE : Y:\2019\319582.cph\319582\dwg\Plans\Pre-Final\Swale.dwg

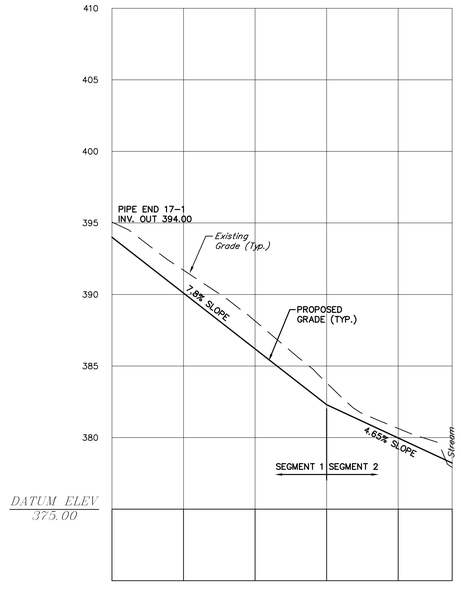
PERMANENT EMERGENCY SPILLWAY (SEE DETAIL)
SWM FACILITY #18
SWM FACILITY #17
SWM FACILITY #16
SWALE #9
SWALE #8
SWALE #7
SWALE #6
PHASE 2
PHASE 2
1-74 FFE 411.00 BFE 402.00
1-73 FFE 414.50
1-72 FFE 416.00
1-71 FFE 417.00
1-70 FFE 419.00
1-69 FFE 421.00
1-68 FFE 423.00
1-67 FFE 425.00
1-66 FFE 427.00
1-65 FFE 427.00
1-64 FFE 428.00
1-63 FFE 427.00
1-62 FFE 427.00
1-61 FFE 427.00
1-60 FFE 424.00
1-59 FFE 422.00
1-58 FFE 420.00
1-57 FFE 414.00
1-56 FFE 413.00
1-100 FFE 412.00 BFE 403.00
1-101 FFE 414.00 BFE 405.00
1-102 FFE 417.50 BFE 408.00
1-103 FFE 419.00 BFE 409.00
1-104 FFE 419.00 BFE 408.00
1-105 FFE 419.00 BFE 407.00
1-106 FFE 419.00 BFE 408.00
1-107 FFE 415.00
1-108 FFE 419.00
1-109 FFE 421.00
1-110 FFE 423.00
1-111 FFE 427.00
1-112 FFE 424.00
1-113 FFE 420.00
1-114 FFE 417.00
1-83 FFE 407.00
1-84 FFE 405.00
1-85 FFE 405.00
1-86 FFE 404.00
PPL 23727/531899
PPL 23740/531883
PPL 23754/531877
Verizon 4001/08
PPL 23750/531873
PPL 23755/531867
PPL 23744/531845
PPL 23763/531857
Stream
Stone-A
Wall
Wright Way
Street Sign
Stop Sign
24" Blue Spruce
12" Pine
4" Bush
11" Root Drop Inv. 419.65
Inv. 419.65
Inv. 419.65

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

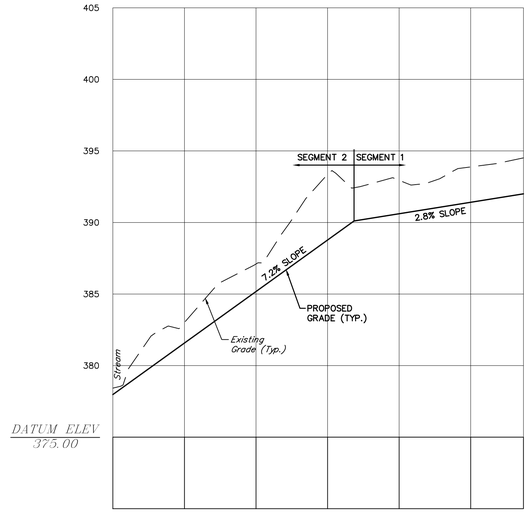
DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021



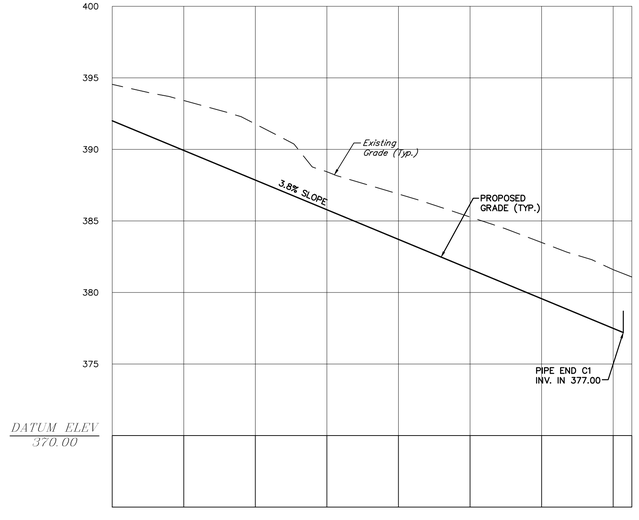
PLAN VIEW
SCALE: 1" = 50'



SWALE #11
SCALES: 1"=50'H 1"=5'V



SWALE #12
SCALES: 1"=50'H 1"=5'V



SWALE #13
SCALES: 1"=50'H 1"=5'V

100 50 10 0 10 50 100
GRAPHIC SCALE
1" = 50'

PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

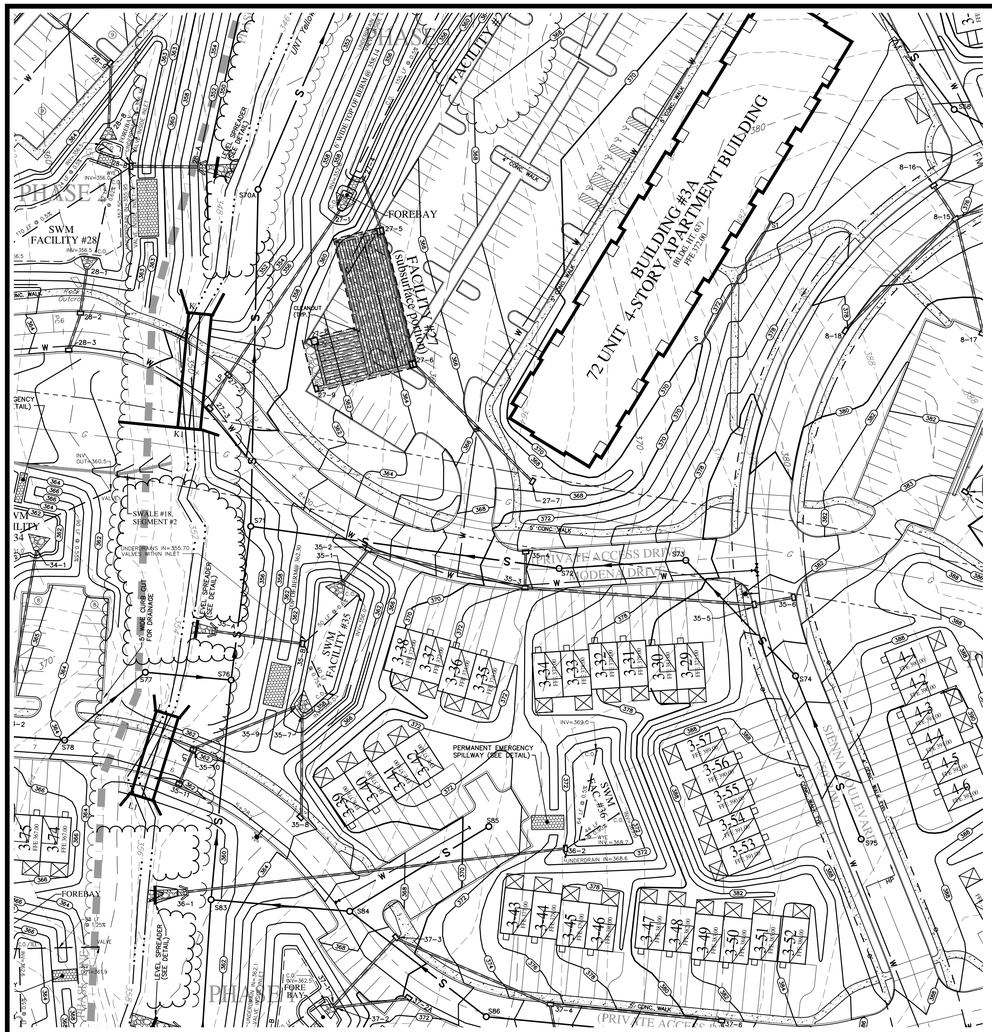
SWALE PROFILES

FOR

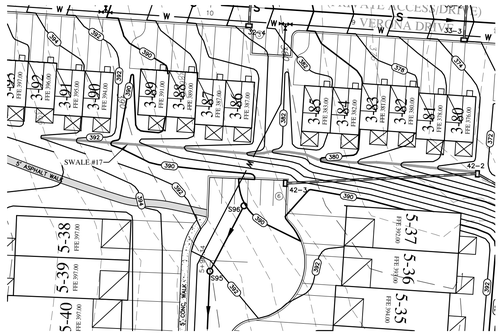
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

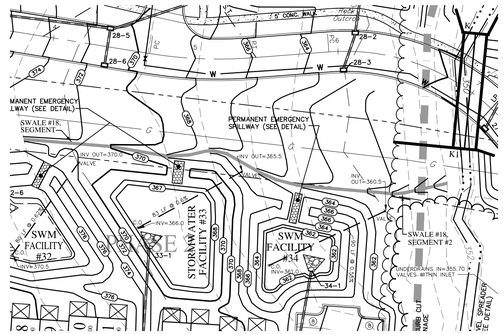
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. : Y:\2019\319582.dgn\319582\ FILE : dwg\Plans\Pre-Final\ Exhibit.dwg

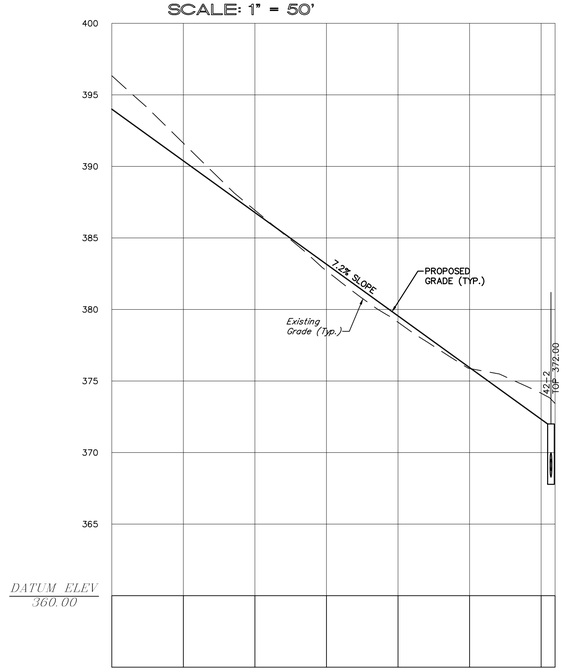


PLAN VIEW
SCALE: 1" = 50'

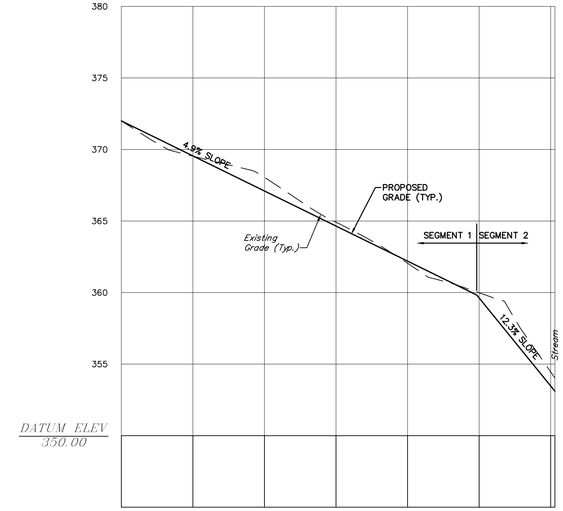


PLAN VIEW
SCALE: 1" = 50'

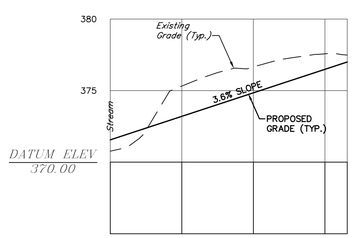




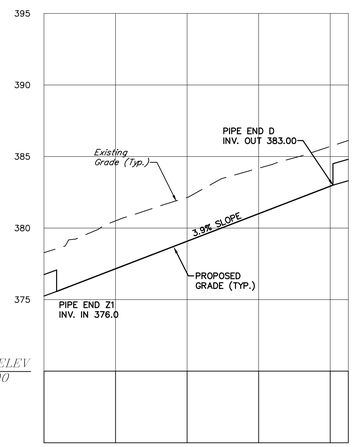
SWALE #17
SCALES: 1"=50'H 1"=5'V



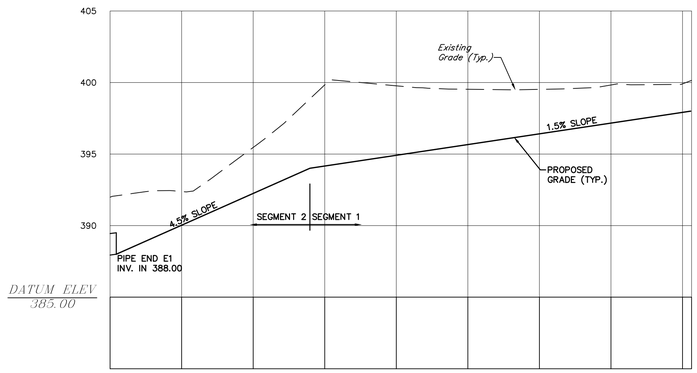
SWALE #18
SCALES: 1"=50'H 1"=5'V



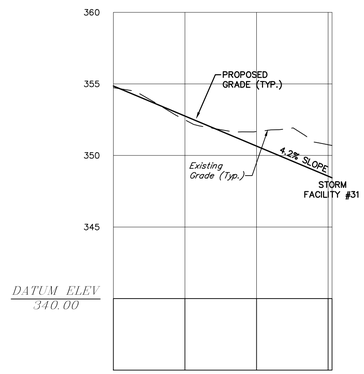
SWALE #14
SCALES: 1"=50'H 1"=5'V



SWALE #15
SCALES: 1"=50'H 1"=5'V



SWALE #16
SCALES: 1"=50'H 1"=5'V



SWALE #19
SCALES: 1"=50'H 1"=5'V

100 50 10 0 10 50 100
GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
41 MICHAEL LANE, P.O. BOX 6
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

SEAL

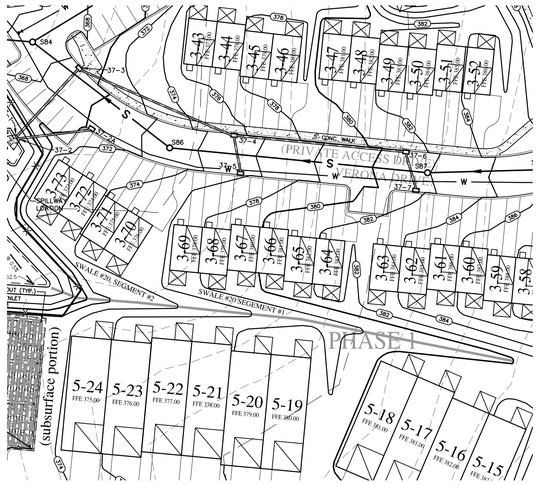
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

SWALE PROFILES

FOR SIENNA

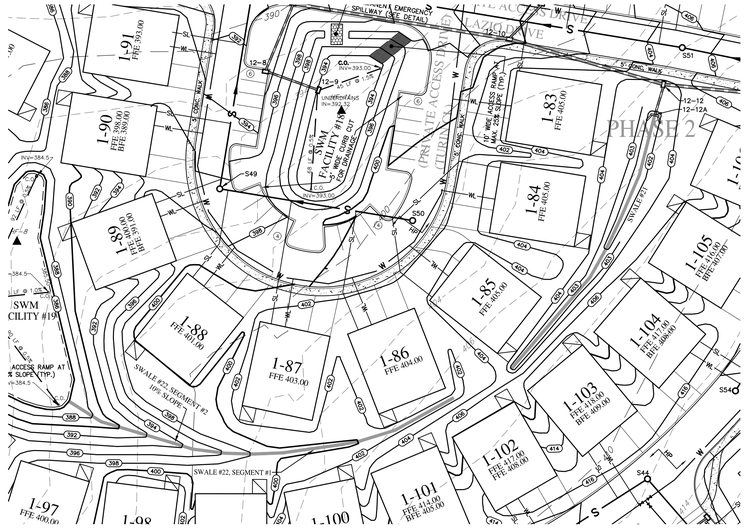
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.spn\319582\ FILE : dwg\Plans\Pre-Final\ Exhibit.dwg
SHEET 75 of 89



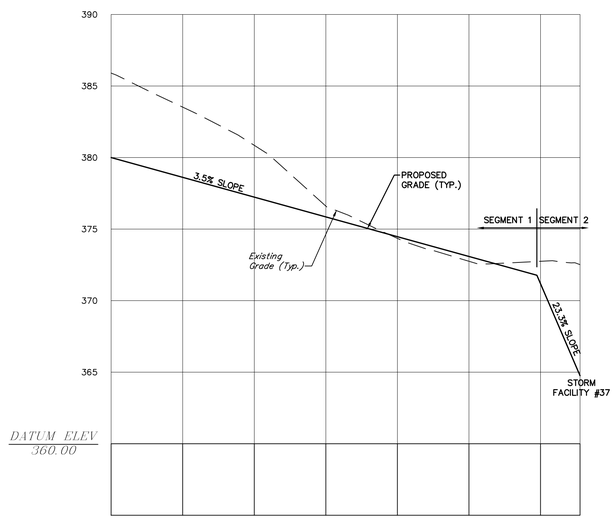
PLAN VIEW

SCALE: 1" = 50'



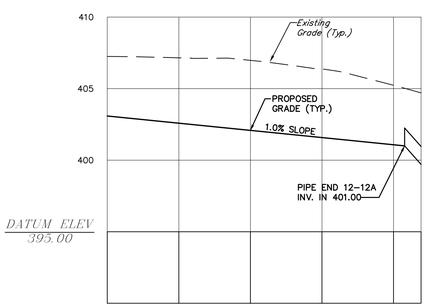
PLAN VIEW

SCALE: 1" = 50'



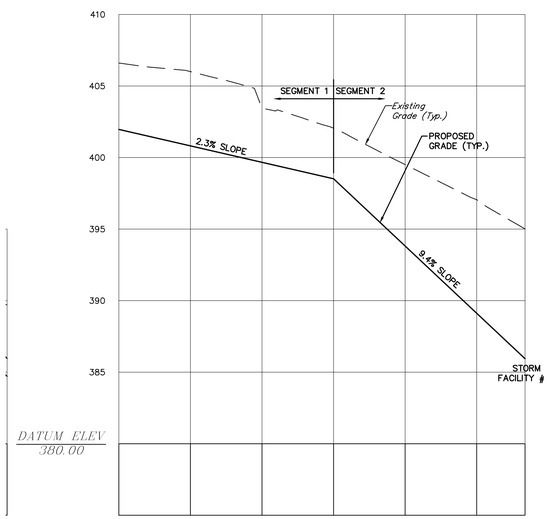
SWALE #20

SCALES: 1"=50'H 1"=5'V



SWALE #21

SCALES: 1"=50'H 1"=5'V



SWALE #22

SCALES: 1"=50'H 1"=5'V

GRAPHIC SCALE
1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
FELLOWSHIP RD. P.O. BOX 5
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

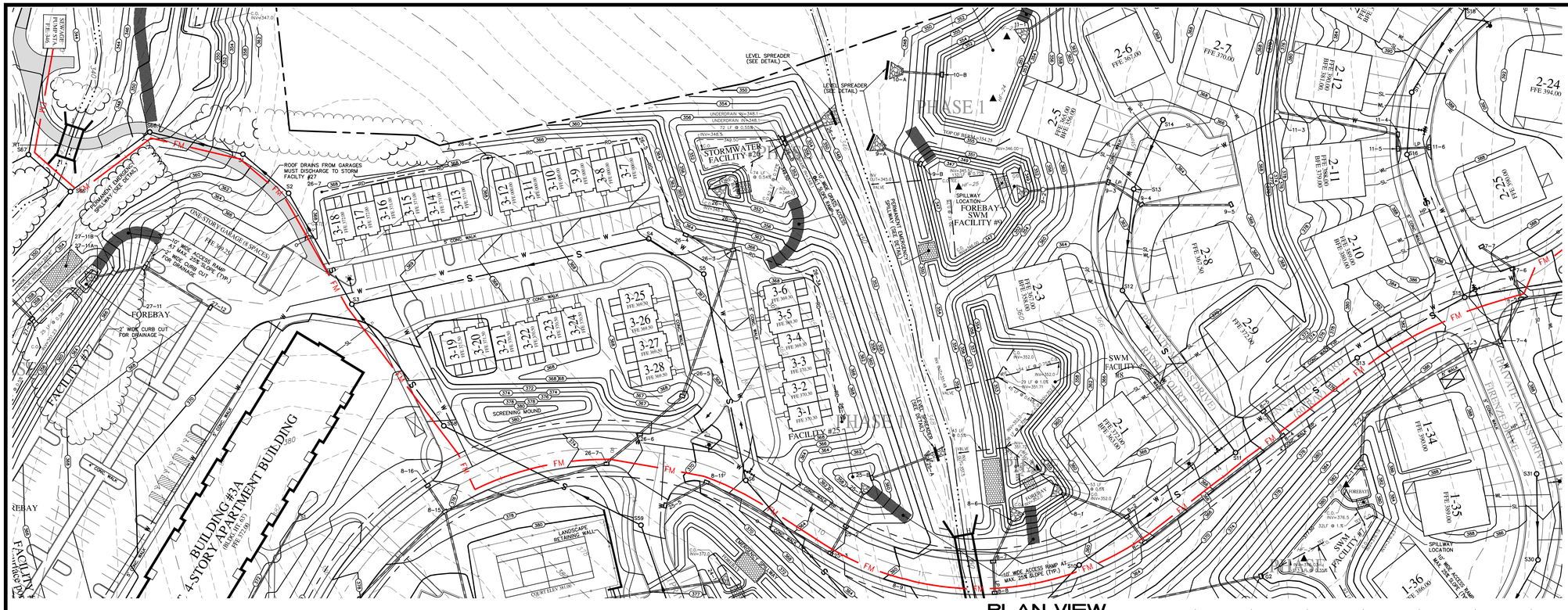
SWALE PROFILES

FOR

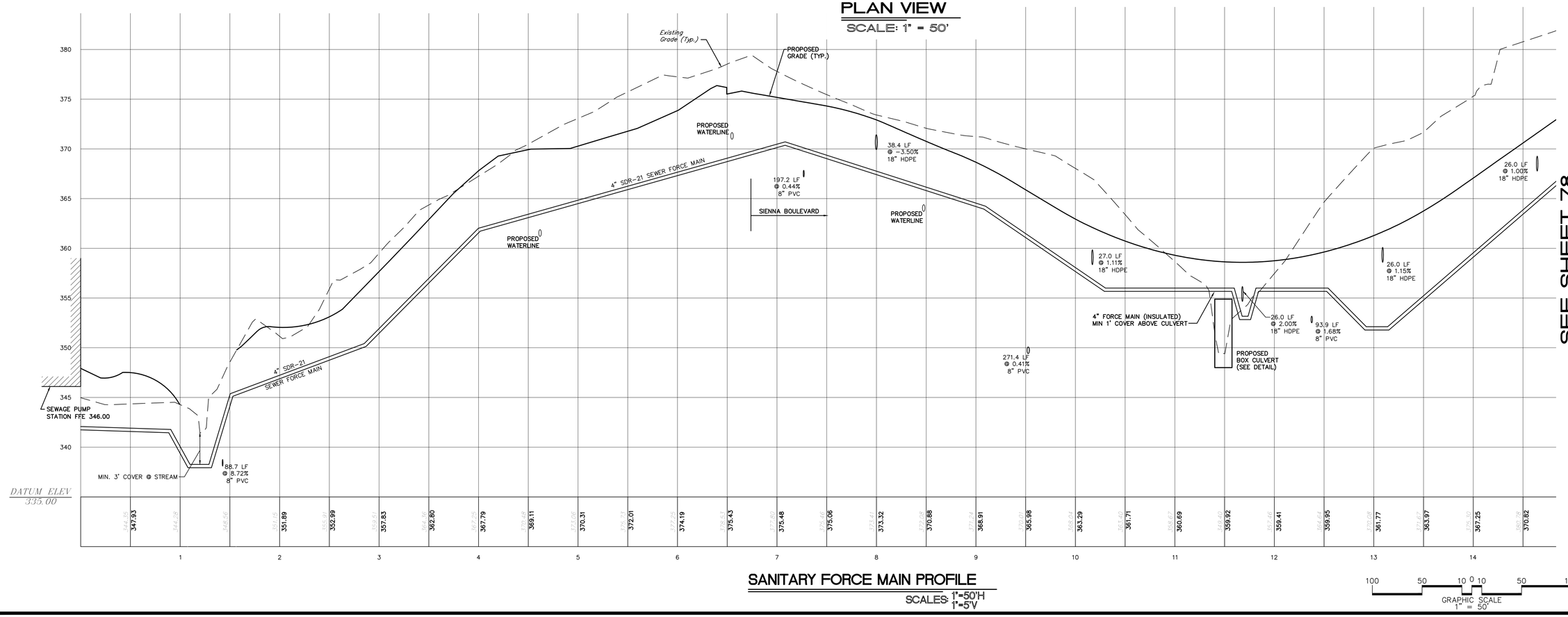
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\Field
SCALE : 1" = 50'
DWG. Y:\2019\319582.cph\319582\FILE : Dwg\Plans\Pre-Final\Exhibit.dwg



