

EAST FALLOWFIELD TOWNSHIP



Act 537

Official Plan Update

May 2022

Prepared by:
Herbert E. MacCombie, Jr., P.E.,
Consulting Engineers and
Surveyors, Inc.

ACT 537 PLAN UPDATE

FOR

**EAST FALLOWFIELD TOWNSHIP
CHESTER COUNTY, PA**

MAY 2022

Prepared by:
HERBERT E. MACCOMBIE, J.R., P.E.
CONSULTING ENGINEERS AND SURVEYORS, INC.
P. O. BOX 118
BROOMALL, PA 19008
610-356-9550

TABLE OF CONTENTS

East Fallowfield Township
Act 537 Plan Update 2022

EXECUTIVE SUMMARY.....	1
I. PREVIOUS WASTEWATER PLANNING	3
A. Identify and Discuss Past Wastewater Planning	3
II. PHYSICAL AND DEMOGRAPHIC ANALYSIS	6
A. Identify Planning Area, Municipal Boundaries, and Service Area Boundaries Through Mapping	6
B. Identify the Physical Characteristics of the Planning Area	6
C. Soils Analysis	11
D. Geological Features of the Planning Area	13
E. Topography	13
F. Potable Water Supply Information	13
G. Wetlands	14
III. EXISTING SEWAGE FACILITIES IN THE PLANNING AREA	16
A. Identify and Describe Municipal Sewerage Systems in the Planning Area.....	16
B. Individual and Community On-Lot Disposal Systems	18
C. Wastewater Sludge and Septage Generation.....	18
IV. FUTURE GROWTH AND LAND DEVELOPMENT.....	19
A. Municipal and County Planning	19
B. Delineation and Description through Map, Text, and Analysis	23
V. ALTERNATIVES TO PROVIDE NEW OR IMPROVED WASTEWATER DISPOSAL FACILITIES	27
A. Conventional Collection, Conveyance, Treatment, and Discharge Alternatives	27
B. Use of Individual Disposal Systems	29
C. Small Flow Sewage Treatment Facilities.....	30
D. Community Land Disposal	31
E. Retaining/Holding Tank.....	32
F. Septage Management Programs (SMPs) to Assure Future Operation and Maintenance (O&M) of Existing and Proposed Sewage Facilities	33
G. Non-Structural Comprehensive Planning Alternatives	36

TABLE OF CONTENTS

East Fallowfield Township
Act 537 Plan Update 2022

H.	No Action Alternative.....	38
VI.	EVALUATION OF ALTERNATIVES	40
A.	Consistency Determination	40
B.	Resolution of Inconsistencies.....	43
C.	Alternative Evaluation with Respect to Applicable Water Quality Standards and Effluent Limitations	43
D.	Preliminary Cost Opinions.....	44
E.	Analysis of Available Funding Methods.....	46
F.	Immediate or Phased Implementation.....	50
G.	Ability of the Township to Implement the Alternative	50
VII.	INSTITUTIONAL EVALUATION	51
A.	Analysis of the Township, Past Actions, and Present Performance.....	51
B.	Institutional Alternatives Necessary to Implement the Technical Alternative.....	51
C.	Administrative and Legal Activities to be Completed and Adopted to Ensure the Implementation of the Technical Alternative.....	52
D.	Institutional Alternatives for Implementing Chosen Technical Wastewater Disposal Alternatives.....	53
VIII.	SELECTED WASTEWATER TREATMENT AND INSTITUTIONAL ALTERNATIVE.....	54
A.	Identify the Chosen Technical Alternative	54
B.	Selected Capital Financing Plan	55
C.	Implementation Schedule.....	56

TABLE OF CONTENTS

East Fallowfield Township
Act 537 Plan Update 2022

LIST OF TABLES AND FIGURES

TABLES

Table 1	Projected Dwelling Unit Connections Per Year.....	24
Table 2	Population Projections	25