PLAN VIEW
SCALE: 1" = 50'



SANITARY FORCE MAIN PROFILE
SCALES: 1"=50'H 1"=5'V

SEE SHEET 78

GRAPHIC SCALE 1" = 50'

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

SANITARY FORCE MAIN PROFILE

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

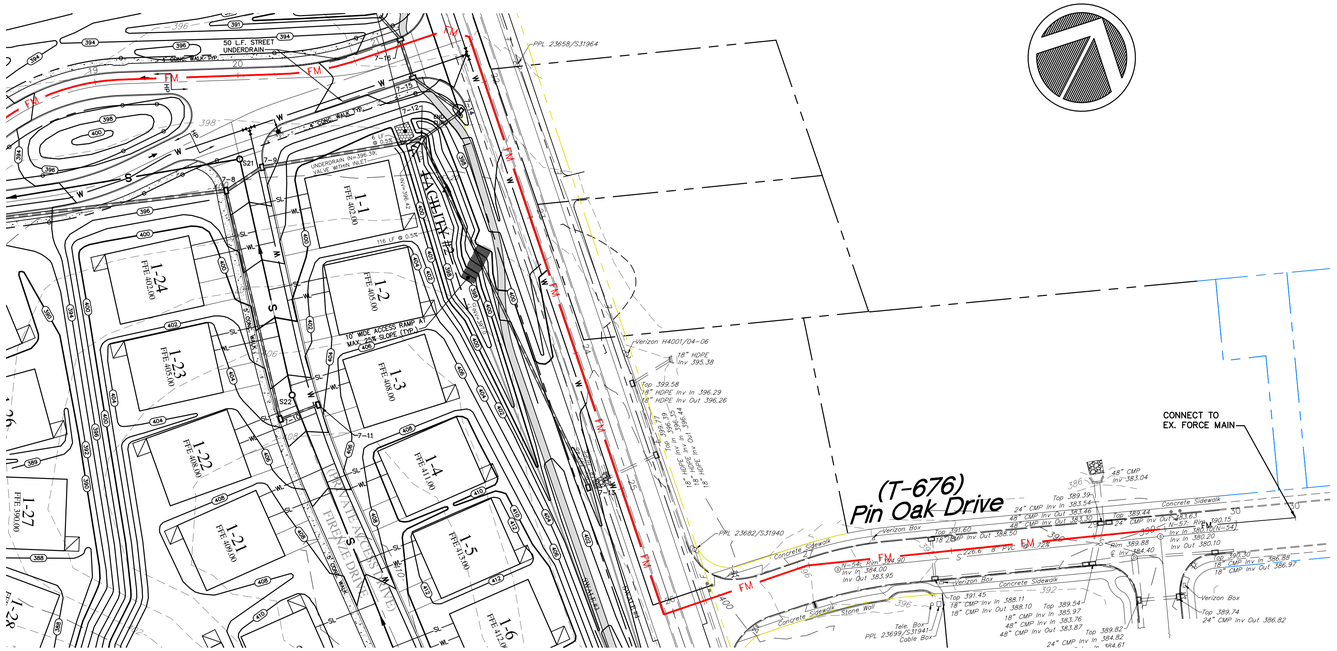
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582\Exhibit.dwg
FILE : Dwg\Plans\Pre-Final\Exhibit.dwg
SHEET 77 of 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

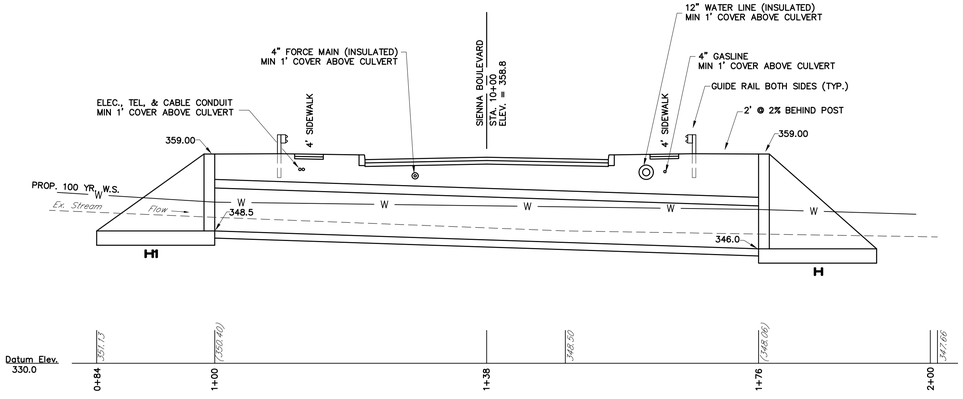
DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

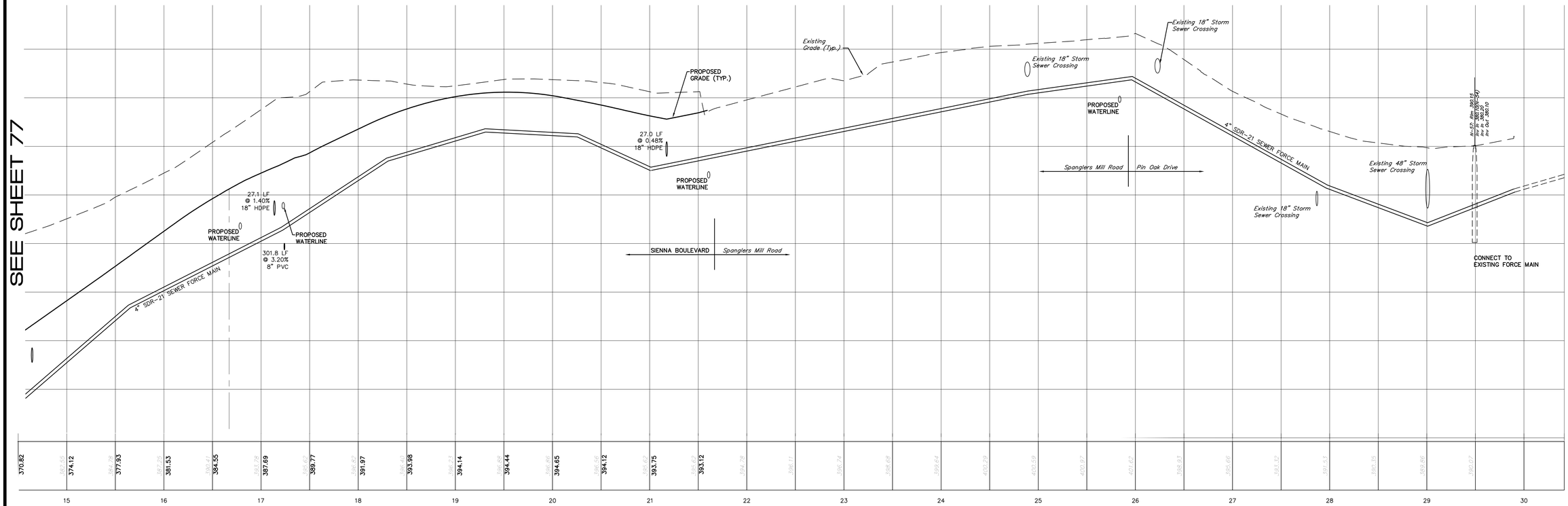


PLAN VIEW
SCALE: 1" = 50'



SIENNA BOULEVARD

SEE SHEET 77



SANITARY FORCE MAIN PROFILE
SCALES: 1"=50'H
1"=5'V

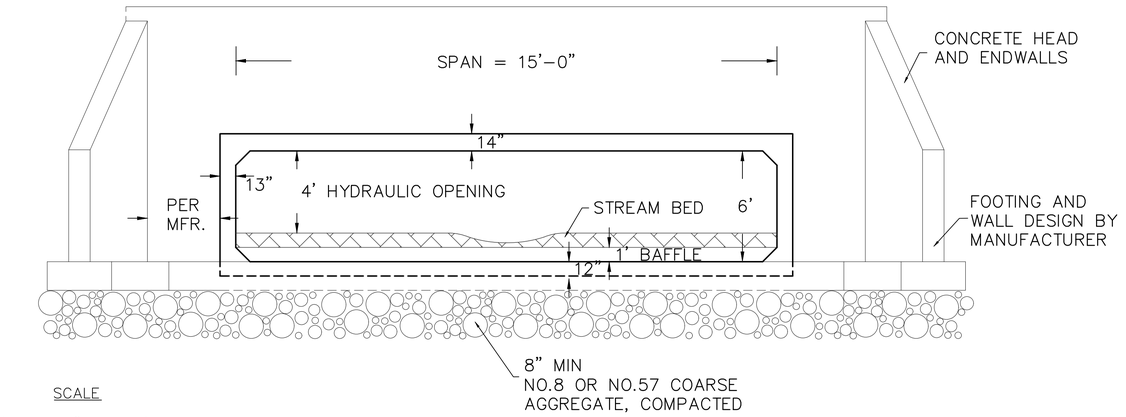
GRAPHIC SCALE
1" = 50'

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

SANITARY FORCE MAIN PROFILE

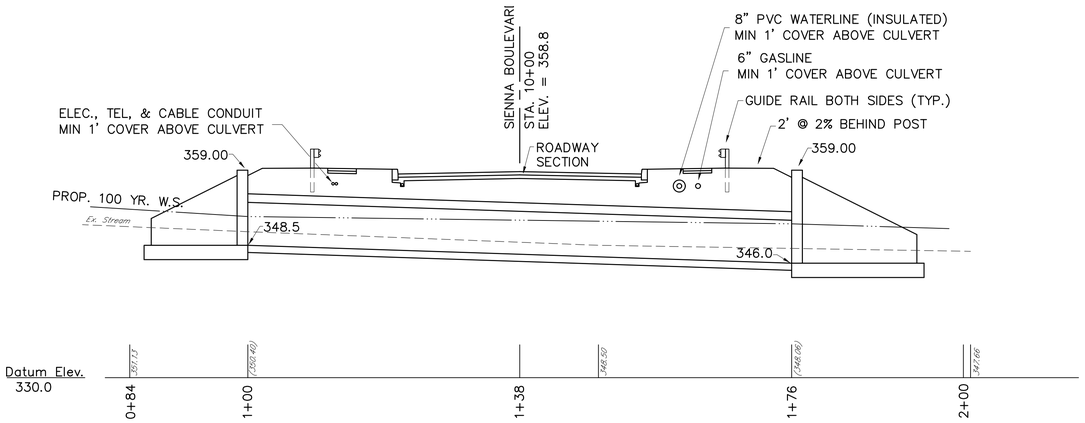
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. FILE : Y:\2019\319582.dgn\319582\dwg\Plans\Pre-Final\Exhibit.dwg
SHEET 78 & 89

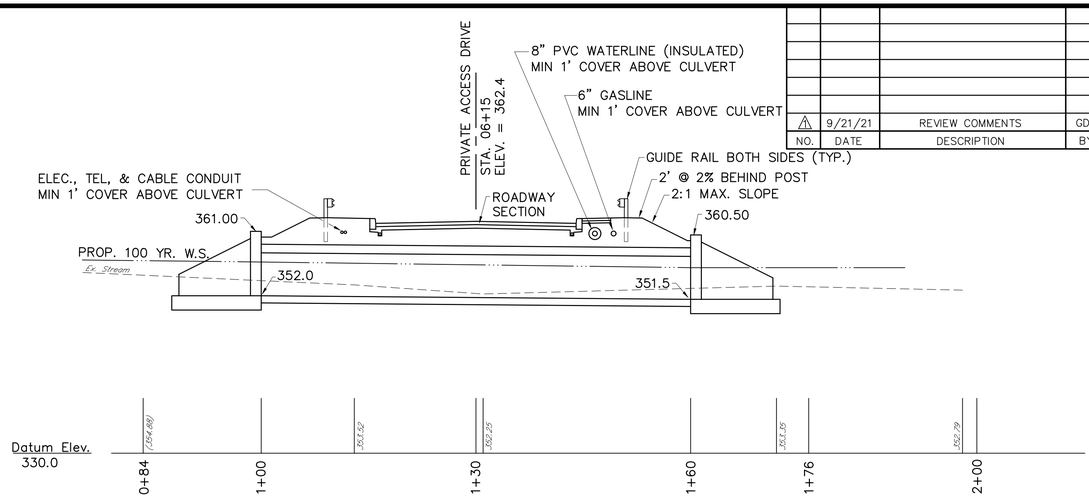


SCALE

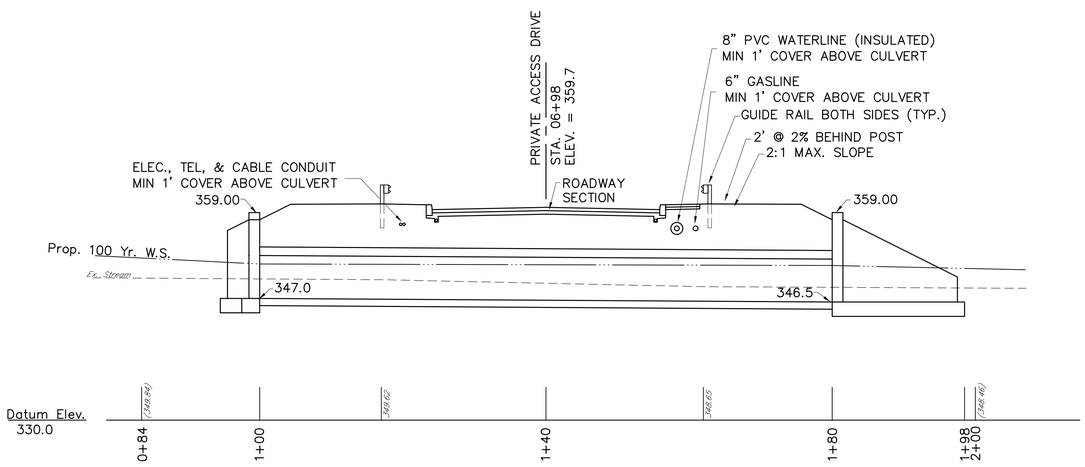
5 0 5



SIENNA BOULEVARD

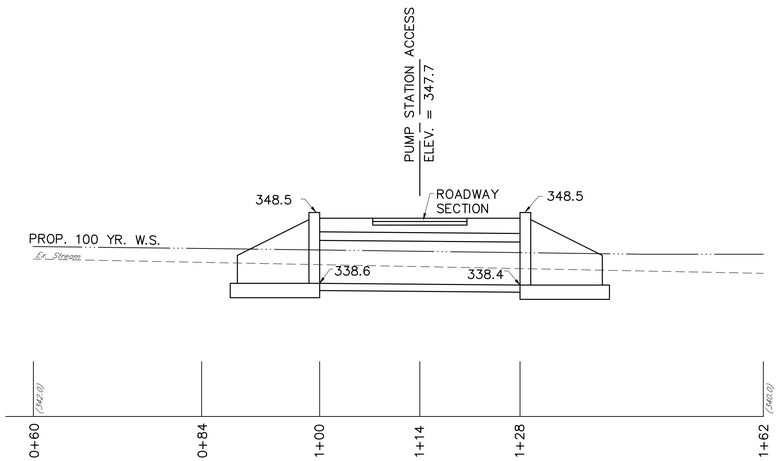


VERONA DRIVE

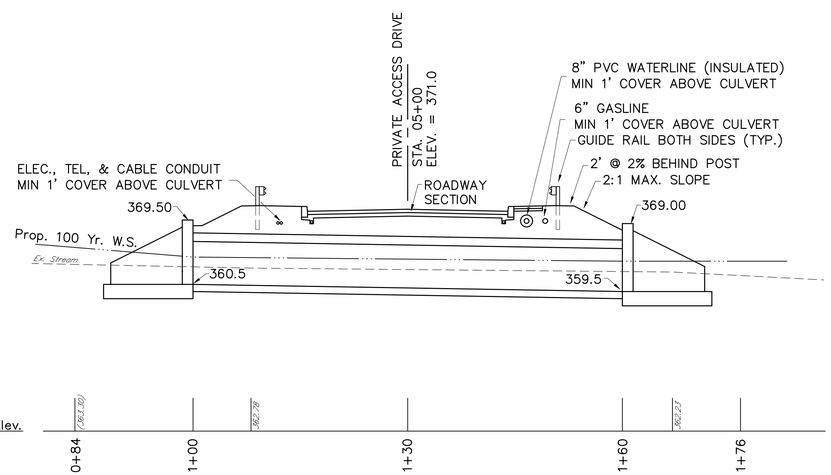


MODENA DRIVE

1. CONSTRUCT IN ACCORDANCE WITH REQUIREMENTS OF PENNDOT PUBLICATION 408, SECTION 714 AND 1085. INSPECTION AND APPROVAL REQUIREMENTS ARE MODIFIED TO REPLACE THE WORD(S) 'DEPARTMENT' WITH 'FAIRVIEW TOWNSHIP'.
2. BOX CULVERTS, HEAD AND END WALLS TO BE PRECAST STRUCTURES.
3. PRECAST MANUFACTURER TO VERIFY ALL DIMENSIONS TO ENSURE PROPER DESIGN AND FUNCTION BASED ON FABRICATION WITH THE MANUFACTURE'S OWN PROCESSES AND STANDARD MOLDS. INITIAL DIMENSIONS ARE SHOWN BASED ON ASSUMED USE OF STANDARD PADOT APPROVED PRODUCTS PRODUCED BY 'MONARCH PRODUCTS COMPANY, INC.' YORK HAVEN PA.
4. MANUFACTURER TO CONSTRUCT INDIVIDUAL UNITS FOR POST TENSIONING AND PROVIDE LIFTING HOLES.
5. SEAL ALL CONNECTIONS.
6. POST TENSIONING OF THE STRUCTURE IS REQUIRED. CONTRACTOR TO CONSULT WITH THE MANUFACTURER ON THE POST TENSIONING METHOD AND REQUIREMENTS. AN ON-SITE MANUFACTURER'S REPRESENTATIVE IS HIGHLY RECOMMENDED DURING PLACEMENT AND POST TENSIONING.
7. BOX CULVERT SECTIONS ARE TO INCLUDE 12" HIGH BAFFLE TO SECURE STREAM BOTTOM AND BANK MATERIAL ONE BAFFLE PER SECTION/UNIT. WIDTH AS REQUIRED BY MANUFACTURER.
8. CONTRACTOR SHALL PLACE EXISTING ON-SITE STREAM BED MATERIAL MINIMUM 1-FOOT DEPTH ABOVE THE BAFFLES AND CONSTRUCT CENTER CHANNEL IN CLOSE CONFORMITY TO THE EXITING ADJACENT CHANNEL.
9. ALL STONE GRADATIONS ARE AASHTO CLASSIFICATION.
10. IF UNSUITABLE FOUNDATION MATERIAL OR ROCK IS ENCOUNTERED, REMOVE ALL UNSUITABLE MATERIAL AT LEAST 12 INCHES, OR ROCK AT LEAST 24 INCHES, BELOW BOTTOM OF BOX CULVERT AND BACKFILL WITH NO. 2A OR AASHTO NO. 8 COARSE AGGREGATE, AS SHOWN ON PENNDOT STANDARD DRAWINGS, GRADED IN CLOSE CONFORMITY WITH THE STREAM BED GRADE TO PROVIDE PROPER BEDDING CONDITIONS. ACCURATELY SHAPE BEDDING MATERIAL WITH A TEMPLATE TO PROVIDE UNIFORM CONTACT (90% OF BEARING).
11. MINIMUM COVERS SHOWN WERE PROVIDED BY THE UTILITY OWNERS AND ARE FOR THE UTILITIES ONLY. COVERS REQUIRED FOR THE CULVERT STRUCTURE ARE TO BE PROVIDED BY, OR ARE SHOWN ON PLANS AND SPECIFICATION BY, 'MONARCH PRODUCTS COMPANY, INC.' YORK HAVEN PA. CONTRACTOR SHALL VERIFY MINIMUM COVERS AND CONSULT THE ENGINEERS IN THE EVENT OF DISCREPANCIES OR USE OF A DIFFERENT MANUFACTURER.
12. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT FINAL LOCATION OF GUIDERAIL POST DOES NOT CONFLICT WITH THE STRUCTURE. FOR FILL HEIGHTS GREATER THAN 24 INCHES AT POST LOCATIONS, PROVIDE TYPE 2 STRONG POST GUIDE RAIL AS SHOWN ON PENNDOT PUBLICATION 72M, CURRENT EDITION. FOR FILL HEIGHTS 24 INCHES OR LESS AT POST LOCATIONS, PROVIDE STRUCTURE MOUNTED GUIDE RAIL CONNECTED TO THE HEAD / END WALL AS SHOWN ON PENNDOT PUBLICATION 72M, CURRENT EDITION.
13. ALTERNATE STRUCTURES: AN ALTERNATE STRUCTURE MAY BE PROVIDED / CONSTRUCTED BY THE CONTRACTOR IF APPROVED BY THE TOWNSHIP. CONTRACTOR SHALL PROVIDE ALTERNATE STRUCTURE PLANS AND DESIGNS TO THE TOWNSHIP FOR APPROVAL PRIOR TO ORDERING AND CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ANY REQUIRED PERMITS ARE OBTAINED OR UPDATED TO REFLECT THE ALTERNATE STRUCTURE. THE HYDRAULIC OPENING (SQUARE FOOT) AND STREAM BED SLOPE MUST BE MAINTAINED AS SHOWN FOR THE BOX CULVERTS IN ORDER TO CONFORM TO THE APPROVED HYDROLOGIC AND HYDRAULIC ANALYSIS. A REVISED ANALYSIS MUST BE INCLUDED / PROVIDED FOR REVISED HYDRAULIC OPENINGS AND OR STREAM BED SLOPES.



PUMP STATION ACCESS



PISA COURT

SCALE

10 0 10

NO.	DATE	DESCRIPTION	BY
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : MEA
DRAWN : MEA
CHECKED : JKM
DATE : 9/13/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STREAM CROSSING PROFILES / DETAILS

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

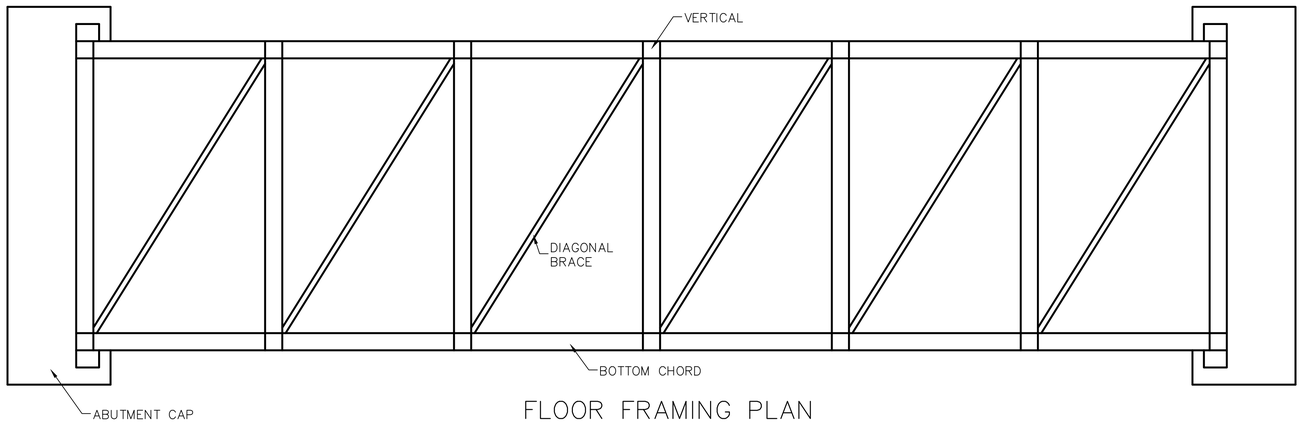
PROJECT NO. 319582

SURVEY BOOK : Z:\2019\319582.sur\319582sur\Field

SCALE : AS NOTED

DWG. \ FILE : Y:\2019\319582.sdp\319582\dwg\Plans\Pre-Final\70-CROSSINGS.dwg

SHEET 79 of 89



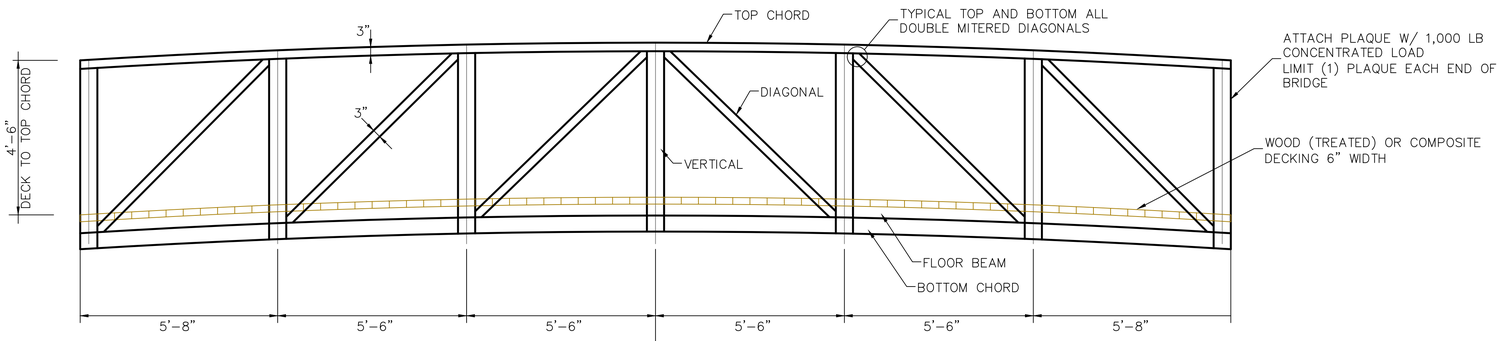
FLOOR FRAMING PLAN

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

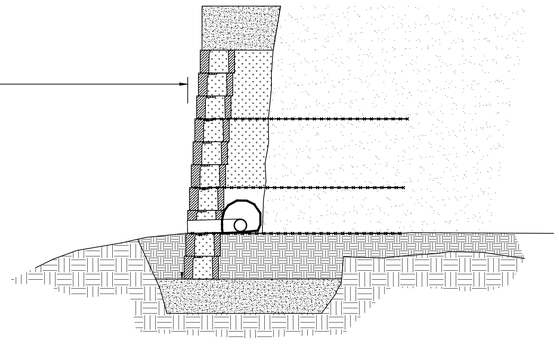
DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

GENERAL NOTES:

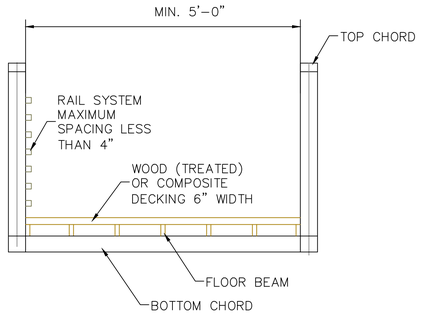
1. DESIGN STRESSES ARE IN ACCORDANCE WITH THE MANUAL OF STEEL CONSTRUCTION, FIFTEENTH EDITION, AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. BRIDGE MEMBERS ARE FABRICATED FROM HIGH STRENGTH, LOW ALLOY, ENHANCED ATMOSPHERIC CORROSION RESISTANT ASTM A847 COLD-FORMED WELDED SQUARE AND RECTANGULAR TUBING, AND ASTM A588, ASTM A606, OR ASTM A709-50W PLATE AND STRUCTURAL SHAPES (Fy=50,000 PSI).
3. THE GAS METAL ARC WELDING PROCESS OR FLUX CORED ARC WELDING PROCESS WILL BE USED. WELDING TO BE IN ACCORDANCE WITH AWS D1.1.
5. ALL TOP AND BOTTOM CHORD SHOP SPLICES TO BE COMPLETE PENETRATION TYPE WELDS. WELD BETWEEN TOP CHORD AND END VERTICAL SHALL BE AS DETAILED.
6. UNLESS OTHERWISE NOTED, WELDED CONNECTIONS SHALL BE FILLET WELDS (OR HAVE THE EFFECTIVE THROAT OF A FILLET WELD) OF A SIZE EQUAL TO THE THICKNESS OF THE LIGHTEST GAGE MEMBER IN THE CONNECTION. WELDS SHALL BE APPLIED AS FOLLOWS:
   A. BOTH ENDS OF VERTICALS, DIAGONALS, AND FLOOR BEAMS SHALL BE WELDED ALL AROUND.
   B. BRACE DIAGONALS WILL BE WELDED ALL AROUND.
   C. MISCELLANEOUS NON-STRUCTURAL MEMBERS (DEFINED AS MEMBERS WITH CONNECTION WELDS NOT SPECIFICALLY DETAILED) WILL BE STITCH WELDED TO THEIR SUPPORTING MEMBERS, BUTT WELDED AT SHOP SPLICE LOCATIONS, AND ARE TO BE EXEMPT FROM THE REQUIREMENTS OF AWS D1.1.
7. BRIDGE DESIGN WAS ONLY BASED ON COMBINATIONS OF THE FOLLOWING LOADS WHICH WILL PRODUCE MAXIMUM CRITICAL MEMBER STRESSES.
   A. 100 PSF UNIFORM LIVE LOADING ON THE FULL DECK AREA OR ONE 1,000 LB CONCENTRATED LOAD DISTRIBUTED ON ANY 2.5' x 2.5' AREA ON THE BRIDGE. THE CONCENTRATED LOAD SHALL BE LOCATED SO AS TO PRODUCE THE MAXIMUM STRESSES IN EACH MEMBER, INCLUDING DECKING.
   B. 40 PSF ULTIMATE WIND LOAD ON THE FULL HEIGHT OF THE BRIDGE, AS IF ENCLOSED.
   C. 20 PSF UPWARD FORCE APPLIED AT THE WINDWARD QUARTER POINT OF THE TRANSVERSE BRIDGE WIDTH (AASHTO 3.8.2).
8. CLEANING: ALL EXPOSED SURFACES OF STEEL SHALL BE CLEANED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL SURFACES PREPARATION SPECIFICATIONS NO. 7 BRUSH-OFF BLAST CLEANING. SSPC-SP7-LATEST EDITION.
9. MINIMUM MATERIAL THICKNESS OF 3/16" ON ALL STRUCTURAL MEMBERS.



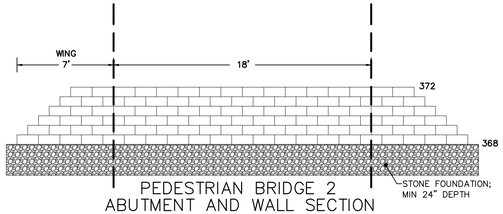
PRATT TRUSS



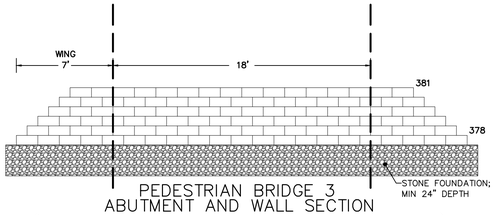
ABUTMENT SECTION



SECTION

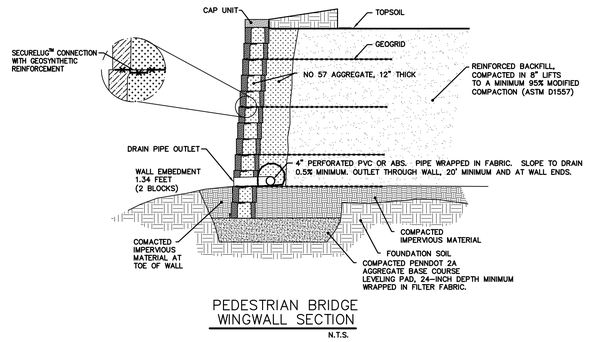


PEDESTRIAN BRIDGE 2
ABUTMENT AND WALL SECTION
(NEAR LIMEKILN ROAD, WEST OF UNITS 5-1)



PEDESTRIAN BRIDGE 3
ABUTMENT AND WALL SECTION
(NEAR LIMEKILN ROAD, WEST OF BUILDING 4B)

SCALE
5 0 5



PEDESTRIAN BRIDGE
WINGWALL SECTION
N.T.S.

PLANNING • ENGINEERING • SURVEYING
NEW MEMBER, P.O. BOX 4
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

PEDESTRIAN BRIDGE DETAILS

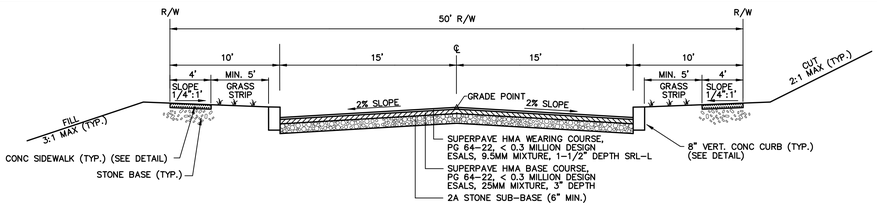
FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\Field
SCALE : N.T.S.
DWG. FILE : Y:\2019\319582.dgn\319582\Dwg\Plans\Pre-Final\

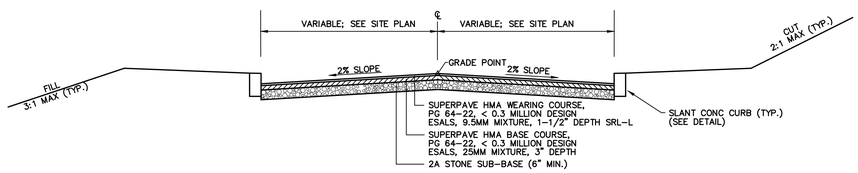
SHEET 80 of 89



NOTE:

1. SUBGRADE SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR FOR FILL AREAS LESS THAN OR EQUAL TO 5 FEET AND 98% FOR FILL AREAS GREATER THAN 5 FEET. ALL UNSTABLE MATERIAL SHALL BE REPLACED. MATERIAL IS TO BE PLACED IN 8" LOOSE (6" COMPACTED) LIFTS.
2. INSTALL PAVEMENT BASE DRAIN AT LOW POINTS AND TIE INTO STORM INLET AT LOW POINT. SEE GRADING PLAN FOR LOCATIONS.
3. SIDEWALK TO BE CONSTRUCTED WHERE SHOWN ON SITE PLAN.

TYPICAL PROPOSED PUBLIC STREET SECTION
NTS

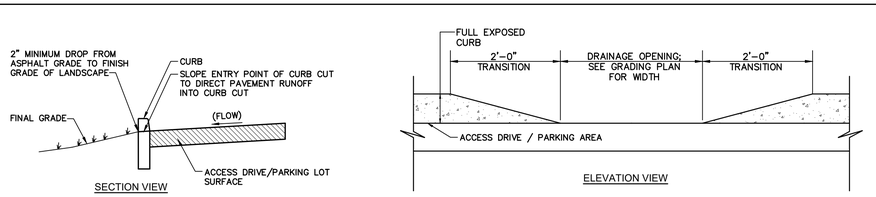


NOTE:

1. SUBGRADE SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR FOR FILL AREAS LESS THAN OR EQUAL TO 5 FEET AND 98% FOR FILL AREAS GREATER THAN 5 FEET. ALL UNSTABLE MATERIAL SHALL BE REPLACED. MATERIAL IS TO BE PLACED IN 8" LOOSE (6" COMPACTED) LIFTS.
2. SIDEWALK TO BE CONSTRUCTED WHERE SHOWN ON SITE PLAN.

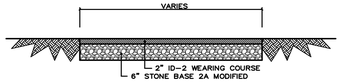
TYPICAL PRIVATE ACCESS DRIVE SECTION
NTS

* SIDEWALK TO BE CONSTRUCTED WHERE SHOWN ON SITE PLAN.

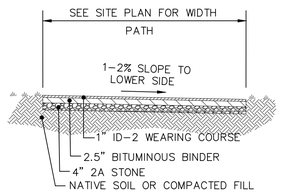


CURB CUT FOR DRAINAGE DETAIL
NTS

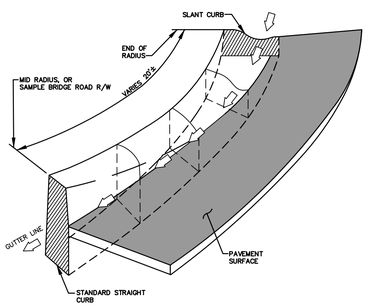
NOTE: SEE GRADING OR SITE PLAN FOR CURB CUT LOCATIONS AND WIDTH OF OPENINGS.



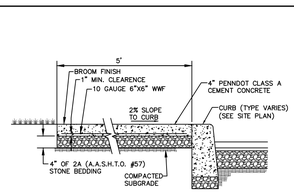
TYPICAL PRIVATE RESIDENCE DRIVEWAY SECTION
NTS



ASPHALT PATH SECTION
NTS



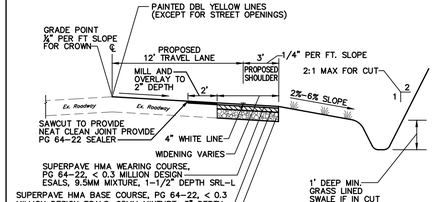
CURB TYPE TRANSITION
NTS



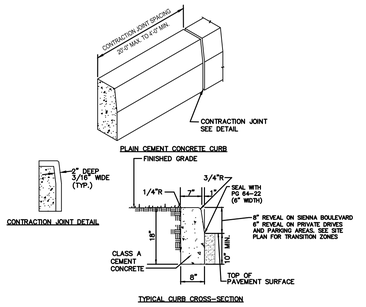
NOTES:
1. PROVIDE 1/2" EXPANSION JOINTS AT 20' C. TO C. (MAX.) PROVIDE TRANSVERSE CONTROL SCORE JOINTS AT 5' C. TO C. (MIN.)

2. TRANSVERSE DUMMY JOINTS SHALL BE SPACED IN UNIFORM LENGTHS OF NOT MORE THAN FIVE (5) FEET AND SHALL BE 1/8" INCHES WIDE AND ONE (1) INCH DEEP AND MAY BE EITHER HAND-FORMED OR SAWED JOINTS.

TYPICAL CONCRETE WALK ALONG PRIVATE ACCESS DRIVES AND PARKING COURTS
NTS

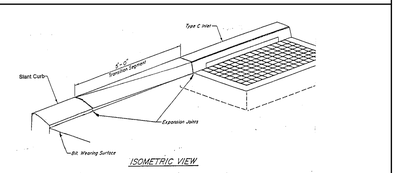


TYPICAL LIMEKILN ROAD WIDENING SECTION
NTS



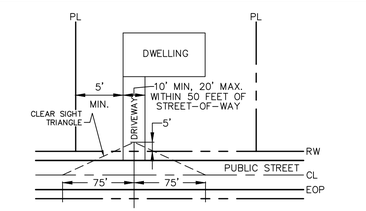
NOTES:
1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUB. 408, SECTION 630 FOR PLAIN CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CONCRETE CURB AND PLAIN CONCRETE CURB GUTTER.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS; MAXIMUM OF 20' SPACING.
3. PLACE 3/4-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY.

VERTICAL CONCRETE CURB DETAIL
NTS



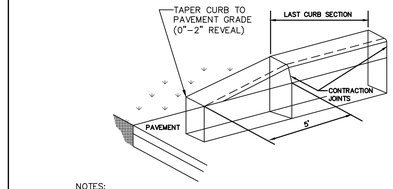
NOTES:
1. WHERE THERE IS A DRAIN INLET ON THE CURB RETURN OF A PRIVATE STREET WITH A PUBLIC STREET, THE CURB TRANSITION SHALL OCCUR FROM THE INLET HOOD AWAY FROM THE PUBLIC STREET.

SLANT CURB TRANSITION TO TYPE "C" INLET/VERTICAL CURB
NTS



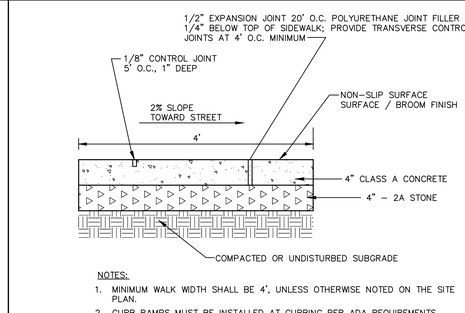
NOTES:
1. A MAXIMUM OF TWO DRIVEWAY CONNECTIONS IS PERMITTED PER LOT BUT MUST BE NO LESS THAN 100 FEET APART MEASURED FROM THE CENTER LINE OF EACH DRIVEWAY.
2. DRIVEWAYS SHALL NOT CONNECT WITH A PUBLIC STREET WITHIN 40 FEET OF THE RIGHT-OF-WAY OF AN INTERSECTING STREET.
3. DRIVEWAYS SHALL NOT BE LOCATED WITHIN 5 FEET OF A FIRE HYDRANT.
4. DRIVEWAYS SHALL BE SET BACK MINIMUM OF 5 FEET FROM A SIDE OR REAR LOT LINE, UNLESS A COMMON LOCATION IS PROPOSED.
5. THE SLOPE OF A DRIVEWAY WITHIN THE PUBLIC STREET RIGHT-OF-WAY SHALL NOT EXCEED 4% SLOPE.
6. DRIVEWAYS WITHIN 50 FEET OF THE PUBLIC STREET RIGHT-OF-WAY SHALL BE MINIMUM 10 FEET WIDE AND MAXIMUM 20 FEET WIDE.
7. DRIVEWAY ENTRANCES OR APRONS WITHIN THE PUBLIC STREET RIGHT-OF-WAY SHALL BE PAVED FOR THEIR FULL WIDTH WITH EITHER CONCRETE, OR THE SAME PAVING STRUCTURE OF THE ADJACENT STREET.

SINGLE FAMILY RESIDENTIAL DRIVEWAY DETAIL
NTS



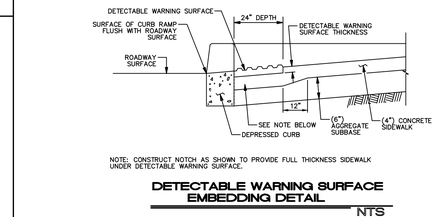
NOTES:
1. ALL CONSTRUCTION MATERIALS AND STRUCTURES SHALL BE IN CONFORMANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION AS AMENDED.
2. ALL CURBING SHALL BE IN CONFORMANCE WITH RC-64M STANDARDS
3. CURB TAPER SHALL BE PROVIDED AT CURB ENDS WITH A 5' TRANSITION AND A 0"-2" TERMINUS REVEAL.

VERTICAL CURB TERMINUS DETAIL
NTS



NOTES:
1. MINIMUM WALK WIDTH SHALL BE 4', UNLESS OTHERWISE NOTED ON THE SITE PLAN.
2. CURB RAMPS MUST BE INSTALLED AT CURBING PER ADA REQUIREMENTS.
3. SEE THE SITE PLAN FOR PASSING ZONES AT 5' WIDE PER ADA STANDARDS.

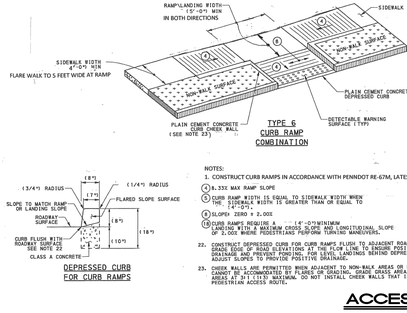
PUBLIC STREET CONCRETE SIDEWALK DETAIL
NTS



NOTE: CONSTRUCT NOTCH AS SHOWN TO PROVIDE FULL THICKNESS SIDEWALK UNDER DETECTABLE WARNING SURFACE.

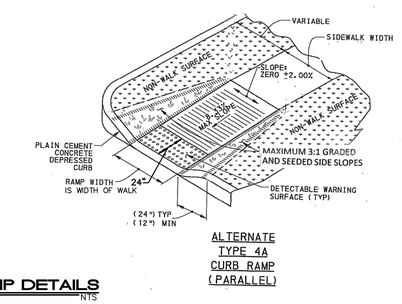
DETECTABLE WARNING SURFACE EMBEDDING DETAIL
NTS

IN-LINE ACCESSIBLE RAMP AT PARKING SPACES DETAIL
NTS

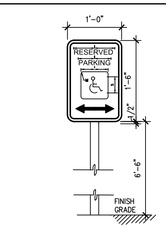


NOTES:
1. CONSTRUCT CURB RAMPS IN ACCORDANCE WITH PENNDOT RE-67M, LATEST EDITION.
4. 8.33% MAX RAMP SLOPE
5. CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO 5'-0".
6. SLOPE= ZERO ± 2.00%
10. CURB RAMPS REQUIRE A 5'-0" MINIMUM LANDING AT THE TOP OF THE CROSS AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS.
22. CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. SHOULD GRADE OF ROAD ELEVATIONS IN THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL LANDINGS BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE.
23. CHEEK WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE BREAKS APPEAR ON OTHER NON-WALK AREAS AT 31.11% MAXIMUM. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE.

ACCESSIBLE RAMP DETAILS
NTS



ALTERNATE TYPE 4A CURB RAMP (PARALLEL)



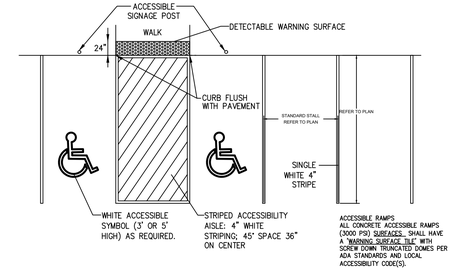
NOTES:
1. ALL SIGNAGE TO BE FROM LATEST EDITION OF MUTCD.

2. ONE (1) SIGN REQUIRED FOR EACH ACCESSIBLE PARKING SPACE.

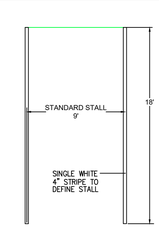
3. INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)

4. SIGN MAY BE MOUNTED ON BUILDING/WALL, AT PROPER HEIGHT, IF ALIGNED WITHIN 12" OF CENTER OF PARKING SPACE.

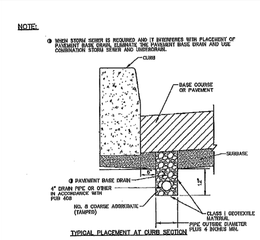
ACCESSIBLE PARKING SIGNAGE
NTS



ACCESSIBLE PARKING SPACE MARKING DETAIL
NTS



TYP. PARKING SPACE MARKING DETAIL
NTS



PAVEMENT BASE DRAIN DETAIL
NTS

NO.	DATE	DESCRIPTION	BY
1	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

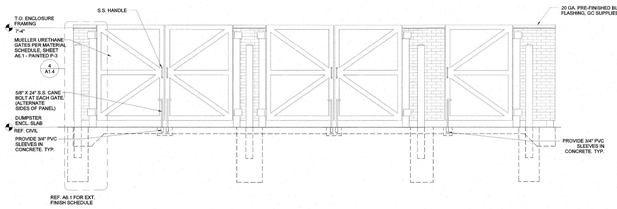
MISCELLANEOUS DETAILS

FOR

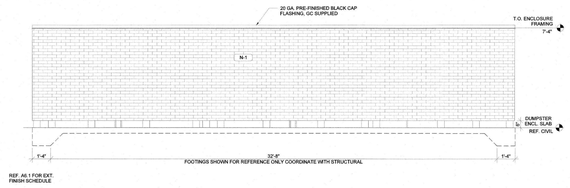
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

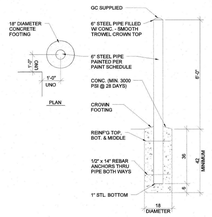
PROJECT NO. 319582
SURVEY BOOK :
SCALE : 1" = 50'
DWG. Y:\2019\319582.dgn\319582-MD-DETAILS
FILE : dea3\Plans\Fire-Finish\
SHEET 81 of 89



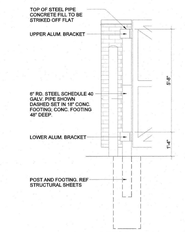
9 FRONT DUMPSTER ENCL. ELEVATION
3/8" = 1'-0"



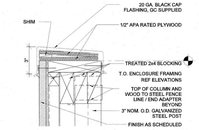
8 REAR DUMPSTER ENCL. ELEVATION
3/8" = 1'-0"



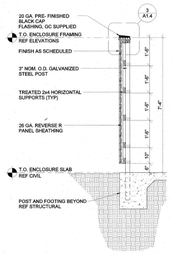
5 TYPICAL BOLLARD SECTION
1/2" = 1'-0"



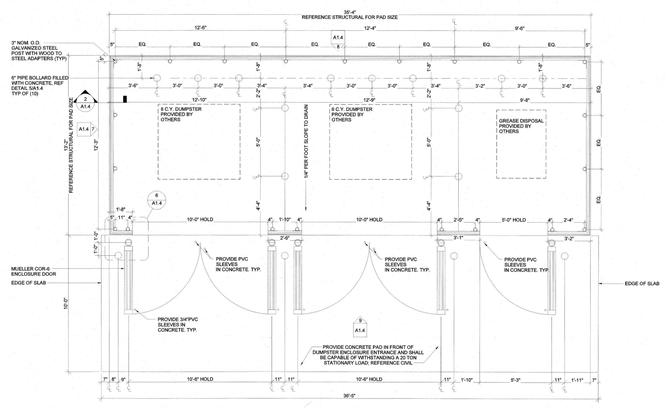
4 GATE BOLLARD DETAIL
1/2" = 1'-0"



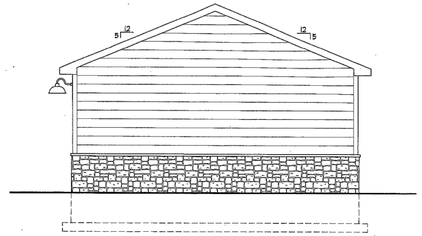
3 DETAIL - COPING
3" = 1'-0"

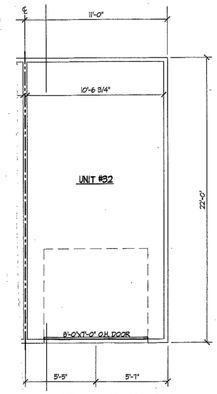


2 DUMPSTER ENCL. WALL SECTION
1/2" = 1'-0"

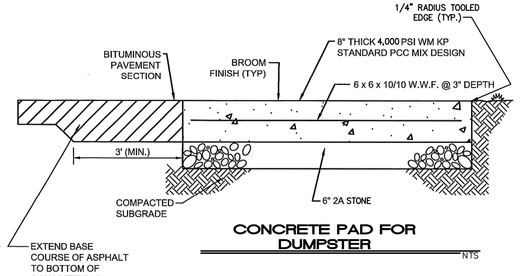


1 DUMPSTER ENCLOSURE PLAN
3/8" = 1'-0"





ENCLOSED GARAGE TYPICAL UNIT
NTS



CONCRETE PAD FOR DUMPSTER
NTS

PRIVATE ACCESS DRIVE PARKING RESTRICTION SIGNS
NTS

2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG
NO.	DATE	DESCRIPTION	BY

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

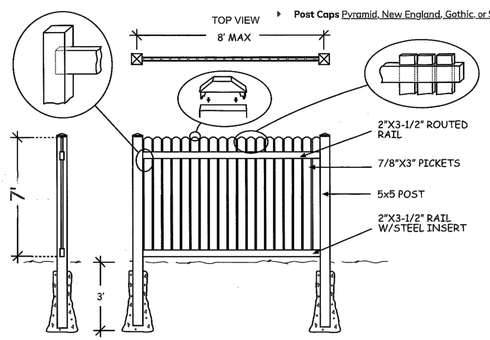
ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

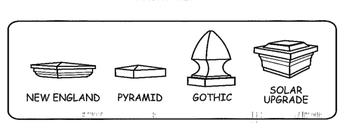
SEAL

Hilton Head Vinyl/PVC

the Hilton Head features pickets going through the top rail.

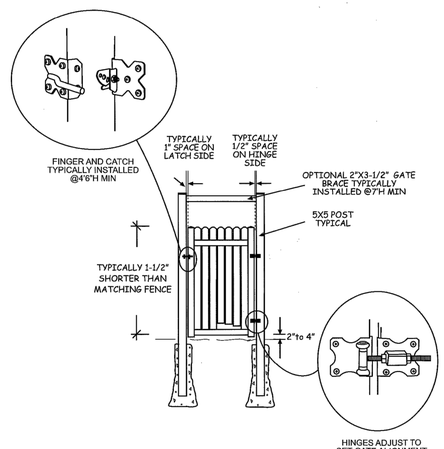
- **Maintenance-Free** Yes
- **Warranty** Lifetime Warranty
- **Privacy Level** Semi-Privacy
- **Vinyl/PVC Colours** White, Adobe, or Tan
- **Post Caps** Pyramid, New England, Gothic, or Solar



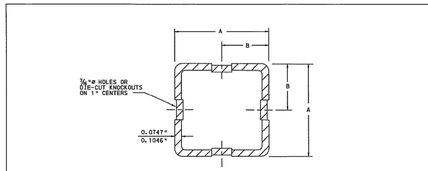


CHOICE OF CAP

Hilton Head Vinyl/PVC Gate



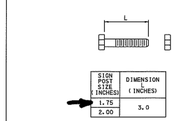
NOTES:
• All dimensions are nominal.
• Clearance below the fence isn't included in height calculations.



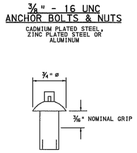
SIGN POST			ANCHOR POST			ANCHOR SLEEVE *			SPLICE SLEEVE		
SIZE	DIMENSION A	B	THICK.	DIMENSION A	B	THICK.	DIMENSION A	B	THICK.	DIMENSION A	B	THICK.
1.75"	1.75	1.75	0.075"	2.00"	2.00	0.105"	2.25"	2.25	0.105"	1.50"	1.50	0.075"
2.00"	2.00	2.00	0.075"	2.25"	2.25	0.105"	2.50"	2.50	0.105"	1.75"	1.75	0.075"

* REQUIRED FOR ALL POST INSTALLATIONS

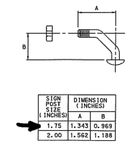
SQUARE STEEL POSTS SYSTEM C
O.0747" - 60 KSI
O.1046" - 33 KSI



3/8" - 16 UNC ANCHOR BOLTS & NUTS
CADMIUM PLATED STEEL, ZINC PLATED STEEL OR ALUMINUM



3/8" DRIVE RIVET
CADMIUM PLATED STEEL, ZINC PLATED STEEL OR ALUMINUM



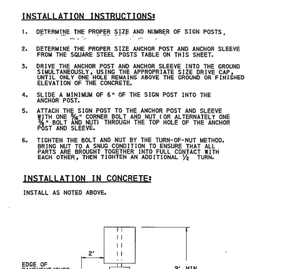
5/16" - 18 UNC CORNER BOLTS & NUTS
CADMIUM PLATED STEEL, ZINC PLATED STEEL OR ALUMINUM

INSTALLATION INSTRUCTIONS:

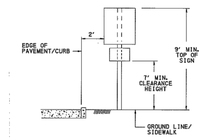
1. DETERMINE THE PROPER SIZE AND NUMBER OF SIGN POSTS, ANCHOR POSTS AND SLEEVES.
2. DETERMINE THE PROPER SIZE ANCHOR POST AND ANCHOR SLEEVE FROM THE SQUARE STEEL POSTS TABLE ON THIS SHEET.
3. DRIVE THE ANCHOR POST AND ANCHOR SLEEVE INTO THE GROUND SIMULTANEOUSLY, USING THE APPROPRIATE SIZE DRIVE CAP, UNTIL ONLY ONE HOLE REMAINS ABOVE THE GROUND OR FINISHED ELEVATION OF THE CONCRETE.
4. SLIDE A MINIMUM OF 6" OF THE SIGN POST INTO THE ANCHOR POST.
5. ATTACH THE SIGN POST TO THE ANCHOR POST AND SLEEVE WITH ONE 5/16" CORNER BOLT AND NUT (OR ALTERNATELY ONE 3/8" BOLT AND NUT) THROUGH THE TOP HOLE OF THE ANCHOR POST AND SLEEVE.
6. TIGHTEN THE BOLT AND NUT BY THE TURN-OF-NUT METHOD. BRING NUT TO A SNUG CONDITION TO ENSURE THAT ALL PARTS ARE BROUGHT TOGETHER INTO FULL CONTACT WITH EACH OTHER, THEN TIGHTEN AN ADDITIONAL 1/2 TURN.

INSTALLATION IN CONCRETE:

INSTALL AS NOTED ABOVE.



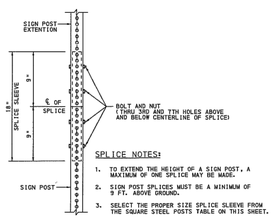
INSTALLATION DETAIL



BUSINESS OR RESIDENTIAL AREA

NOTES:

1. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PUBL. 408.
2. SIGN POSTS AND SPLICE SLEEVES SHALL HAVE 3/8"ø DIAMETER HOLES OR DIE-CUT KNOCKOUTS ON 1" CENTERS ON ALL FOUR SIDES. ANCHOR POSTS AND ANCHOR SLEEVES SHALL HAVE 3/8"ø DIAMETER HOLES ON 1" CENTERS ON ALL FOUR SIDES.
3. BOLTS AND NUTS SHALL BE ASTM A 307, GRADE B.
4. DRIVE RIVETS MAY BE USED TO FASTEN SIGN BLANKS TO THE SIGN POST.



SPLICE NOTES:

1. TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE.
2. SIGN POST SPLICES MUST BE A MINIMUM OF 9 FT. ABOVE GROUND.
3. SELECT THE PROPER SIZE SPLICE SLEEVE FROM THE SQUARE STEEL POSTS TABLE ON THIS SHEET.

SPLICE DETAIL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF MAINTENANCE AND OPERATIONS

POST-MOUNTED SIGNS, TYPE B

STEEL SQUARE POSTS (SYSTEM C) ERECTION DETAILS

RECOMMENDED JUN.13, 2013 CHIEF, TRAFFIC ENGINEERING AND PERMITS SECTION

RECOMMENDED JUN.13, 2013 CHIEF, SIGNING/SAFETY AND TRAFFIC OPERATIONS SECTION

SHT. 3 OF 9
TC-8702B

VINYL FENCE DETAIL
NTS

SEAL

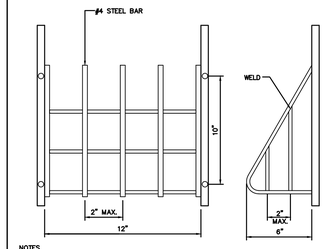
PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN
MISCELLANEOUS DETAILS
FOR
SIENNA
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.su\319582su\field
SCALE :
DWG : Y:\2019\319582.dph\319582\dwg\Plans\Pre-Final\82-DETAILS
FILE :

SHEET 82 & 89

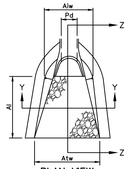
OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE R--	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
A	18"	4	18	8.0	4.5	12.5
C	18"	4	18	8.0	4.5	12.5
D	18"	4	18	8.0	4.5	12.5
E	18"	4	18	8.0	4.5	12.5
F	15"	4	18	12.0	3.8	15.8
G	15"	3	9	8.0	3.8	11.8
1-1	15"	3	9	8.0	3.8	11.8
1-4	15"	3	9	8.0	3.8	11.8
3-1	15"	3	9	8.0	3.8	11.8
4-1	15"	3	9	8.0	3.8	11.8
5-1	15"	5	27	13.0	3.8	16.8
7-1	30"	4	18	16.0	7.5	23.5
8-1	18"	4	18	8.0	4.5	12.5
8-6	18"	4	18	8.0	4.5	12.5
9-1	15"	4	18	10.0	3.8	13.8
11-1	15"	3	9	8.0	3.8	11.8
12-A	18"	4	18	8.0	4.5	12.5
12-1	36"	5	27	19.0	9.0	28.0
13-1	15"	3	9	8.0	3.8	11.8
15-1	15"	3	9	8.0	3.8	11.8
16-1	15"	3	9	8.0	3.8	11.8
17-1	15"	3	9	8.0	3.8	11.8
17-3	15"	3	9	8.0	3.8	11.8
17-6	15"	3	9	8.0	3.8	11.8
19-1	15"	3	9	8.0	3.8	11.8
20-1	18"	3	9	8.0	3.8	11.8
21-1	18"	4	18	8.0	4.5	12.5
21-8	18"	4	18	10.0	4.5	14.5
22-1	15"	3	9	8.0	3.8	11.8
22-5	15"	3	9	8.0	3.8	11.8
23-1	15"	3	9	8.0	3.8	11.8
24-1	15"	3	9	8.0	3.8	11.8
25-A	15"	3	9	8.0	3.8	11.8
25-1	18"	4	18	8.0	4.5	12.5
26-A	15"	3	9	8.0	3.8	11.8
26-1	18"	4	18	14.0	4.5	18.5
27-A	18"	4	18	8.0	4.5	12.5
27-1	15"	3	9	8.0	3.8	11.8
27-11A	15"	3	9	8.0	3.8	11.8
28-1	15"	3	9	8.0	3.8	11.8
28-4	15"	3	9	8.0	3.8	11.8
28-8	15"	4	18	12.0	3.8	15.8
30-1	15"	3	9	8.0	3.8	11.8
31-1	24"	4	18	12.0	6.0	18.0
32-1	15"	3	9	8.0	3.8	11.8
32-6	15"	3	9	8.0	3.8	11.8
33-1	15"	3	9	8.0	3.8	11.8
34-1	15"	3	9	8.0	3.8	11.8
35-1	18"	4	18	12.0	4.5	16.5
35-7	15"	3	9	8.0	3.8	11.8
35-9	15"	3	9	8.0	3.8	11.8
36-1	15"	3	9	8.0	3.8	11.8
37-1	18"	4	18	12.0	4.5	16.5
37-A	18"	3	9	8.0	3.8	11.8
38-1	15"	3	9	8.0	3.8	11.8
38-6	15"	3	9	8.0	3.8	11.8
39-1	15"	3	9	8.0	3.8	11.8
40-1	15"	3	9	8.0	3.8	11.8
42-1	15"	3	9	8.0	3.8	11.8

NTS



NOTES
1. CONSTRUCT TRASH RACK OF STAINLESS STEEL.
2. INSTALL/ CENTER TRASH RACK OVER THE ORIFICE; ATTACH TO ENDWALL/ INLET BOX/ ORIFICE PLATE.

ORIFICE TRASH RACK DETAIL
NTS

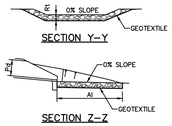


PLAN VIEW

NOTES:

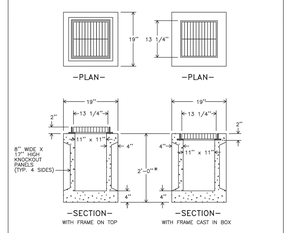
ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

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



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

MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.

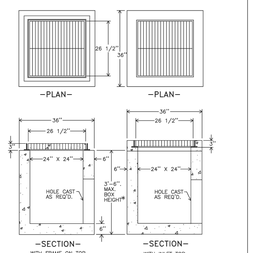


*RISER SECTIONS AVAILABLE

12" X 12" CATCH BASIN — DWG. CB-1

CAN ONLY BE USED FOR PRIVATE STRUCTURES OUTSIDE OF PUBLIC RIGHT-OF-WAY

MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.



*RISER SECTIONS AVAILABLE

24" X 24" CATCH BASIN — DWG. CB-7

CAN ONLY BE USED FOR PRIVATE STRUCTURES OUTSIDE OF PUBLIC RIGHT-OF-WAY

Advanced Pipe Products

CORRUGATED HDPE FLARED END SECTION SPECIFICATIONS

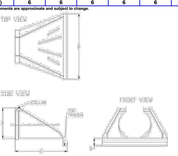
Scope
This specification describes 12- through 36-inch (300 to 900mm) Flared End Sections for use in culvert and drainage outlet applications for Corrugated HDPE Pipe.

Requirements
The invert of the pipe and the end section shall be at the same elevation as the Flared End Section and shall be high density polyethylene meeting ASTM D3350-00 with a minimum cell classification of 213320C. Each end section shall have a carbon black additive for UV protection.

Installation
Installation shall be in accordance with those issued by state or local authorities. Visit www.4ppe.com for Advanced Pipe Products' most recent recommended installation instructions.

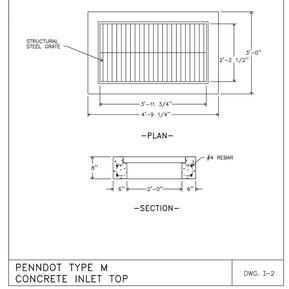
Dimensional Reference	Pipe Diameter in (mm) 12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)
A (in)	42	42	59	59	82	82
B (in)	14	17	21	27	34	41
C (in)	34	34	48	48	68	68
D (in)	6	6	6	6	6	6

All measurements are approximate and subject to change.



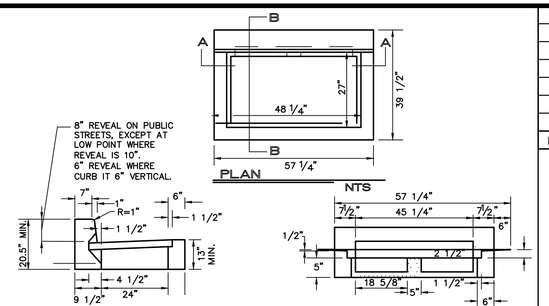
Advanced Pipe Products
1526 Gienwaple Dr. Bowling Green, OH. 43402
Phone: 419-509-1126 Fax: 202-449-2916 www.4ppe.com

MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.



PENNDOT TYPE M CONCRETE INLET TOP — DWG. I-2

CAN ONLY BE USED FOR PRIVATE STRUCTURES OUTSIDE OF PUBLIC RIGHT-OF-WAY

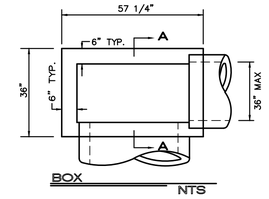


PLAN — NTS

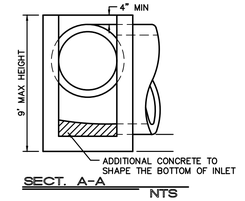
SECTION A-A — NTS

SECTION B-B — NTS

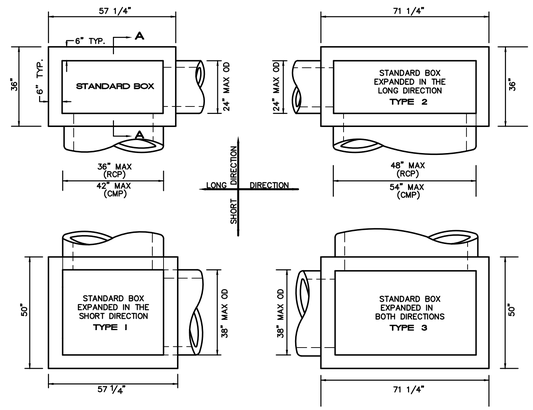
TYPE "C" INLET TOP
NTS

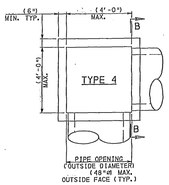


BOX — NTS



SECT. A-A — NTS





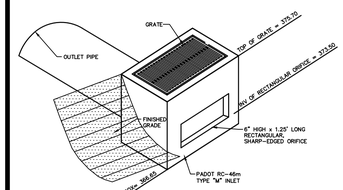
INLET BOXES
NTS

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

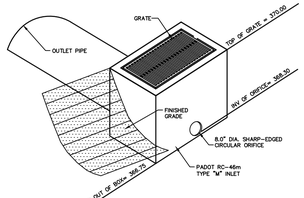
ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

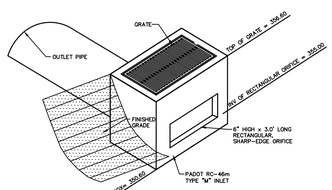


STORM FACILITY #12 OUTLET STRUCTURE (12-B)
NTS

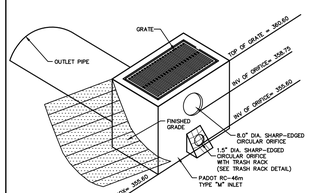
NOTE: THERE ARE TWO IDENTICAL OUTLET STRUCTURES SIDE BY SIDE



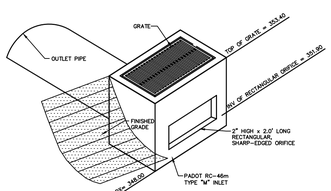
STORM FACILITY #38 OUTLET STRUCTURE (38-B)
NTS



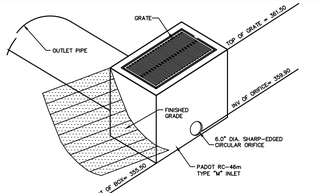
STORM FACILITY #27 OUTLET STRUCTURE (27-B)
NTS



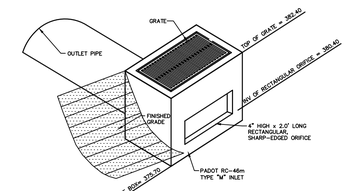
STORM FACILITY #25 OUTLET STRUCTURE (25-B)
NTS



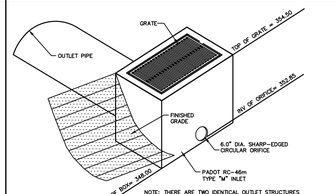
STORM FACILITY #10 OUTLET STRUCTURE (10-B)
NTS



STORM FACILITY #28 OUTLET STRUCTURE (28-B)
NTS

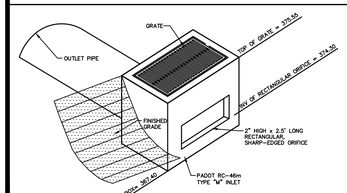


STORM FACILITY #7 OUTLET STRUCTURE (G2)
NTS

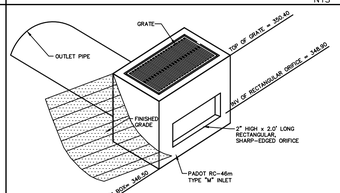


NOTE: THERE ARE TWO IDENTICAL OUTLET STRUCTURES

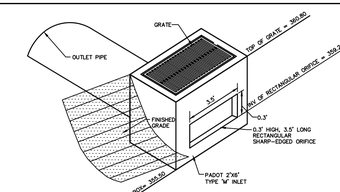
STORM FACILITY #26 OUTLET STRUCTURE (26-B)
NTS



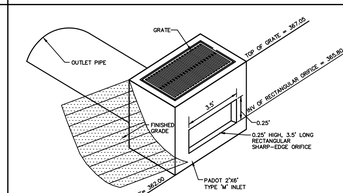
STORM FACILITY #24 OUTLET STRUCTURE (24-B)
NTS



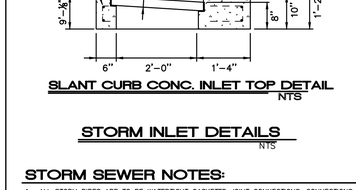
STORM FACILITY #9 OUTLET STRUCTURE (9-B)
NTS



STORM FACILITY #35 OUTLET STRUCTURE (35-B)
NTS



STORM FACILITY #37 OUTLET STRUCTURE (37-B)
NTS

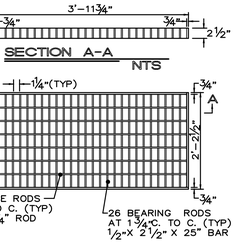


SLANT CURB CONC. INLET TOP DETAIL
NTS

STORM INLET DETAILS
NTS

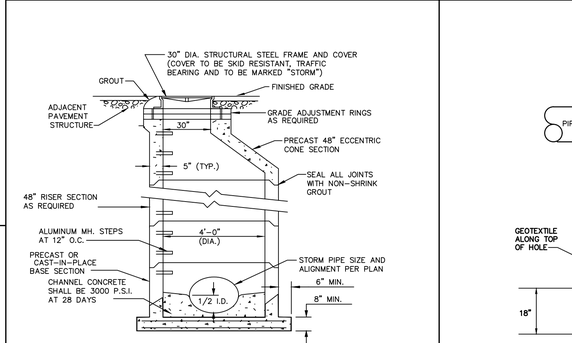
STORM SEWER NOTES:

1. ALL STORM PIPES ARE TO BE WATERTIGHT GASKETED JOINT CONNECTIONS. CONNECTIONS INTO INLETS SHALL BE WATERTIGHT. ALL PIPES ENTERING OR EXITING INLETS SHALL BE CUT FLUSH WITH THE INLET WALL.
2. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATION AS SET FORTH IN THE LATEST EDITION OF PENNDOT PUBLICATION 408 AND AS DETAILED ON THE LATEST EDITION OF DRAWING RC-34M OF PENNDOT PUBLICATION 72M – STANDARDS FOR ROADWAY CONSTRUCTION, OR THEIR SUCCESSOR PUBLICATIONS PERTAINING TO THE SAME SUBJECT MATTER.
3. HDPE = SMOOTH INTERIOR CORRUGATED PLASTIC PIPE.
4. STORM INLETS OVER 5 FEET IN DEPTH SHALL BE EQUIPPED WITH PENNDOT RC-39M LADDER RUNGS.
5. ALL STORM INLETS SHALL HAVE HEAVY DUTY BICYCLE SAFE GRATES CONSISTENT WITH PENNDOT PUBLICATION 72M.
6. STORM INLETS OUTSIDE OF PUBLIC STREET RIGHTS-OF-WAY MAY USE PENNDOT APPROVED OR EQUIVALENT PRODUCTS PRODUCED BY MONARCH PRODUCTS COMPANY, INC. OF YORK HAVEN, PA. SUCH AS WITH AN 8" THICK TOP.
7. ALL INLETS SHALL HAVE WEEP HOLES PLACED AT THE APPROPRIATE ELEVATIONS TO COMPLETELY DRAIN THE SUBGRADE PRIOR TO PLACING THE BASE COURSE AND SURFACE COURSE.



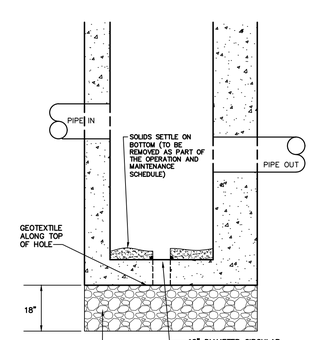
NOTE: 1. ALL INLET GRATES SHALL BE BICYCLE SAFE.

BICYCLE SAFE STEEL GRATE
NTS



NOTES: 1. CONSTRUCT MANHOLE IN ACCORDANCE WITH PENN DOT PUBLICATION 72, RC-39 FOR PRECAST CONCRETE MANHOLES.
2. ALL MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PENN DOT PUBLICATION 408, LATEST EDITION.
3. MANHOLE COVERS SHALL BE THE BOLT-DOWN TYPE.

TYPICAL STORM SEWER MANHOLE
NTS



NOTES:
1. SEE PROFILE FOR INLET LOCATIONS AND SPECIFIC ELEVATIONS.

WATER QUALITY INLET WITH SUMP BOTTOM
NTS

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

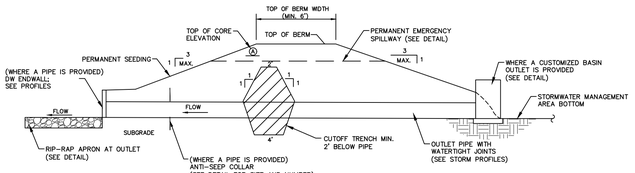
STORMWATER DETAILS

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

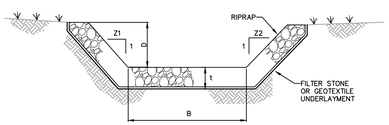
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG : Y:\2019\319582.dgn\319582-BD-DETAILS
FILE : dwg\Plans\Pre-Final\
SHEET 83 & 89



NOTES:
1. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED ON ALL AREAS EFFECTED BY THE BASIN CONSTRUCTION (I.E., BASIN FLOOR, SIDE SLOPES, TOP OF BERM, AND THE LIKE) TO ALLOW FOR THE ESTABLISHMENT OF VEGETATION.
2. ALL FILL MATERIAL TO BE UTILIZED IN EMBANKMENT AREAS SHALL BE SELECTED FROM THE MORE IMPERVIOUS MATERIALS AVAILABLE AT THE SITE AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIAL MAXIMUM DRY DENSITY AS DETERMINED BY A STANDARD PROCTOR TEST.
3. BACKFILL TRENCH AROUND DISCHARGE PIPE WITH RELATIVELY IMPERVIOUS SOIL (NO STONE BACKFILL).
4. SOILS ACCEPTABLE FOR EMBANKMENT CONSTRUCTION SHOULD BE LIMITED TO GC, GM, SM, CL, OR ML AS DESCRIBED IN ASTMD-2487 (UNIFIED SOILS CLASSIFICATION).
5. ALL BASIN EMBANKMENTS SHOULD BE COMPACTED BY, THE LOOSE LIFT THICKNESS SHOULD BE 9 INCHES OR LESS, DEPENDING ON ROLLER SIZE, AND THE MAXIMUM PARTICLE SIZE IS 6 INCHES OR LESS – 2/3 LIFT THICKNESS. FIVE PASSES OF THE COMPACTION EQUIPMENT OVER THE ENTIRE SURFACE OF EACH LIFT IS REQUIRED. EMBANKMENT COMPACTION TO VISIBLE NON-MOVEMENT IS ALSO REQUIRED.

STORM FACILITY #	A ELEVATION
1	386.3
2	399.6
3	401.8
4	382.7
5	367.0
6	364.6
7	382.4
8	355.6
9	350.4
10	353.6
12	375.7
13	376.2
15	383.6
16	393.3
17	410.2
18	396.4
19	386.8
20	376.9
21	374.3
22	371.7
23	369.0
24	375.3
25	360.6
26	354.7
27	356.8
28	361.6
30	357.8
31	350.4
32	374.7
33	368.7
34	363.8
35	361.0
36	372.7
37	367.3
38	369.9
39	374.9
40	381.0
42	366.4

TYPICAL STORM FACILITY BERM CONSTRUCTION
NTS



(LOOKING DOWNSTREAM)
CHANNEL CROSS-SECTION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	RIPRAP GRADATION (R-__)	RIPRAP DEPTH t (IN)	UNDERLAYMENT	UNDER-LAYMENT THICKNESS
11, SEG. 1	ENTIRE SWALE	5.0	1.2	3	3	R-5	27"	AASHTO #3	6"
11, SEG. 2	ENTIRE SWALE	5.0	1.2	3	3	R-5	27"	AASHTO #3	6"
14	ENTIRE SWALE	4.0	1.3	3	3	R-4	18"	AASHTO #3	6"
15	ENTIRE SWALE	4.0	1.1	3	3	R-4	18"	AASHTO #3	6"

NOTES:

FILTER STONE UNDERLAYMENT FOR BED SLOPES ≥ 0.10 FT/FT (10 %) SHALL BE USED.

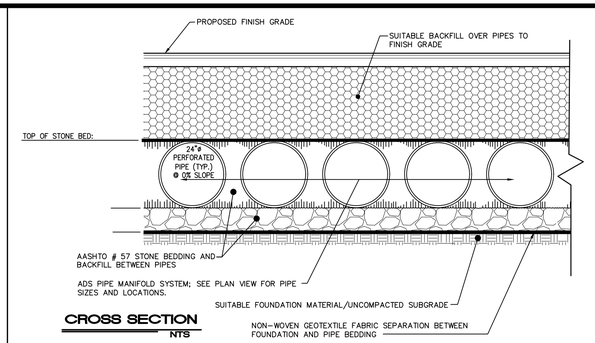
CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.

DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

THE MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

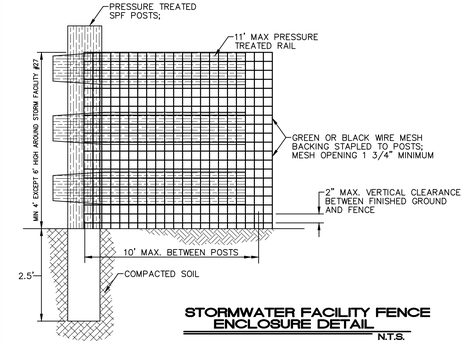
STANDARD CONSTRUCTION DETAIL #6-3
RIPRAP CHANNEL
NOT TO SCALE



CROSS SECTION
NTS

1. All cross pipes in the underground stormwater detention system shall be laid at 0% slope.
2. All pipe connections hall be watertight.
3. If soft or unsuitable materials are encountered for the foundation area, remove poor soils down to a suitable foundation, and then build up the appropriate elevation with a competent backfill, such as shale or 2A stone.
4. Place backfill over pipes in loose 8-inch lifts and compact to 90% ASSHTO T99 standard proctor density, or until no further yielding of the material is observed under the computer roller foot. Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air tamper, vibratory rod or other effective methods.
5. All grate inlets shall be steel bicycle safe.
6. Contact a ADS (Advanced Drainage Systems, Inc or Lane Enterprises) sales representative for elbows, tees, fittings and manifold sections. The spacing of underground pipes can shift slightly if necessary for installation, per manufacturer's specifications.
7. Care should be taken to not drive heavy vehicles over the pipe system until completed backfill has been placed over the system.
8. The contractor and owner shall prevent silt and other debris from entering grate inlets until the project area is permanently stabilized with gravel surfacing and/or vegetation as applicable.
9. If any groundwater seeps into the work area during installation, it shall be removed and treated with a pumped water facility as detailed hereon.

UNDERGROUND PORTION OF DETENTION / INFILTRATION FACILITY
NTS



STORMWATER FACILITY FENCE ENCLOSURE DETAIL
N.T.S.

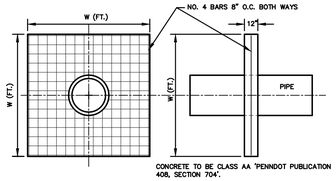
NOTES:
1. SPLIT RAIL FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE PERMANENT STORMWATER BASINS AND INFILTRATION BASINS. SPLIT RAIL FENCE SHALL HAVE THREE RAILS WITH THE HIGHEST RAIL BEING A MINIMUM OF 4' ABOVE GRADE. RAILS SHALL BE LOCATED ON THE BASIN SIDE OF THE FENCE WITH MESH ON THE OUTSIDE OF THE BASIN. GREEN OR BLACK WIRE MESH BACKING SHALL BE STAPLED TO POST. ACCESS TO THE BASIN SHALL BE ACCOMPLISHED BY INSTALLING A GATE. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE FENCE AND THE HOME OWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR THE UPKEEP OF THE FENCE AS WELL AS ALL OTHER ASPECTS OF MAINTENANCE OF THE STORMWATER BASIN.
2. SEE GRADING PLAN FOR FENCE LOCATION.

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

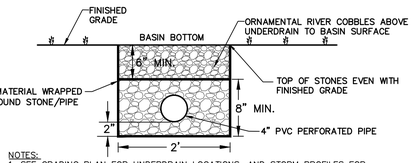


CONCRETE TO BE CLASS AA 'PENNDOT PUBLICATION 408, SECTION 704'.

STORM FACILITY #	W (ft.)	# OF COLLARS	DISTANCE FROM OUTLET STRUCTURE TO FIRST COLLAR (ft.)	COLLAR SPACING (ft.)
3	4.45'	1	10	N/A
4	3.25'	1	15	N/A
7	5.05'	2	12	10
9	3.05'	2	10	10
10	3.05'	2	8	10
12	3.9'	2	8.5	10
17	2.85'	2	10	10
18	2.85'	2	10	10
19	2.45'	1	8	N/A
24	5.05'	1	7	N/A
25	4.65'	2	17	10
26	4.25'	2	9	10
27	3.9'	2	6	10
28	6.3'	2	6	10
35	3.65'	2	7	10
36	4.45'	1	10	N/A
37	3.45'	2	7	10
38	4.25'	1	9	N/A

1. ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE PIPE, OR BARREL, SHOULD BE WATERTIGHT.
2. COLLARS SHOULD NOT BE CLOSER THAN 2 FEET TO A PIPE JOINT.

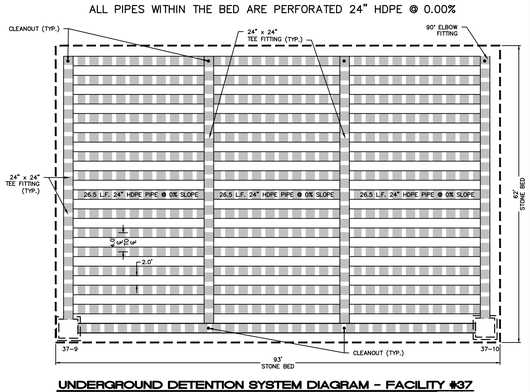
ANTI - SEEP COLLAR
NTS



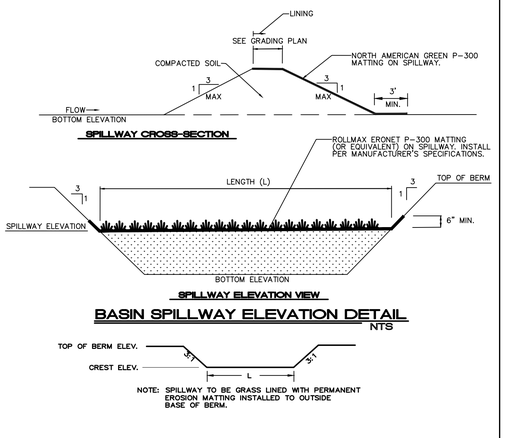
NOTES:
1. SEE GRADING PLAN FOR UNDERDRAIN LOCATIONS, AND STORM PROFILES FOR INVERT ELEVATIONS AND PIPE SLOPES.
2. PIPE IS PERFORATED ONLY INSIDE BASIN. PIPE IS SOLID UNDER THE BERM AND OUTSIDE THE BASIN.
3. STONE WITH GEOTEXTILE FOLLOWS THE PIPE ONLY INSIDE THE BASIN.

STORM FACILITY UNDERDRAIN DETAIL
NTS

ALL PIPES WITHIN THE BED ARE PERFORATED 24" HDPE @ 0.00%



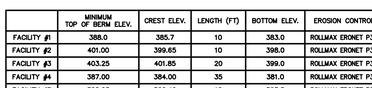
UNDERGROUND DETENTION SYSTEM DIAGRAM - FACILITY #37
NTS



SPILLWAY CROSS-SECTION

SPILLWAY ELEVATION VIEW

BASIN SPILLWAY ELEVATION DETAIL
NTS



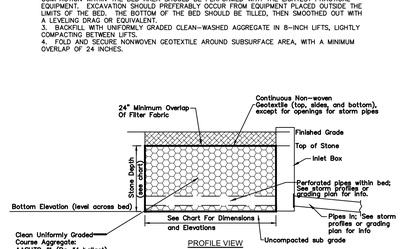
NOTE: SPILLWAY TO BE GRASS LINED WITH PERMANENT EROSION MATTING INSTALLED TO OUTSIDE BASE OF BERM.

	MINIMUM TOP OF BERM ELEV.	CREST ELEV.	LENGTH (FT)	BOTTOM ELEV.	EROSION CONTROL MATTING
FACILITY #1	388.0	385.7	10	383.0	ROLLMAX ERONET P300 MATTING
FACILITY #2	401.00	399.65	10	398.0	ROLLMAX ERONET P300 MATTING
FACILITY #3	403.25	401.85	20	399.0	ROLLMAX ERONET P300 MATTING
FACILITY #4	387.00	384.00	35	381.0	ROLLMAX ERONET P300 MATTING
FACILITY #5	368.25	366.40	10	363.5	ROLLMAX ERONET P300 MATTING
FACILITY #6	366.00	364.50	5	362.0	ROLLMAX ERONET P300 MATTING
FACILITY #7	384.00	382.50	30	377.5	ROLLMAX ERONET P300 MATTING
FACILITY #8	357.00	355.40	40	353.0	ROLLMAX ERONET P300 MATTING
FACILITY #9	352.00	350.50	15	347.0	ROLLMAX ERONET P300 MATTING
FACILITY #10	355.00	353.40	15	350.0	ROLLMAX ERONET P300 MATTING
FACILITY #12	377.30	375.75	65	372.0	ROLLMAX ERONET P300 MATTING
FACILITY #13	378.00	376.00	5	374.0	ROLLMAX ERONET P300 MATTING
FACILITY #14	351.0	349.7	10	348.0	ROLLMAX ERONET P300 MATTING
FACILITY #15	384.80	383.20	10	382.5	ROLLMAX ERONET P300 MATTING
FACILITY #16	394.55	392.50	5	390.5	ROLLMAX ERONET P300 MATTING
FACILITY #17	412.00	410.00	5	407.5	ROLLMAX ERONET P300 MATTING
FACILITY #18	398.00	396.50	8	394.0	ROLLMAX ERONET P300 MATTING
FACILITY #19	388.20	386.85	15	385.5	ROLLMAX ERONET P300 MATTING
FACILITY #20	378.00	376.75	5	374.0	ROLLMAX ERONET P300 MATTING
FACILITY #21	373.80	373.45	5	371.0	ROLLMAX ERONET P300 MATTING
FACILITY #22	373.40	371.50	10	368.0	ROLLMAX ERONET P300 MATTING
FACILITY #23	372.0	368.20	5	366.0	ROLLMAX ERONET P300 MATTING
FACILITY #24	377.00	375.70	25	373.0	ROLLMAX ERONET P300 MATTING
FACILITY #25	362.00	360.60	20	355.60	ROLLMAX ERONET P300 MATTING
FACILITY #26	356.00	364.65	40	349.5	ROLLMAX ERONET P300 MATTING
FACILITY #27	358.14	356.8	40	353.0	ROLLMAX ERONET P300 MATTING
FACILITY #28	363.0	361.65	40	357.5	ROLLMAX ERONET P300 MATTING
FACILITY #30	360.0	357.7	5	355.5	ROLLMAX ERONET P300 MATTING
FACILITY #31	352.00	349.8	5.5	347.5	ROLLMAX ERONET P300 MATTING
FACILITY #32	376.0	374.0	5	371.5	ROLLMAX ERONET P300 MATTING
FACILITY #33	370.0	368.5	7	367.0	ROLLMAX ERONET P300 MATTING
FACILITY #34	366.0	363.5	5	362.0	ROLLMAX ERONET P300 MATTING
FACILITY #35	362.30	360.95	30	357.0	ROLLMAX ERONET P300 MATTING
FACILITY #36	374.0	372.75	10	370.0	ROLLMAX ERONET P300 MATTING
FACILITY #37	368.60	367.1	30	363.5	ROLLMAX ERONET P300 MATTING
FACILITY #38	372.0	370.3	15	367.0	ROLLMAX ERONET P300 MATTING
FACILITY #39	376.0	374.5	15	372.5	ROLLMAX ERONET P300 MATTING
FACILITY #40	382.0	380.6	18	378.5	ROLLMAX ERONET P300 MATTING
FACILITY #42	368.0	366.2	8	364.0	ROLLMAX ERONET P300 MATTING
FACILITY #43	392.00	390.80	10	390.0	ROLLMAX ERONET P300 MATTING

PERMANENT EMERGENCY SPILLWAY DETAIL
NTS

INSTALLATION PROCEDURES AND GUIDELINES FOR SUBSURFACE STORMWATER INFILTRATION BED

1. DURING CONSTRUCTION, ISOLATE BED FROM SURFACE RUNOFF AND POSSIBLE SILT. ALSO, MAINTAIN A FILTER ON THE CATCH BASIN GRATE UNTIL THE PROJECT AREA IS ENTIRELY PERMANENTLY STABILIZED.
2. EXCAVATE SUBSURFACE BED BOTTOM TO A UNIFORM, LEVEL AND UNCOMPACTED GRADE, FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE. ALL EXCAVATION AND COMPACTION WITHIN THE BED AREA SHOULD BE PERFORMED WITH THE LIGHTEST PRACTICAL EQUIPMENT. EXCAVATION SHOULD PREFERABLY OCCUR FROM EQUIPMENT PLACED OUTSIDE THE LIMITS OF THE BED. THE BOTTOM OF THE BED SHOULD BE TILLED, THEN SMOOTHED OUT WITH A LEVELING DRAG OR EQUIVALENT.
3. BACKFILL WITH UNIFORMLY GRADED CLEAN-WASHED AGGREGATE IN 8-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
4. FOLD AND SECURE NONWOVEN GEOTEXTILE AROUND SUBSURFACE AREA, WITH A MINIMUM OVERLAP OF 24 INCHES.



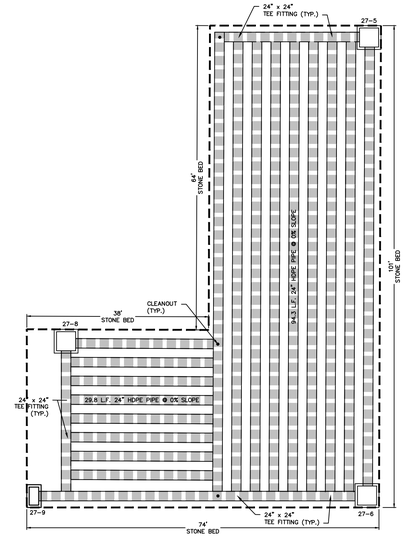
PROFILE VIEW

SUBSURFACE STORMWATER BED SUMMARY			
FACILITY #	HORIZONTAL AREA	BOTTOM OF STONE ELEVATION	STONE DEPTH (FT.)
27	5,040	353.00	2.5
37	5,656	363.50	2.5

NOTE:
1. ALL STORM PIPES WITHIN A BED SHALL BE PERFORATED.

DIAGRAM OF SUBSURFACE STORMWATER DETENTION/INFILTRATION FACILITY
NTS

ALL PIPES WITHIN THE BED ARE PERFORATED 24" HDPE @ 0.00%



LANE
HDPE PERFORATION GUIDE
PERFORATIONS PER AASHTO M252/M294

AASHTO M294 CLASS 2 SLOTTED PERFORATIONS FOR DOUBLE-WALL (SP) PIPE

Type SP Class 2 Perforations

D	d	L	WA
12	0.3125	1.04	2.85
15	0.3125	2.62	2.11
18	0.3125	2.96	1.87

D = Nominal pipe diameter (in)
d = diameter of circular perforation (in)
L = Longitudinal spacing between holes (in)
WA = Water inlet area (in²/ft)

Summary description
Class 2 perforations for 12", 15" and 18" HDPE pipes include a total of six equally spaced 5/16" diameter holes in each corrugation valley as shown at right.

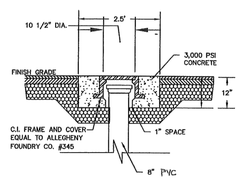
Type SP Class 2 Perforations

D	d	L	WA
24	0.3750	3.95	2.68
30	0.3750	4.01	2.64
36	0.3750	4.06	2.61
42	0.3750	5.38	1.97
48	0.3750	5.37	1.97

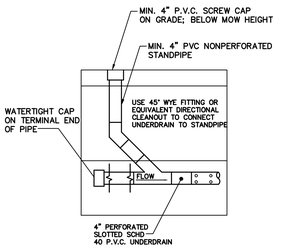
D = Nominal pipe diameter (in)
d = diameter of circular perforation (in)
L = Longitudinal spacing between holes (in)
WA = Water inlet area (in²/ft)

Summary description
Class 2 perforations for 24", 30", 36", 42" and 48" HDPE pipes include a total of eight equally spaced 3/8" diameter holes in each corrugation valley as shown at right.

PERFORATED PIPE SECTION
NTS



CLEAN-OUT CAP IN PAVED AREAS
NTS



NOTE: SEE GRADING PLAN FOR CLEANOUT LOCATIONS AND INVERT ELEVATIONS.

UNDERDRAIN CLEANOUT DETAIL
NTS

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

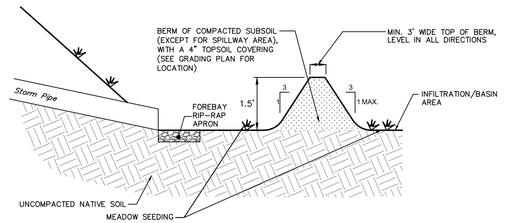
STORMWATER DETAILS

FOR

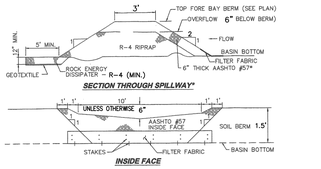
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sp\319582sur\field
SCALE : 1" = 50'
DWG. FILE : Y:\2019\319582.dgn\319582\80-DETAILS
SHEET 84 of 89



FOREBAY DETAIL
NTS



NOTE:
1. FORE BAY BERM SHALL BE CONSTRUCTED WITH ON-SITE SUBSOILS, COMPACTED IN 9" LIFTS. (MAXIMUM)
2. EACH FORE BAY BERM SHALL BE PROVIDED WITH A 10' WIDE STONE FILTER BERM, AS SHOWN ABOVE, TO PROVIDE A CONTROLLED OUTLET TO DRAIN THE BASIN.
3. THE FILTER BERM SHALL BE CONSTRUCTED AS SHOWN ABOVE. THE 10' WIDE FILTER SHALL BE COMPOSED ENTIRELY OF ROCK WITH THE MAIN BODY R-4 RIPRAP OR LARGER AND 6" OF AASHTO #57 STONE SHALL COVER THE FACE OF THE FILTER BERM.
4. THE UNDERDRAIN VALVE SHOULD REMAIN IN THE SHUT POSITION UNLESS THE BASIN DOES NOT DRAIN WITHIN 72 HOURS OF THE STORM EVENT.

FOREBAY SPILLWAY / FILTER BERM
NTS

Agri Drain CORPORATION

PO Box 458 · 1602 340th Street · Adair, Iowa 50002
Phone: 1-800-232-4742 · Fax: 1-800-282-3353
www.agridrain.com · email: info@agridrain.com

1½", 2", 3", 4", 6", & 8" Valterra Gate Valves

Inexpensive valve for industrial, agricultural, and commercial markets.

- Must provide a stable base, and installation using flexible couplers is recommended.
- Well suited as a drain valve to tanks.
- Attaches to SCH40 PVC pipe.
- Unrestricted flow.
- Quick opening.
- Trouble-free simplicity.
- 100% water tested at factory.
- Quick shutoff in low pressure or vacuum lines.
- Other sizes available.

VALTERRA

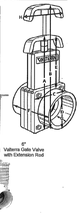
Materials and Specifications

	1½"	2"	3"	4"	6"/8"
Color	White	White	White	White	White
Hubs	PVC	PVC	PVC	PVC	PVC
Body	PVC	PVC	PVC	PVC	ABS
Shaft	304SS	304SS	304SS	304SS	304SS
Paddle	Polypro	304SS	304SS	304SS	304SS
Handle	Plastic	Plastic	Plastic	Die Cast Aluminum	304SS
Seals	Sarlink	Sarlink	Sarlink	Sarlink	Sarlink
Max PSI Open/Closed	30/45	20/40	15/15	15/15	6/10

Dimensions and Hub Depth

	1½"	2"	3"	4"	6"	8"
A	6.5"	7.5"	9.25"	13.25"	22.75"	22.75"
B	8.625"	10.25"	13"	18"	31.125"	31.125"
C	2.896"	3.37"	4.37"	6.665"	11.1"	11.1"
D (Stub I.D.)	1.913"	2.387"	3.516"	4.518"	6.647"	8.655"
E	3.9375"	4.5"	5.1875"	7.4375"	13.25"	12.1875"
F	3.375"	3.5"	4.5"	5.1875"	11.125"	13.75"
G	1.25"	1.6"	1.8"	1.7"	4.375"	5.67"
H	3.25"	3.25"	3.25"	3.25"	3.5"	3.5"

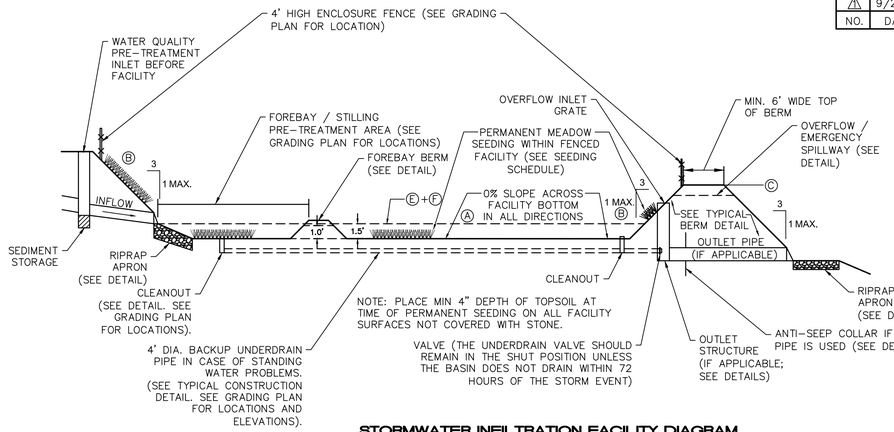
D Dimension is height of valve is fully open position.



Extension Rods for Valterra Gate Valves

- Extension Rod for 1¼"-4" Valve
  - Aluminum tube that easily threads onto valve shaft. Handle threads onto stub.
  - Available in 12", 24", 36", and 48" lengths.
- Extension Rod for 6"-8" Valve
  - Stainless steel rod with cotter pin(s) for assembly. Can attach multiple extensions together to achieve greater height.
  - Available in 12", 36", and 72" (two 36" pieces) lengths.

UNDERDRAIN VALVE DETAIL
NTS



STORMWATER INFILTRATION FACILITY DIAGRAM
NTS

STORMWATER FACILITY ID #	TOTAL WATERSHED AREA (ACRES)	Ⓐ BOTTOM ELEVATION	Ⓑ FACILITY SIDE SLOPES	Ⓒ TOP OF BERM ELEVATION	2-YEAR STORM FACILITY BOTTOM SURFACE DEWATERING AREA (INCLUDING FOREBAY) (SQ. FT.)	Ⓔ 2-YEAR STORM MAX. WATER STORAGE DEPTH (FT.)	Ⓕ 100-YEAR STORM MAX. WATER STORAGE DEPTH (FT.)	APPLICABLE SOIL TEST SITE ID #'S	LIMITING ZONE ELEVATION	PERCOLATION TEST ELEVATION	AVERAGED MEASURED INFILTRATION RATE (IN./HR.)	DESIGN INFILTRATION RATE (IN./HR.)	2-YEAR STORM DEWATERING TIME (HOURS)	IMPERVIOUS LOADING RATIO	TOTAL LOADING RATIO
1	1.72	383.00	3:1	388.00	2,997	2.71'	3.26'	HF-22	NONE	384.0	0.75	0.375	61.8	13.7:1	25:1
2	0.90	398.00	3:1	401.00	2,806	1.22'	1.55'	HF-20	NONE	398.0	1.75	0.875	21.0	5.8:1	15:1
3	2.14	399.00	3:1	403.25	5,114	1.81'	2.80'	HF-19	NONE	399.0	5.00	2.50	11.0	8.5:1	17.8:1
4	3.99	381.00	3:1	387.00	14,968	0.94	1.68'	HF-17+HF-18	NONE	381.0	3.75	1.875	7.4	3.9:1	11.7:1
5	3.58	363.50	3:1	368.25	7,740	2.24'	3.50'	HF-15	NONE	363.7	6.50	3.25	9.1	9.1:1	19.9:1
6	0.60	362.00	3:1	366.00	1,781	0.76'	2.57'	HF-16	NONE	362.0	2.00	1.00	17.9	2.3:1	20:1
7	4.53	377.50	3:1	384.00	9,394	2.83'	4.90'	HF-27+HF-28	NONE	378.0	1.00	0.50	64.1	9.9:1	20:1
8	2.21	353.00	3:1	357.00	7,518	1.49'	2.56'	HF-26	NONE	353.0	3.00	1.50	11.5	4.7:1	13:1
9	2.22	347.00	3:1	352.00	6,309	1.87'	3.38'	HF-25	NONE	347.0	5.00	2.50	8.9	6.8:1	15.9:1
10	2.42	350.00	3:1	355.00	5,284	1.95'	3.54'	HF-23+HF-24	NONE	351.0	1.25	0.625	29.7	7.5:1	20:1
12	11.87	372.00	3:1	377.30	28,645	1.57'	3.70'	41,42,HF-12,HF-13,HF-14	NONE	373.0	3.876	1.938	9.1	8.4:1	18:1
13	1.69	374.00	3:1	378.00	8,002	1.00'	2.19'	HF-5+HF-6	NONE	374.0	2.875	1.4375	10.0	4.2:1	9.4:1
14	0.97	348.00	3:1	351.00	3,160	0.36'	1.77'	15+16	NONE	348.0	1.00	0.50	18.5	1.6:1	13.9:1
15	1.63	382.50	3:1	384.80	12,382	0.61'	1.04'	HF-1+HF-2	NONE	383.0	2.50	1.25	7.1	2.7:1	5.8:1
16	2.38	390.50	3:1	394.55	6,439	1.83'	2.75'	HF-3+HF-4	NONE	391.0	1.75	0.875	26.8	7.1:1	15.8:1
17	2.08	407.50	3:1	412.00	7,238	1.17'	2.71'	HF-9+HF-10	NONE	408.0	0.50	0.25	66.3	4.8:1	12.2:1
18	0.73	394.00	3:1	398.0	4,096	0.60'	2.41'	HF-11	NONE	394.0	5.25	2.625	4.9	4:1	8:1
19	1.60	385.50	3:1	388.20	6,236	0.62'	1.31'	HF-7+HF-8	NONE	386.0	1.00	0.50	20.4	2.6:1	9.4:1
20	1.57	374.00	3:1	378.00	7,216	2.73'	2.91'	HF-42,HF-43,HF-44	NONE	374.0	2.916	1.4583	9.9	4.4:1	9.2:1
21	2.47	371.00	3:1	376.00	7,364	1.91'	3.26'	hf-40+hf-41	NONE	371.0	2.375	1.875	21.5	8.5:1	14.5:1
22	2.72	368.00	3:1	373.40	9,074	2.07'	3.68'	hf-38+hf-39	NONE	368.0	1.50	0.75	32.4	8:1	13:1
23	2.16	366.00	3:1	372.00	5,098	2.16'	2.93'	HF-34+HF-35	NONE	366.0	2.00	1.00	27.0	8:1	18:1
24	1.48	373.00	3:1	377.00	6,083	1.32'	2.25'	HF-32	NONE	373.0	4.50	2.25	6.0	6.3:1	10.6:1
* 25	0.79	355.60	3:1	362.00	N/A	2.63'	5.00'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	3.59	349.50	3:1	356.00	6,909	3.01'	5.13'	HF-29	NONE	350.0	5.75	2.875	13.2	12.3:1	22:1
27	3.79	353.00	3:1 BERM 2:1 OTHER	358.14	10,198	2.07'	3.79'	18+HF-66	NONE	18=352.0 HF-66=353.0	2.125	1.0625	14.8	8.8:1	16.5:1
28	3.12	357.50	3:1	363.00	7,869	2.61'	4.23'	HF-64+HF-65	NONE	358.0	3,125	1.5625	14.0	11.1:1	17.3:1
30	1.68	355.50	3:1	360.00	10,917	0.97'	2.30'	HF-70+HF-71	NONE	356.0	1.75	0.875	15.0	4.2:1	6.2:1
31	3.37	347.50	3:1	352.00	10,003	1.47'	2.86'	HF-72+HF-73	NONE	348.0	3.00	1.50	14.8	7.1:1	14.7:1
32	1.86	371.50	3:1	376.00	3,168	2.53'	3.22'	18+HF-63	NONE	372.0	0.75	0.375	60.4	11.7:1	26.6:1
33	0.83	367.00	3:1	370.00	4,345	0.74'	1.72'	HF-62	NONE	367.0	3.00	1.50	7.8	3.6:1	8.3:1
34	0.46	362.00	3:1	366.00	1,790	0.62'	1.75'	HF-61	NONE	362.0	5.25	2.625	6.3	5.3:1	11.5:1
35	2.21	357.00	3:1	362.30	3,707	2.33'	4.03'	HF-58+HF-59	NONE	357.0	2.625	1.3125	15.4	14.2:1	24.5:1
36	0.70	370.00	3:1	374.00	2,268	0.56'	2.71'	HF-57	NONE	370.0	0.75	0.375	39.6	3.8:1	14:1
37	4.20	363.50	3:1	368.60	13,577	2.26'	3.77'	HF-50,HF-51,HF-52,HF-53	NONE	364.0	2.625	1.3125	18.4	8:1	13.5:1
38	3.78	367.00	3:1	372.00	13,830	1.30'	2.85'	HF-45+HF-46	NONE	367.0	2.375	1.1875	15.4	5.7:1	11.8:1
39	2.39	372.50	3:1	376.00	7,300	1.56'	2.34'	30+31	NONE	373.0	2.225	1.1125	19.1	6.7:1	14:1
40	1.66	378.50	3:1	382.00	5,190	2.10'	2.43'	HF-47+HF-48	NONE	379.0	2.625	1.3125	19.3	8.5:1	13.8:1
42	3.12	364.00	3:1	368.00	5,998	1.53'	2.37'	HF-55	NONE	364.0	0.50	0.25	62.7	7.4:1	22:1
43	0.50	390.00	3:1	392.00	4,867	0.12'	0.74'	53+54	NONE	390.0	1.44	0.75	5.4	0.8:1	4.5:1

* NOT AN INFILTRATION FACILITY

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

STORMWATER DETAILS

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

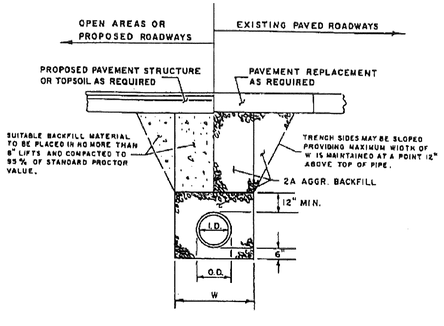
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sw*.fwd
SCALE : 1" = 50'
DWG. Y:\2019\319582.dgn\319582\dwg\Plans\Fire-Final\80-DETAILS
FILE
SHEET 85 & 89

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

ALPHA CONSULTING ENGINEERS, INC.
PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHACEI.COM

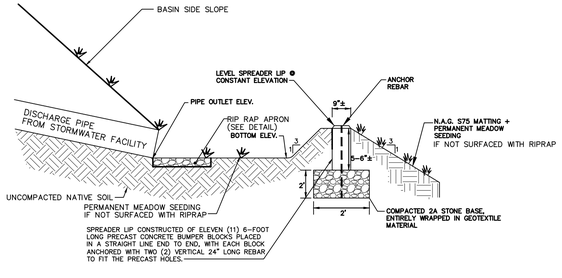
SEAL



I.D. = NOMINAL INSIDE DIAMETER OF PIPE OR SPAN OF PIPE-ARCH.
O.D = OUTSIDE DIAMETER OF PIPE BARREL OR OUTSIDE SPAN OF PIPE-ARCH.
W = TRENCH WIDTH - 2.0' + O.D. FOR PIPES OR PIPE-ARCHES WITH 48" OR LESS I.D.
2.5' + O.D. FOR PIPES OR PIPE-ARCHES WITH I.D. GREATER THAN 48".

TYPICAL TRENCH DETAIL FOR STORM PIPE UNDER OPEN AREAS AND ROADWAYS

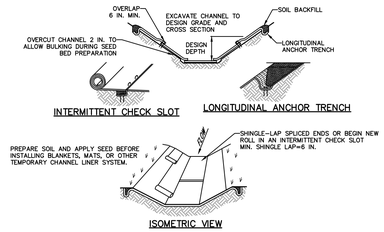
NTS



PIPE OUTLET #	PIPE OUTLET ELEVATION	BOTTOM ELEVATION	LEVEL SPREADER LIP ELEVATION	LEVEL SPREADER MIN LENGTH (FT.)
F	366.00	363.0	364.0	12.5
G	352.55	350.5	351.5	12.5
12-A	364.00	363.0	364.0	15
25-A	352.50	352.0	353.0	12.5
26-A	347.00	346.0	347.0	12.5
27-A	349.00	348.0	349.0	12.5
28-A	349.00	348.0	349.0	12.5
35-A	353.50	352.5	354.0	12.5
36-1	359.0	358.0	359.0	12.5
37-A	360.5	359.0	360.0	12.5
38-A	365.9	365.5	367.0	12.5
19-1	372.0	371.0	372.0	12.5
9-A	346.26	346.0.	347.0	12.5
10-A	347.46	347.0	348.0	12.5

LEVEL SPREADER DETAIL

NTS



* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	CHANNEL SLOPE	SS	B (FT)	D (MIN.) (FT)	PERMANENT LINING
1, SEG. 1	1.30%	3.0	1.5	1.0	RET. C GRASS
1, SEG. 2	12.1%	3.0	1.5	0.8	RET. C GRASS
2	3.5%	3.0	1.5	0.8	RET. C GRASS
3	2.3%	3.0	1.5	1.0	RET. C GRASS
4	4.0%	3.0	1.5	0.9	RET. C GRASS
5	3.0%	3.0	1.5	0.9	RET. C GRASS
6, SEG. 1	3.8%	3.0	1.5	1.0	RET. C GRASS
6, SEG. 2	1.2%	3.0	4.0	1.0	RET. C GRASS
7	0.9%	3.0	6.0	1.1	RET. C GRASS
8	3.8%	3.0	2.0	0.9	RET. C GRASS
9	4.2%	3.0	1.5	0.8	RET. C GRASS
10	6.0%	3.0	1.5	0.8	RET. C GRASS
12, SEG. 1	2.8%	3.0	1.5	0.9	RET. C GRASS
12, SEG. 2	7.2%	3.0	1.5	0.7	RET. C GRASS
13	3.8%	3.0	1.5	0.8	RET. C GRASS
16, SEG. 1	1.5%	3.0	3.0	1.1	RET. C GRASS
16, SEG. 2	4.5%	3.0	3.0	0.9	RET. C GRASS
17	7.2%	3.0	3.0	0.8	RET. C GRASS
18, SEG. 1	4.9%	3.0	4.5	1.0	P300 MAT & RET. C GRASS
18, SEG. 2	12.3%	3.0	4.5	0.9	P300 MAT & RET. C GRASS
19	4.2%	3.0	1.5	0.8	RET. C GRASS
20, SEG. 1	3.5%	3.0	2.0	1.0	RET. C GRASS
20, SEG. 2	23.3%	3.0	2.0	0.8	P300 MAT & RET. C GRASS
21	1.0%	3.0	5.0	1.0	RET. C GRASS
22, SEG. 1	2.3%	3.0	2.0	1.0	RET. C GRASS
22, SEG. 2	9.4%	3.0	3.0	0.8	RET. C GRASS
23	1.6%	3.0	2.0	1.0	RET. C GRASS

1. All Channels Must Be Kept Free Of Obstruction Such As Fill Ground, Fallen Leaves And Woody Debris, Accumulated Sediment, And Construction Materials / Wastes. Channels Should Be Kept Mowed And/or Free Of All Weedy, Brushy Or Woody Growth (unless Part Of The Landscape Plan). Any Underground Utilities Running Across / Through The Channel(s) Shall Be Immediately Backfilled And The Channel(s) Repaired And Stabilized Per The Channel Cross-section Detail.
2. Vegetated Channels Shall Be Constructed Free Of Rocks, Tree Roots, Stumps Or Other Projections That Will Impede Normal Channel Flow And/or Prevent Good Lining To Soil Contact. The Channel Shall Be Initially Over-excavated Minimum Of 6" To Allow For Placement Of Topsoil.
3. Channels Must Be Stabilized With Indicated Lining Immediately Upon Construction.
4. Channel Maintenance: Channels Must Be Maintained To Ensure That The Specified Design Dimensions And Stabilization Are Available At All Times.
5. Anchor Trenches Shall Be Installed At Beginning And End Of Channel In The Same Manner As Longitudinal Anchor Trenches.
6. Channel Dimensions Shall Be Constantly Maintained. Channel Shall Be Cleaned Whenever Total Channel Depth Is Reduced By 25% At Any Location. Sediment Deposits Shall Be Removed Within 24 Hours Of Discovery Or As Soon As Soil Conditions Permit Access To Channel Without Further Damage. Damaged Lining Shall Be Repaired Or Replaced Within 48 Hours Of Discovery.
7. No More Than One Third Of The Shoot (grass Leaf) Shall Be Removed In Any Mowing. Grass Height Shall Be Maintained Between 2 And 3 Inches Unless Otherwise Specified. Excess Vegetation Shall Be Removed From Permanent Channels To Ensure Sufficient Channel Capacity.

STANDARD CONSTRUCTION DETAIL #6-1 VEGETATED CHANNEL

NTS

TRASH GATE HARDWARE

NTS

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

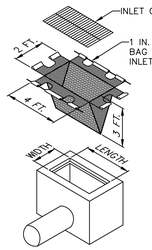
STORMWATER DETAILS

FOR

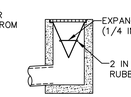
SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

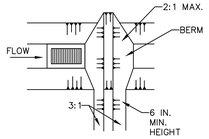
PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG Y:\2019\319582.sph\319582\dwg\Plans\Final\80-DETAILS
FILE
SHEET 86 of 89



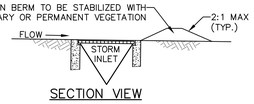
ISOMETRIC VIEW



INSTALLATION DETAIL



PLAN VIEW



SECTION VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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

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

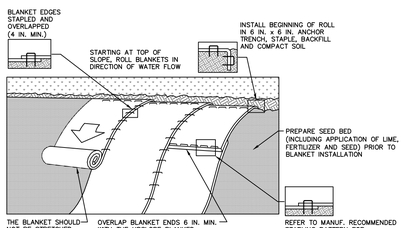
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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

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

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION (CHANNEL OR ROADSIDE SWALE)

NTS



NOTES:

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.

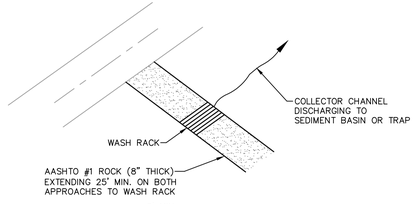
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

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.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION

NTS



NOTES:

1. WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.

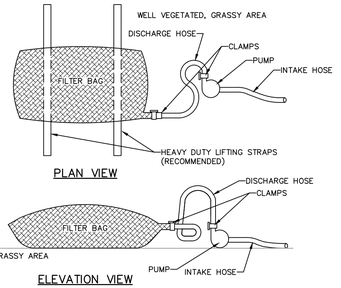
2. WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.

3. A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

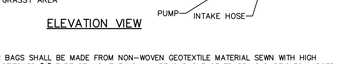
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-2
ROCK CONSTRUCTION ACCESS WITH WASH RACK

NTS



PLAN VIEW



ELEVATION VIEW

NOTES:

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

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

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

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

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

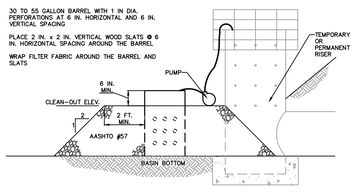
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

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

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

PUMPED WATER FILTER BAG

NTS



NOTES:

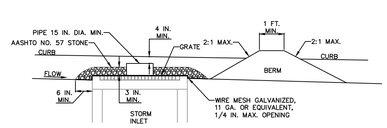
DEWATERING FACILITY SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF BASIN/TRAP.

PRIOR TO INITIATING OPERATION OF DEWATERING FACILITY, ALL ACCUMULATED SEDIMENT SHALL BE CLEANED FROM THE INSIDE OF THE BARREL.

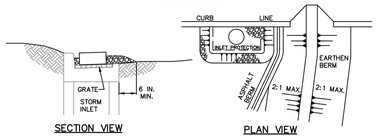
DEWATERING FACILITY SHALL BE CONTINUOUSLY MONITORED DURING OPERATION. IF FOR ANY REASON THE DEWATERING FACILITY CEASES TO FUNCTION PROPERLY, IT SHALL BE IMMEDIATELY SHUT DOWN AND NOT RESTARTED UNTIL THE PROBLEM HAS BEEN CORRECTED.

STANDARD CONSTRUCTION DETAIL #7-18
SEDIMENT BASIN OR SEDIMENT TRAP SEDIMENT STORAGE DEWATERING FACILITY

NTS



SECTION VIEW



SECTION VIEW PLAN VIEW

NOTES:

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

ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROPOSED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. A 6 IN. MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

STONE INLET PROTECTION AND BERM FOR A TYPE C INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN OVERFLOW PIPE AND 4 IN. HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA.

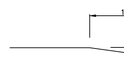
SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE, DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 IN. THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

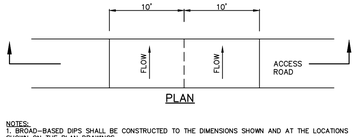
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-19
STONE INLET PROTECTION AND BERM

NTS



PROFILE



PLAN

NOTES:

1. BROAD-BASED DIPS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN AND AT THE LOCATIONS SHOWN ON THE PLAN DRAWINGS.

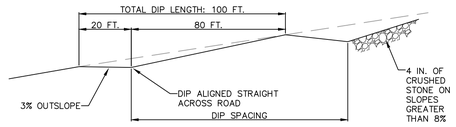
2. DIPS SHALL BE ORIENTED SO AS TO DISCHARGE TO THE LOW SIDE OF THE ROADWAY.

3. DIPS SHALL BE INSPECTED DAILY. DAMAGED OR NON-FUNCTIONING DIPS SHALL BE REPAIRED BY THE END OF THE WORKDAY.

4. MAXIMUM SPACING OF BROAD-BASED DIPS SHALL BE AS SHOWN IN TABLE 3.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #3-7
BROAD BASED DIP - LOW GRADIENT (<5%) ROADWAYS

NTS



PROFILE VIEW

NOTES:

BROAD-BASED DIPS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN AND AT THE LOCATIONS SHOWN ON THE PLAN DRAWINGS.

DIPS SHALL BE ORIENTED SO AS TO DISCHARGE TO THE LOW SIDE OF THE ROADWAY.

DIPS SHALL BE INSPECTED DAILY. DAMAGED OR NON-FUNCTIONING DIPS SHALL BE REPAIRED BY THE END OF THE WORKDAY.

MAXIMUM SPACING OF BROAD-BASED DIPS SHALL BE AS SHOWN IN TABLE 3.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #3-7
BROAD BASED DIP - HIGH GRADIENT (5%-10%) ROADWAYS

NTS

TABLE 4.1
Compost Sock Fabric Minimum Specifications

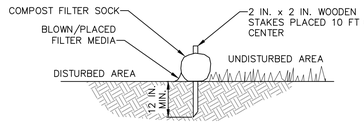
Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"		3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (M.D-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.					

Filtrexx ® AMD

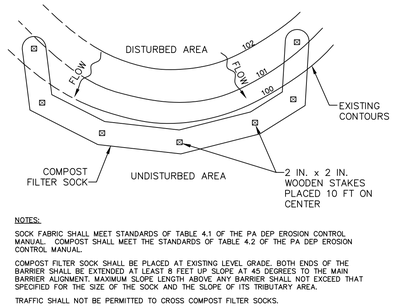
Compost should be a well decomposed, weed-free organic matter derived from agriculture, food, stump grindings, and yard or wood/bark organic matter sources. The compost should be aerobically composted. The compost should possess no objectionable odors and should be reasonably free (<1% by dry weight) of man-made foreign matter. The compost product should not resemble the raw material from which it was derived. Wood and bark chips, ground construction debris or reprocessed wood products are not acceptable as the organic component of the mix.

TABLE 4.2

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



The physical parameters of the compost should comply with the standards in the chart below. The standards contained in the PennDOT Publication 408 are an acceptable alternative.



NOTES:

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

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

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

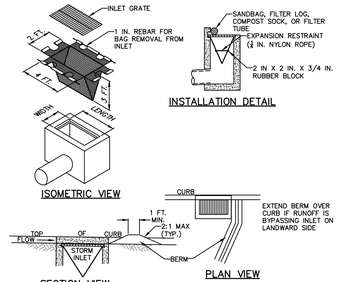
UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

WHERE SOCK CROSSES PAVEMENT, ANCHOR SOCK IN PLACE WITH A FILLED SANDBAG BUTTED ON EACH SIDE OF THE SOCK, EVERY 30 FEET OF SOCK.

THE PHYSICAL PARAMETERS OF THE COMPOST SHOULD COMPLY WITH THE STANDARDS IN TABLE 4.2. THE STANDARDS CONTAINED IN THE PENNDOT PUBLICATION 408 ARE AN ACCEPTABLE ALTERNATIVE.

STANDARD CONSTRUCTION DETAIL #3-7
COMPOST FILTER SOCK

NTS



INSTALLATION DETAIL

ISOMETRIC VIEW

SECTION VIEW PLAN VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
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.

STANDARD CONSTRUCTION DETAIL #4-15 FILTER BAG INLET PROTECTION (CURBED ROADWAY)

NTS

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 - 2500
FAX: (717) 770 - 2400
WWW.ALPHAGEO.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EROSION CONTROL DETAILS

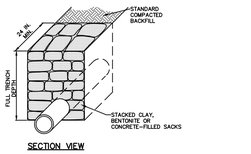
FOR

SIENNA

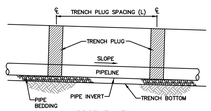
FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.su\319582su\field
SCALE : 1" = 50'
DWG. FILE : Y:\2019\319582.dgn\319582\dwg\Plans\Pre-Final\XX-DETAILS.dwg

SHEET 87 of 89



SECTION VIEW



PROFILE VIEW

PA DEP EROSION CONTROL MANUAL TABLE 13.1
MAXIMUM SPACING AND MATERIALS FOR TRENCH PLUGS

TRENCH SLOPE (%)	SPACING L (FT)	PLUG MATERIAL
< 5	1000	* 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 BAGS (METTED) OR MORTARED STONE

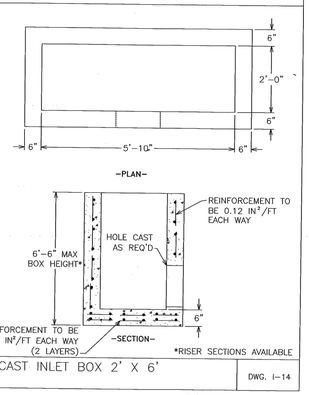
* TOPSOIL MAY NOT BE USED TO FILL SACKS

NOTES:

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

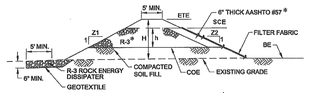
STANDARD CONSTRUCTION DETAIL #13-4
TRENCH PLUG INSTALLATION
NTS

MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.

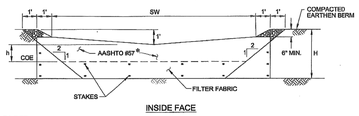


PRECAST INLET BOX 2' X 6' | DWG. I–14

STANDARD CONSTRUCTION DETAIL #8-1
EMBANKMENT SEDIMENT TRAP
NTS



SECTION THROUGH SPILLWAY *



INSIDE FACE

PA DEP

Embankment outlet shall be composed entirely of rock above clean out elevation (COE); main body R-3 or larger — R-4 to be used for drainage areas greater than 3.0 acres, inside face AASHTO # 57 stone or smaller. A 6" thick layer of compost, compost sock, or clean sand shall be installed on top of the AASHTO #57 stone and securely anchored in HQ watersheds. 24" diameter compost sock(s) shall be used in place of filter fabric and AASHTO #57 stone in EV watersheds.

Fill material for the embankments shall be free of roots, or other woody vegetation, organic material, large stones, and other objectionable materials. The embankment shall be compacted in layered lifts of not more than 9". The maximum rock size shall be no greater than 6".

Upon completion, the embankment shall be seeded and mulched or otherwise stabilized according to the specifications of the E&S plan drawings.

All sediment traps shall be inspected at least weekly and after each runoff event.

Access for sediment removal and other required maintenance activities shall be provided.

A clean out stake shall be placed near the center of each trap. Accumulated sediment shall be removed when it has reached the clean out elevation on the stake and the trap restored to its original dimensions. Dispose of materials removed from the trap in the manner described in the E&S Plan.

Check embankments, spillways, and outlets for erosion, piping and settlement. Clogged or damaged spillways and/or embankments shall be immediately restored to the design specifications.

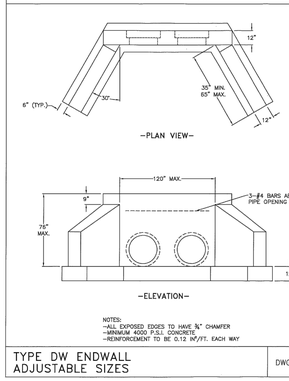
Displaced riprap within the spillway or outlet protection shall be replaced immediately.

Accumulated sediment shall be removed and disturbed areas inside the trap shall be stabilized before conversion to a stormwater management facility. To assist in removing sediment, which may be saturated, a device such as is shown in Standard Construction Detail #7-18 may be used to dewater the sediment prior to its removal.

NOTE:
IF SEDIMENT REACHES CLEANOUT LEVEL, REMOVE SEDIMENT AND PLACE ON TOPSOIL STOCKPILE. RESTORE BASIN TO ORIGINAL DIMENSIONS.

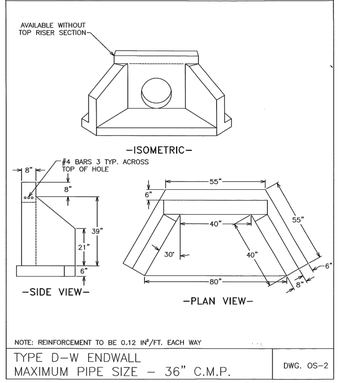
SEDIMENT CLEANOUT STAKE DETAIL
NTS

MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.



TYPE DW ENDWALL
ADJUSTABLE SIZES | DWG. OS–4

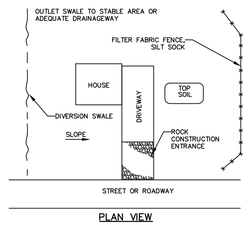
MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.



NOTE: REINFORCEMENT TO BE 0.12 IN²/FT. EACH WAY

TYPE D–W ENDWALL
MAXIMUM PIPE SIZE – 36" C.M.P. | DWG. OS–2

TYPICAL ON–LOT BMPS FOR LOT ALONG ASCENDING OR DESCENDING ROADWAY



PLAN VIEW

NOTES:

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER RUNOFF FROM AREAS ABOVE THE LOT ARE NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

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.

TYPICAL ON–LOT CONTROL DIAGRAMS
NTS

FIGURE 3.11
Temporary Cofferdam and Pump Bypass Around In-channel Work Areas

NOTE: Pump intake shall be maintained a sufficient distance from bottom to prevent sediment from entering the system.

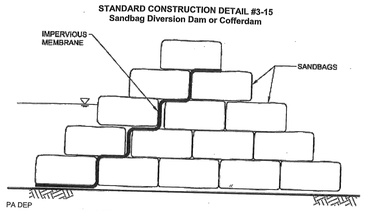
* Sandbags (Standard Construction Detail #3-15), Jersey barriers (Figure 3.13) or other non-erosive material, no earth fill. Do not excavate a sump for the pump intake.

** See Standard Construction Detail # 4-14. For low gradient channels, the rock filter may be replaced by an impervious cofferdam to prevent backflow into the work area.

Pumped water bypass systems should conform to Figure 3.11. Pump-around systems should not be used for bypasses anticipated to last more than 2 weeks. **NOTE: A cofferdam should be constructed to impound water for the pump intake. DO NOT EXCAVATE A SUMP AREA WITHIN THE STREAM CHANNEL FOR THE PUMP INTAKE.**

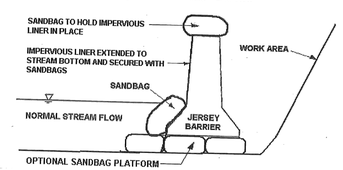
Whenever an in-stream cofferdam diversion is used, it should conform to Figure 3.12. Various types of cofferdams are available from various manufacturers. Wherever such cofferdams are proposed, they should conform to the manufacturer's specifications.

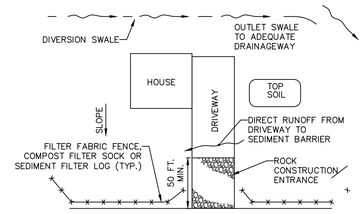
STANDARD CONSTRUCTION DETAIL #3-15
Sandbag Diversion Dam or Cofferdam



2 BAG MINIMUM HEIGHT ABOVE NORMAL BASE FLOW

FIGURE 3.13
Jersey Barrier Cofferdam – End View



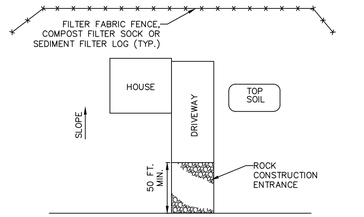


PLAN VIEW

NOTES:

THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM 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 AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

STANDARD CONSTRUCTION DETAIL #10-1
TYPICAL ON–LOT BMPs FOR LOT ABOVE ROADWAY
NTS

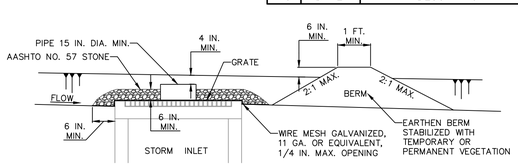


PLAN VIEW

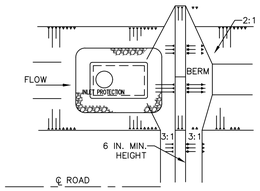
NOTES:

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

STANDARD CONSTRUCTION DETAIL #10-2
TYPICAL ON–LOT BMPs FOR LOT BELOW ROADWAY
NTS



SECTION VIEW



PLAN VIEW

NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET 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 TO REMAIN PERMANENTLY.

STONE INLET PROTECTION AND BERM FOR A TYPE M INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2–YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. TOP OF PIPE SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADWAY IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. EARTHEN BERM SHALL BE ROLLED.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 IN. THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

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

STANDARD CONSTRUCTION DETAIL #4-20
STONE INLET PROTECTION AND BERM – TYPE M INLET
NTS

NO.	DATE	DESCRIPTION	BY
3	11/22/21	REVIEW COMMENTS	GDG
2	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

PLANNING • ENGINEERING • SURVEYING
115 LIMEKILN RD, P.O. BOX 'G'
NEW CUMBERLAND, PA 17070
PHONE: (717) 770 – 2500
FAX: (717) 770 – 2400
WWW.ALPHAGEI.COM
ALPHA CONSULTING ENGINEERS, INC.

SEAL

PRELIMINARY SUBDIVISION AND LAND DEVELOPMENT PLAN

EROSION CONTROL DETAILS

FOR

SIENNA

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

PROJECT NO. 319582
SURVEY BOOK : Z:\2019\319582.sur\319582sur\field
SCALE : 1" = 50'
DWG. FILE : Y:\2019\319582.sph\319582-dwg\Plans\Pre-Final\80-DETAILS

SHEET 88 & 89

EROSION CONTROL PLAN NOTES:

GENERAL PROVISIONS / STABILIZATION SPECIFICATIONS

1. A copy of the approved (stamped, signed and dated by the reviewing agency) erosion and sediment control plan must be available at the project site at all times. The York County Conservation District shall be notified of any changes to the approved plan prior to implementation of those changes. The Conservation District may require a written submittal of those changes for review and approval at its discretion. The site contractor and their designees shall familiarize themselves with this Erosion Control Plan. The site contractor shall be responsible for implementation of this Erosion Control Plan.

2. At least 7 days before starting any earth disturbance activities, the owner and/or operator shall invite all contractors involved in those activities, the landowner, all appropriate municipal officials, the erosion and sediment control plan preparer, and a representative of the York County Conservation District to an on-site pre-construction meeting.

3. At least 3 days before starting any earth disturbance activities, all contractors involved in those activities shall notify the Pennsylvania One Call System Incorporated at 1-800-242-1776 for the location of existing underground utilities.

4. All earth disturbance activities shall proceed in accordance with the following sequence. Each stage shall be completed and immediately stabilized before any following stage is initiated. Clearing, grubbing and topsoil stripping shall be limited only to those areas described in each stage. The site contractor shall not disturb more area than is necessary for the task to be done, so that potential for erosion is minimized. Deviation from that sequence must be approved in writing from the County Conservation District prior to implementation.

5. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to eliminate the potential for accelerated erosion and/or sediment pollution, and notify the York County Conservation District.

6. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment removal facility, over undisturbed vegetated areas.

7. Upon completion of all earth disturbance activities, and permanent stabilization of all disturbed areas, the owner and/or operators shall contact the County Conservation District for an inspection prior to the removal / conversion of the E&S BMPs.

8. Upon completion of all earth disturbance activities, removal of all temporary BMPs, installation of all permanent PCSM BMPs, and permanent stabilization of all disturbed areas, the owner and/or operators shall contact the County Conservation District for a final inspection.

9. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan drawings 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. Topsoil stockpile heights shall not exceed 35 feet. Stockpile side slopes must be 2:1 or flatter.

10. Upon temporary cessation of an earth disturbance activity or any stage or phase of an activity where a cessation of earth disturbance activities will exceed 4 days, the site shall be immediately seeded, mulched, or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities.

11. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill for embankments and intended to support buildings, structures, conduits, etc. shall be compacted in accordance with local requirements or codes. All fills shall be placed in compacted layers not to exceed 9 inches in thickness. 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. Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills. Fill shall not be placed on saturated or frozen surfaces.

12. Permanent stabilization is defined as a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

13. Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade, and which will be re-disturbed within 1 year must be stabilized in accordance with the temporary vegetative stabilization specifications. Disturbed areas which are not at final grade or which will be re-disturbed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications.

14. An erosion control blanket will be installed on all disturbed slopes steeper than 3:1, all areas of concentrated flows, and disturbed areas within 50 feet of a surface water.

15. Any sediment removed from BMPs during construction will be returned to upland areas on site and incorporated into the site grading.

16. All wastes and materials deposited in and removed from post-construction stormwater management (PCSM) BMP facilities and from impervious areas (i.e. sweeping of streets and parking lots) during operation and maintenance shall be removed from the site and properly 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 waste materials shall be burned, buried, dumped or discharged at the site.

17. The contractor will be responsible for the removal of any excess material and make sure the site(s) receiving the excess has an approved and fully implemented erosion and sediment control plan that meets the conditions of Chapter 102 and/or other State or Federal regulations.

18. 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.).

19. 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.

20. 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*."

21. Failure to correctly install E & S BMPs, failure to prevent sediment-laden runoff from leaving the earth disturbance activity, 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 Pennsylvania Department of Environmental Protection 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,

22. If fuel or other dangerous chemicals are stored on site, then a Preparedness, Prevention and Contingency (PPC) Plan must be developed and kept on site.

23. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches - 6 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.

24. Topsoil should not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. Compacted soils should be scarified 6 to 12 inches along contour whenever possible prior to seeding.

25. Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, and other objectionable material.

26. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.

EROSION CONTROL PLAN:

MAINTENANCE PROGRAM

1. Until the site is stabilized, all erosion and sediment control BMPs must be maintained properly. Responsibility for implementing and maintaining erosion and sedimentation control measures shall be designated to a minimum of one individual who will be present at the project site each working day, and who is trained and experienced in erosion and sediment control, to ascertain that the Erosion and Sediment Control (E&S) BMPs are operational and effective in preventing pollution to the waters of the Commonwealth. Maintenance must include inspections of all erosion and sediment control BMPs after each measurable runoff event and on a weekly basis, to ensure that they are in place, stable, and functioning properly. All preventative and remedial maintenance work, including clean out, repair, replacement, re-grading, reseeding, re-mulching, and re-netting must be performed immediately, to restore the control measure to the original design. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs, or modifications of those installed, will be required.
2. A log showing dates that E & S BMPs were inspected as well as any deficiencies found and the date and manner in which they were corrected shall be maintained on the site and be made available to the York County Conservation District or other regulatory agency officials at the time of inspection. A written report of each inspection shall be kept, and include:

   1) a summary of the site conditions, E&S BMPs, and compliance; and
   2) the date, time, and the name of the person conducting the inspection
3. Any sediment removed from BMPs during construction will be returned to upland areas within the project area, and incorporated into the site grading, or in the manner described on the plan drawings.
4. See the construction details and seeding specifications for maintenance procedures for the various control measures.
5. Mud must be removed from vehicle tires before they exit the site. 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.

STAGING OF EARTHMOVING ACTIVITIES

GENERAL NOTES--

A. At least 7 days before starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors involved in those activities, the landowner, all appropriate municipal officials, the erosion control plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative of the County Conservation District to an on-site pre-construction meeting.

B. At least 3 days before starting any earth disturbance activities, all contractors involved in those activities shall notify the Pennsylvania One Call System Incorporated at 1-800-242-1776 (or 811) for the location of existing underground utilities.

C. All earth disturbance activities shall proceed in accordance with the following specific sequencing. Each stage shall be completed and immediately stabilized before any following stage is initiated. Clearing, grubbing and topsoil stripping shall be limited only to those areas described in each stage. Any deviation from the following sequence must be approved in writing by the York County Conservation District.

D. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to eliminate the potential for accelerated erosion and/or sediment pollution, and notify the County Conservation District.

E. Immediately after earth disturbance activities cease, the operator shall stabilize the disturbed areas. During non-germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be re-disturbed within 1 year must be stabilized in accordance with the temporary vegetative stabilization specifications. Disturbed areas which are not at final grade or which will not be re-disturbed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications.

F. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment removal facility, over undisturbed vegetated areas.

EROSION CONTROL PLAN (CONT.):

GENERAL UTILITY CORRIDOR STAGING OF ACTIVITIES

A. Field mark limits of disturbance. Install protection fencing where shown on the plan.
B. Clear all vegetation in the corridor, but do not grub roots yet.
C. Install silt socks where shown on the drawings.
D. Begin main installation at one end and work toward the other end, but only grubbing vegetation, stripping topsoil, disturbing area as necessary each day to install the portion of pipe to be placed that day and the next. The total length of excavated trench open at any time should not be greater than the total length of pipe that can be placed in the trench and backfilled in one working day. No more than 50 linear feet of open trench should exist when pipe installation ceases at the end of a workday. Open trenches must be fenced off at the end of a workday since residences are nearby.

Place stripped topsoil in a linear mound parallel to the trench. Replace topsoil as soon as the trench is backfilled, and immediately permanently seed or pave if in the street in accordance with Township or PennDOT specifications as applicable.

STREAM CROSSING SPECIFICS

Note that utilities may be bored under the stream. Stabilize with stone the vehicle approach within 50 feet of the stream area. Construction vehicles may not cross the stream areas, but shall access the work area from either side using the construction vehicle route / construction entrances.

Runoff from the graded access route to the stream crossing must be diverted to the side and into a sediment removal BMP before it reaches the stream (see the broad-based dip detail for guidelines).

Any water pumped from excavated areas must be filtered prior to discharging into surface waters. The pumped water facility should be available before trenching begins, and maintained until trench backfilling is completed.

Assembly areas, temporary equipment and non-hazardous material storage areas should be located at least 50 feet back from the top of stream bank. All excavated materials must be placed in a temporary stockpile located outside of the channel floodway. A 12" silt sock must be installed between the storage pile and the stream.

Trench plugs must be installed on both sides of the stream crossing.

Any disturbed area within 50 feet of the stream must be permanently stabilized immediately after work is done there. 'S75' erosion control matting must be placed on all seeded areas.

See the permit issued by PA DEP for this work, for other requirements.

TEMPORARY SEEDING SCHEDULE

The contractor shall immediately temporarily stabilize any rough graded area, topsoil stockpile or unused excavated fill material that will be left idle for less than 1 year. The grass will provide interim protection against the impact of precipitation, running water and wind. Permanently seed any area that will be idle for more than 1 year.

Temporary seeding schedule is as follows:

Species: annual rye grass
% Live Seed: 98%
Application rate: l0 lbs./l,000 sq. yds.
Fertilizer type: general purpose granular, 10-20-20
Fertilizer application rate: 11 lbs./1,000 sq. yds.
Liming rate: per soil test; minimum of 4 tons per acre.
Strawbale mulch rate: 1,200 lbs/l,000 sq. yds.
Seeding dates: no seeding between 1 1/1 and 3/15
Mulch anchoring: Asphalt, either emulsified or cut-back, containing no solvents or other diluting agents toxic to plant or animal life, uniformly applied at the rate of 31 gallons per 1,000 square yards. Synthetic binders (chemical binders) may be used per manufacturer's recommendation provided they are non-toxic to plant and animal species.

When seeding is not possible due to the time of year or other limitations, disturbed area shall be mulched with strawbales at the rate above. An erosion control blanket must be installed on all disturbed slopes steeper than 3:1, and all areas with concentrated flows. Matting can be North American Green 'S75' or approved equal.

Maintenance procedure:
1. Maintain a minimum 70% soil surface coverage with grass and/or mulch.
2. If a washout, slope failure or similar disturbance occurs, correct drainage problem if necessary, then reapply soil to the proper grade, reapply soil amendments, seed and mulch.

PERMANENT SEEDING SCHEDULE (NON-MEADOW AREA)

All disturbed soil not to be covered with impervious surfaces, riprap or landscaping mulch shall be permanently seeded to provide protection against the impact of precipitation, running water and wind. Permanent seeding schedule for the general project area is as follows:

FOR GENERAL LAWN PLANTING--
Species: 30% Kentucky bluegrass
40% Pennlawn Creeping Red Fescue
20% Norlea Perennial ryegrass
10% annual ryegrass
% Pure live seed: 98%
Application rate: 6 lbs./1,000 sq. ft.
Fertilizer type: general purpose granular, 10-20-20
Fertilizer application rate: 11 lbs./1,000 sq. yds.
Liming rate: per soil test; minimum of 6 tons per acre
Seeding dates: between 4/1 and 10/15
Strawbale mulching rate: 3 tons per acre
Mulch anchoring: Asphalt, either emulsified or cut-back, containing no solvents or other diluting agents toxic to plan or animal life, uniformly Applied at the rate of 31 gallons per 1,000 square yards. Synthetic binders (chemical binders) may be used per manufacturer's recommendation provided they are non-toxic to plant and animal species.

POST-CONSTRUCTION STORMWATER MANAGEMENT (PSCM) PLAN OPERATION, OWNERSHIP AND MAINTENANCE PROGRAM

The storm water volume and quality control Best Management Practices (BMPs) constructed for the Sienna Subdivision & Land Development Plan will be maintained to function as designed, and shall implement the procedures described below; this shall be in the deed of the lot whenever the lot is sold to another. The owner of the lot shall own and maintain the stormwater facilities within the lot.

The approved facilities are to be permanent, and can only be removed or altered after approval by one or more of the following entities which may have jurisdiction: Fairview Township; and/or PA D.E.P. The lot owner, shall maintain on-lot stormwater management, and permanent erosion and sediment pollution control system(s) as set forth herein.

The following physical facilities shall be maintained to the original design and dimensions shown on the design plans approved by Fairview Township, until such time as an amended plan is approved by the Township:
--stormwater inlets, pipes and riprap aprons;
--swales;
--infiltration / detention facilities; and
--subsurface infiltration / detention facilities

The designated maintainer / lessee shall complete a visual inspection of BMPs as specified below for each BMP.

All Surface Stormwater Facilities :
--Inspect two times per year.
--Inspect the outlet structure, basin bottom, inlet, containment berm and riprap areas. Inspect for sediment build-up, any erosion, damage to outlet structure, berm stability, clogging of outlet, pools of standing water, and for adequate (min. 95%) vegetative cover condition.
--Remove any accumulation of debris (such debris may include, but shall not be limited to aggregate material, leaves, grass clippings, and soil material). Removal of sediment/debris shall take place when the area has dried, if possible. Dispose of sediment, trash or other waste material at suitable disposal / recycling sites and in compliance with local, state and federal waste regulations.
--Maintain groundcover vegetation. Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, and to suppress weeds and invasive / exotic vegetation. Mow only when dry, to avoid rutting. Vehicular access is prohibited within basins except for maintenance; and care should be taken to avoid excessive compaction by mowers.
--For any erosion, rills and gullies, correct as needed. Re-vegetate and repair areas in accordance with the specifications contained in the applicable erosion and sediment pollution control plan; and immediately repair any erosion damage by replacing topsoil on all areas that experience minor erosion, and seeding, mulching and matting such areas immediately in accordance with the specifications contained in the applicable erosion and sediment pollution control plan.
--Apply fertilizer and pesticides only when absolutely necessary to salvage desirable vegetation, and to eliminate exotic / invasive species.
--Aerate areas if they become compacted.
--The underdrain valve should remain closed at all times, unless water is standing in the facility for more than 72 hours, or water is standing in the facility and another large storm event is impending. Once a facility is drained, the valve should be closed again.

Subsurface portions of Stormwater Facilities :
--All inlet structures draining to an infiltration bed should be inspected two times per year, and be cleaned as needed. Dispose of sediment, trash or other waste material at suitable disposal / recycling sites and in compliance with local, state and federal waste regulations.
--Evaluate the drain-down time of the facility to ensure the maximum time of 72 hours is not being exceeded. If drain-down times are exceeding the maximum, drain the facility via pumping and clean out perforated piping. If slow drainage persists, the system may need to be replaced. If debris and/or standing water is visible in the inlets and system, then it shall be vacuumed to remove accumulated debris. Stormwater quality/recharge facilities that do not drain within seventy-two (72) hours shall be evaluated by a qualified engineer, geologist, and/or hydrogeologist prior to initiating any repair and/or reconstruction activities.

Failure (BMP no longer provides the benefit or performance anticipated) for this BMP is the following:
--frequent events of standing water for greater than 72 hours.

Corrective measure options should failure of this BMP occur:
--Clean the perforated pipes and contributing inlets by vacuuming out debris.
--Check the contributory watershed for sources of debris / silt, such as erosion, leaves in roof drains, mulch washing from landscape beds, lawn clippings washing into the inlet. Correct the contributing situation so debris / silt does not enter the pipe system.
--If vacuuming does not work, then the BMP might have to be replaced. Consult a qualified engineer / consultant.

Storm Inlets, Storm Piping and Riprap Aprons:
--Inspect for signs of contamination or spills.
--All inlets, control orifices, storm piping, collection swales and drainage structures shall be kept free of any obstructions and foreign material that would cause disruption of water flow in a manner not anticipated for the facility.
--Dislodged rock in any riprap apron should be reset in place or replaced.
--Inspect two times per year, with one time being in late autumn after leaves have dropped, and the other in early spring when there may be grit and plow deposits.

General Provisions for any BMP listed above--
--A written report documenting each inspection shall be retained by the designee, including dates of inspection, dates of repair, list of items inspected, list of items repaired, list of items replaced, costs of replaced items, list of maintenance tasks performed, name and organization of the person conducting the inspection, and the contractor(s) information.
--For any structural facility (pipe, inlet, manhole), it must be repaired or replaced if damaged more than superficially, in a way that is a safety hazard, if structurally unsound, or if not substantially performing as it is intended per the original design.
--The owner shall immediately notify Fairview Township prior to initiating any "major" repair activities (such repairs that may be required as a result of settlement, sinkholes, seeps, structural cracking, foundation movement). All "major" repairs shall be conducted under the direction and supervision of a qualified engineer, geologist, and/or hydrogeologist.
--Vehicular access and parking is prohibited within basins and rain gardens except for maintenance; and care should be taken to avoid excessive compaction by mowers.
--All impervious surfaces shall be maintained clean of oil, fuel or other toxic spills, in accordance with State, Federal or local regulations.
--The PCSM plan, inspection reports, and monitoring records must be available for review and inspection by the PA Department of Environmental Protection and/or the County Conservation District.

Fairview Township shall have the right to:
a. Enter the site and inspect the facilities at any time;
b. Require the facility maintainer to take corrective measures, and assign reasonable time periods for any necessary action; and
c. Authorize maintenance to be done by the Township or an agent or contractor of the Township, and the liening of the cost of the work against the lot owner.

A licensed professional or their designee shall be present on the site for the installation of the following BMPs:
--stormwater facility berm cores and outfall pipes through the berms,
--installation and backfilling of stormwater facilities, and
All other stormwater facilities are surface features that can be easily verified.

Sunoco Logistics

ENGINEERING AND CONSTRUCTION GUIDELINES
For working near the pipeline right-of-way and pipeline

1.0 ENGINEERING GUIDELINES

SPLP constructs, repairs, operates and maintains its pipelines in compliance with current U.S. Department of Transportation (DOT) regulations, industry and company standards for safe operations. Should Encroaching Party propose plans that infringe on SPLP's rights or affect SPLP's ability to meet these requirements, modifications to the pipeline or plans will be required. **The cost of all such modifications shall be borne by the Encroaching Party. The following guidelines apply to Encroaching Party and any contractors, agents and or representatives it uses for construction activities conducted in SPLP's right-of-way and /or affecting SPLP's pipelines:**

1.1 In order to maintain immediate and unimpeded access to the pipeline, NO trees, shrubs, permanent structures (i.e. buildings, decks, sheds, swimming pools, inlets, drainage structures, hydrants, poles, etc.) bodies of water shall be placed within the pipeline right of way.

1.2 The depth earth cover over the pipelines shall be maintained and never changed in any manner without the express written consent of SPLP. In some cases additional cover may be required.

1.3 In areas where the pipeline currently has less than three feet (3') of cover, no grade cuts will be allowed. Cover over the pipeline shall be increased to a minimum of three (3) feet if there are proposed "improvements" over the pipeline or within the pipeline right-of-way. Proposed road crossings have additional requirements.

1.4 Proposed grading which will place the pipeline at depths greater than seven feet (7') shall require a SPLP Engineering Department written approval.

1.5 In areas where building are proposed within fifty feet (50') of the pipeline facility, vertical cover over the pipeline should be increased to a minimum of four feet (4'), (maximum of seven feet(7').

1.6 The creation of steep slopes within the pipeline right of way that will hinder our access and maintenance shall be avoided. Maximum slope of 5 to 1 within the ROW

1.7 The creation of storm water outfalls or other water management controls which would make the pipeline right-of-way more susceptible to erosion shall be avoided or mitigated. Proposed gabions and rip rap structures must adhere to the vertical one foot (1') vertical clearance requirement. Geotextile protection may also be required.

1.8 Drainage swales shall maintain a minimum of three feet (3') of vertical clearance between O.D. of the pipeline and the bottom of the swale. Additional protection may be required in order to minimize erosion susceptibility over the existing pipeline and across its associated right of way.

1.9 No fences will be allowed on the ROW without SPLP's prior written approval. Fences shall be easily removable and not to obstruct the view of the ROW for inspection purposes. No Masonry, brick, or stone fences will be allowed. Fences that are perpendicular to the pipeline(s) shall include a gate sixteen feet (16') in width for equipment to pass through. Fence posts shall not be placed within 5 feet of the pipeline(s). Fences that are parallel to the pipeline(s) shall be located outside the pipeline(s) ROW.

1.10 Proposed residential driveway crossings shall be designed to provide a minimum of three feet (3') (maximum of 7 feet) of vertical clearance between the O.D. of the pipeline and the finished surface. Exceptions must be approved by SPLP's Engineering Department.

1.11 Proposed driveway/road crossings should be designed to be as perpendicular to the pipeline as possible. Proposed crossings of angles less than 30 degrees will not be accepted.

1.12 Proposed commercial entrance crossings shall be designed to provide a minimum of four feet (4'), (maximum of seven feet (7') of vertical clearance between the O.D. of the pipeline and the finished surface.

1.13 Proposed road ditches shall be designed to provide a minimum of three feet (3') (maximum of 7 feet) of vertical cover above the top of the pipeline and the bottom of the ditch.

1.14 Road under-drains shall maintain a two foot (2') or greater minimum vertical clearance from the top of the pipeline.

1.15 Construction of parking lots over the pipeline(s) shall not be permitted without SPLP's prior written approval in an Encroachment Agreement releasing SPLP from any and all future damages to the parking lot due to pipeline maintenance and repair.

1.16 Structures such as guide rails, concrete paving, sidewalks, curbing, etc. shall be designed in a manner that would facilitate their removal in the event of pipeline maintenance or an emergency repair.

1.17 Proposed crossings by utilities or underground structures shall be designed to pass under the pipeline unless otherwise approved by SPLP's Engineering Department.

1.18 Proposed utilities shall cross as perpendicular to the pipeline as possible

1.19 All underground facilities or structures crossing the pipeline shall maintain a two foot (2') minimum vertical clearance between the O.D. of the pipeline and the proposed utility structure.

1.20 Utility crossings of the pipeline shall be shown on profile with field verified pipeline depths and proposed clearances clearly labeled.

1.21 Power Cable Installations

A. Secondary Crossings (less than 440 Volts):
Must be installed UNDER the pipeline, (unless otherwise approved by SPLP's Engineering Department), provided the two-foot (2') minimum vertical clearance is maintained between the bottom of the pipeline and the top of the conduit. The cable must be placed in conduit for the width of the right-of-way and a drive post with an electric company marker shall be placed on each side of the pipeline right-of-way.

B. Primary Crossings (greater than 440 volts):
Must be installed UNDER the pipeline, (unless otherwise approved by SPLP's Engineering Department), with a minimum two-foot six-inch (2'6") vertical clearance between the pipeline O.D. and the top of the conduit. The cable shall be placed in conduit for the width of the pipeline right-of-way. The conduit shall be protected by pouring of 2000 psi concrete, dyed red, into the ditch for a minimum distance of five feet (5') on both sides of the pipeline. The concrete must span the width of the ditch. A minimum two-foot (2') vertical clearance must be maintained between the O.D. of the pipeline and the top of the concrete.

C. For all electrical crossings, a drive post with an electric company marker shall be placed and maintained on each side of the pipeline right-of-way.

1.22 Open Trench Fiber Optic Mainline Cable Installations

A. The cable must be installed UNDER the pipeline with a minimum two-foot six –inch (2'6") vertical clearance between the bottom of the pipeline O.D. and the top of the fiber optic cable.

B. Fiber optic cables must be encased in six inches (6") of concrete, dyed orange, for a minimum distance of five feet (5') on both sides of the pipeline. The concrete must span the width of the ditch.

C. Fiber optic company markers must be installed and maintained at the crossing location on both sides of the pipeline right-of-way.

D. For bored or HDD installations see SXL Construction Guidelines section 2.7

1.23 Cathodic Protection:

A. Cathodic protection is employed to control corrosion on SPLP pipelines and other facilities. Cathodic protection may have a detrimental (interference) effect on adjacent and crossing metallic structures.

B. Possible detrimental cathodic protection effects should be evaluated by the owner/developer with appropriate mitigative actions taken if these effects are found to be an issue for the owner/developer facility. Mitigation of detrimental effects from cathodic protection is possible by using non-metallic structure materials, loose barrier coatings, bonded coatings and/or bonded coatings with cathodic protection. However, it is best to consult with those knowledgeable in the field of cathodic protection and cathodic protection interference mitigation to determine what is best for the owner/developer structure and configuration.

C. If cathodic protection is planned for the owner/developer structure, the SPLP One Call Engineering Department must be notified to allow our corrosion control personnel to install appropriate test facilities and evaluate possible detrimental cathodic protection effects on the SPLP facilities.

1.24 Proposed Residential Development

A. Submit a full set of plans, including detail sheets, whereby SPLP's easement is depicted through the proposed development.

B. Proposed residential layout shall be designed not to impede access along the SPLP right of way.

D. Designated equipment crossing locations must be identified and prior to construction a list of equipment types and weights must be supplied so that stress calculations can be completed to ascertain what type of protection over the pipeline right of way will be required to allow the crossings.

E. Proposed landscaping, utilities, drainage, grading and roadways and means of excavation, compaction, blasting, and rock removal within the development must comply with all restrictions stated in this document.

1.25 Encroaching Party shall incorporate SPLP's Engineering and Construction Guidelines contained, herein, into any of the Encroaching Parties design and construction drawings issued "FOR BID purpose". All plan drawings issued either "FOR BID" or "For Construction" will display the following statement on the drawings in areas around SPLP's pipeline(s).

WARNING: HIGH PRESSURE PIPELINE(S)
No Excavation or Construction in this area without contacting the State One Call Center and Sunoco Pipeline L.P. at 1-888-786-3260

2.0 CONSTRUCTION GUIDELINES

The following guidelines apply to Encroaching Party and any contractors, agents and or representatives it uses for construction activities conducted in SPLP's right-of-way and/or affecting SPLP's pipeline(s).

2.1 **State Law requires contractor and excavation companies contact the State One Call Center, prior to any excavation activity as required by your State Law. The nationwide telephone number for the State One Call Center is "811".**

2.2 Encroaching Party shall conduct their activities in compliance with SPLP's Construction/Design Guidelines as well as any applicable agreement in place with Encroaching Party

2.3 The continued integrity of SPLP's pipelines and the safety of all individuals in the area of proposed work are of the utmost importance. Therefore, Encroaching Party shall meet with SPLP's operations and emergency representatives prior to construction. SPLP's on-site representative shall require discontinuation of any work that, in their opinion, endangers the operation or safety of personnel, pipelines, or facilities.

2.4 Notification shall be given to SPLP at least 10 days before the start of construction. A schedule of activities for the duration of the project shall be made available at that time to facilitate the scheduling of SPLP's work site representative. Any Encroaching Party schedule changes shall be provided to SPLP immediately.

2.5 Encroaching Party shall not commence work within SPLP's right of way or within twenty-five feet of a SPLP pipeline or appurtenance(s) without a SPLP representative being present.

2.6 No construction equipment will be allowed on the right of way unless approval to do so has been obtained from SPLP and the appropriate protection has been put in place to protect the pipeline and its right of way.

2.7 **During installation of underground utilities or facilities that will utilize drilling, boring, or HDD the following must be adhered to:**

1. Pot hole and expose the pipeline(s) to verify depth with hydro-vacuum machine (with and SPLP representative on site).
2. Excavation of the boring and receiving pits shall be outside the right of way.
3. Each bore to be a minimum of three (3') from the bottom of the pipeline to top of proposed utility. For HDD installation the completed drilled bore shall be a minimum of five feet (5') below the bottom of the pipeline(s).
4. Each bore shall cross existing pipeline as close to perpendicular (90 degrees) as possible.
5. During pilot hole boring procedure, boring subcontractor is to be aware of the depth of the boring bit head as it passes under the pipeline with metal detector type device.
6. Bore shall extend the entire width of the pipeline right of way.
7. Backfill and compact pot hole and bore pits.
8. Install above ground cable markers at each side of the ROW/easement.
9. Boring profile is to be available to SPLP upon request.

2.8 No "Non-Explosive" seismic testing or construction equipment with steady state vibrator, intermittent vibrator, or thumper sources shall be conducted within 150 feet of SPLP's pipeline without SPLP written approval.

2.9 No blasting shall be allowed within 300 feet of SPLP's facilities without a blast plan review by SPLP and written approval. Notification of blasting shall be given to SPLP including a complete blasting plan. At a minimum the blasting plan shall include a drawing with blast pattern, distance from orientation with respect to the pipeline. It must include spacing between holes, rows, amount of explosives in each hole, manufacturer, and associated energy release values. A pre-blast meeting shall be conducted by the organization responsible for blasting. SPLP requires a signed and executed blasting indemnification agreement before authorized permission to blast can be given. A written emergency plan shall be provided by the organization responsible for blasting.

2.10 No materials or equipment are to be stored within the existing pipeline right-of-way without SPLP's prior written approval.

2.11 No leach beds, wells, cesspools or sewer systems will be permitted within the SPLP ROW.

2.11 **A SPLP inspector must be onsite during any work within the pipeline right-of-way.**

Note: CONTACTING SPLP DIRECTLY DOES NOT EXONERATE YOU OF THE LEGAL OBLIGATION TO NOTIFY YOUR STATE ONE CALL CENTER. Please call 811 before you dig!

DIG SAFELY!

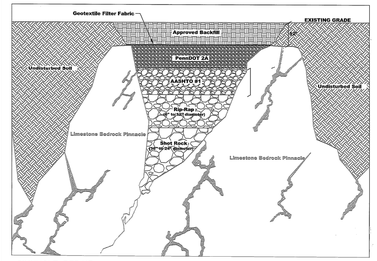
- ☑ Call before you dig.
- ☑ Wait the required time for facilities to be marked
- ☑ Respect the marks.
- ☑ Dig with care.

811 Know what's below. Call before you dig.

NO.	DATE	DESCRIPTION	BY
2	11/22/21	REVIEW COMMENTS	GDG
1	9/21/21	REVIEW COMMENTS	GDG

DESIGN : TCS
DRAWN : GDG
CHECKED : JKM
DATE : 6/4/2021

INVERTED FILTER DETAIL



SINKHOLE REPAIR:
A. EXCAVATE THE AREA OF THE SINKHOLE UNTIL THE "THROAT" IS LOCATED.
B. REMOVE ALL LOOSE SOIL OR MATERIAL.
C. EVALUATE THE THROAT OF THE SINKHOLE FOR STABILITY AND/OR PRESENCE OF ADDITIONAL FRACTURES.
D. LINE THE SINKHOLE USING CLASS 1 TYPE B NON-WOVEN GEOTEXTILE FILTER FABRIC.
E. BACKFILL USING R-5 STONE UP TO WITHIN 36 INCHES OF FINISHED GRADE.
F. FOLD THE GEOTEXTILE FILTER FABRIC OVER ITSELF TO CREATE "BAG".
G. TOP OFF THE EXCAVATION WITH APPROXIMATELY 24 INCHES OF 2A COARSE AGGREGATE TO APPROXIMATELY 12 INCHES BELOW FINAL GRADE.
H. COMPLETE BACKFILLING USING CONSISTENT WITH WHERE THE SINKHOLE IS LOCATED.
I. DIFFERENT METHODS OF REMEDIATING SINKHOLES MAY BE REQUIRED BASED UPON THE ACTUAL LOCATION, CONDITIONS, AND/OR THE REQUIREMENTS OF OTHER AGENCIES; REMEDIATION TO BE AS DIRECTED BY TOWNSHIP ENGINEER.

METHOD OF REMEDIATING SINK HOLE
NTS

EVALUATION OF KARST CONDITIONS & SUSCEPTIBILITY OF SINKHOLE FORMATION

The geologic formations which underlie the western half of the project site are comprised of carbonate bedrock which is subject to dissolution and the development of sinkholes and other karst-geologic features. The Owner should recognize the risk associated with development of project sites underlain by carbonate bedrock. The following construction recommendations are provided in an effort to minimize the potential for development of sinkholes at the site both during and following construction.

- Surface water should not be allowed to collect or pool in low lying areas of the site and should be directed to appropriate storm water channels. Expeditious backfilling or grading of low-lying areas will also help minimize the potential development of sinkholes.
- The extent of excavations should be kept to a minimum and the influx of surface water into excavations should be minimized. The potential for sinkhole development generally increases as the bedrock surface is encountered. Therefore, the prolonged exposure of the bedrock surface should also be minimized.
- Storm sewer conveyance lines should be constructed as "water-tight" joints.
- Positive drainage away from proposed structures should always be maintained. Roof drains should also be directed away from the structures and into designated stormwater channels.
- Unpaved areas, swales or surface basins should be minimized adjacent to building/foundation areas.

The above recommendations constitute best management practices for construction and development in karst settings. Contingencies should be made in the construction schedule and budget for the repair of sinkholes and unstable soil conditions encountered during development of the site.

As noted above, sinkholes may occur during construction, and specifically during and shortly following mass grading of the project site. All sinkholes and unstable soil conditions should be reviewed by the geotechnical engineer of record. Following review of the specific characteristics and locations of a given sinkhole feature, a detailed repair procedure should be developed and implemented.

Should sinkholes be identified during or following construction of the project site, the remediation procedures below should be followed:

Structural Areas *(areas adjacent to/beneath proposed pavement; proposed structures)*

- Any and all loose and/or excessively moist soils within the sinkhole should be excavated and continue until stable soils, a "throat" is identified, or until the extent of the excavation equipment is reached.
- Upon removal of the unstable soils, the excavation should be backfilled using high mobility, low strength flowable fill (500 pound per square inch) to final subgrade elevation; however, utilities should not be encased with flowable fill.
- Dependent on specific conditions, specialty mitigations may be warranted, such as ground modification.

Non-Structural Areas *(non-pavement/landscaped areas)*

- Any and all loose and/or excessively moist soils should be excavated from the sinkhole. Excavation should continue until stable soils, a "throat" is identified, or until the extent of the excavation equipment is reached.
- The excavation should be backfilled with aggregate of decreasing size as depicted on the *Inverted Filter Detail* .

The repairs outlined above are general guidelines and each