FIGURES

Figure 1	USGS Base Map	
Figure 2	Zoning/Overlay Districts Map	
Figure 3	Planning Area Map	
Figure 4	Municipal Plan	
Figure 5	Topographic Map	
Figure 6	Wetlands Map	
Figure 7	Public Water Supply Map	
Figure 8	East Fallowfield Township Sewer Map	
Figure 9	Soils Map	
Figure 10a	Soils Suitability for In-Ground Bed Sewage Disposal	
Figure 10b	Soils Suitability for In-Ground Trench Sewage Disposal	
Figure 10c	Soils Suitability for Sand Mound Sewage Disposal	
Figure 10d	Soils Suitability for Drip Irrigation Sewage Disposal	
Figure 11	Geology Map	
Figure 12	Water Resources Map	
Figure 13a	Location of Historic Resources	
Figure 13b	Tabulation of Historic Resources	
Figure 14a	Needs Identification Survey Results (Overall Township)	
Figure 14b	Needs Identification Survey Results (Overall Township – Small Lots)	
Figure 15a	Needs Identification Survey Results (Sub-Area Analysis)	
Figure 15b	Needs Identification Survey Results (Sub-Area Analysis – Small Lots)	

TABLE OF CONTENTS

East Fallowfield Township
Act 537 Plan Update 2022

APPENDICES

Appendix A	Approved Plan of Study and Task Activity Report
Appendix B	Pennsylvania American Water Company Commitments to Accept Flow
Appendix C	PAWC Connection Management Plan – October 2021
Appendix D	Flow Projection Summary Table
Appendix E	PNDI Response
Appendix F	PHMC Response
Appendix G	Planning Modules
Appendix H	Detailed Cost Opinions
Appendix I	Draft Holding Tank Ordinance
Appendix J	Draft Individual Disposal System Sewage Management Ordinance and SMP Ordinance
Appendix K	Draft SMP
Appendix L	Proof of Publication
Appendix M	Municipal Comments and Responses
Appendix N	County Comments and Responses
Appendix O	Public Comments and Responses
Appendix P	Adopted Resolution
Appendix Q	Sewage Needs Identification Survey

EXECUTIVE SUMMARY

This Act 537 Update was prepared at the request of East Fallowfield Township (Township) in order to address current and future planning needs, as well as concerns raised by the Pennsylvania Department of Environmental Protection (PA DEP) as more recently noted in the Department's letter of January 28, 2014 approving the Plan of Study. The intent of the Study contained herein is to be in substantial compliance with Act 537 entitled *The Pennsylvania Sewage Facilities Act, PA Code Title 25, Chapter 71*, in order to appropriately plan for the current and future needs of the Township, as well as its residents.

The Plan Update contains the requisite Environmental Checklist with the Study addressing the planning requirements necessary in order to provide public sanitary sewer services to meet the immediate needs of the potential development areas as well as to provide continued use of individual on-lot sewage disposal systems under the oversight of a Township-wide Sewage Management Program (SMP) to address the immediate needs of those areas where public sewer service is not practical or desired.

The Plan of Study is comprised of the following components:

- I. Previous Wastewater Planning
- II. Physical and Demographic Analysis
- III. Existing Sewage Facilities in the Planning Area
- IV. Future Growth and Development
- V. Alternatives to Provide New or Improved Wastewater Disposal Facilities
- VI. The Evaluation of Alternatives
- VII. Institutional Evaluation
- VIII. Selected Wastewater Treatment and Institutional Alternatives

The Act 537 Plan Update identifies and evaluates various aspects of alternatives in a prudent manner in order to solve the problems and adequately satisfy the sewage disposal needs identified in this plan. The alternatives considered and evaluated include the background and means by which public sewer service currently exists as well as the merits of providing future service to both residential and commercial development within the overall planning area considered, as well as considering continued use of individual and community on-lot sewage disposal systems (OLDS) in areas where public sewage disposal is not viable. Implementation of a SMP was evaluated as a method of assuring proper long-term operation and maintenance of individual and community OLDS. As part of the Alternatives Analysis, the practicality, environmental impact, and cost effectiveness of the various methods of sewage disposal were considered in determining the Selected Alternatives for different areas of the Township within this Plan. The alternatives were evaluated with consideration to

potential pollution resulting from failed systems, the cost of providing a public sewer alternative versus the cost of repairing or replacing an OLDS, and the administrative cost to the Township to implement a Township-wide Sewage Management Program. In addition, Environmental Impact Coordination has been conducted, as well as coordination with other outside agencies and municipalities including the Chester County Planning Commission (CCPC), the Chester County Health Department (CCHD), the Pennsylvania Historic and Museum Commission (PHMC), Pennsylvania American Water Company (PAWC) and various adjacent municipalities.

East Fallowfield Township is sensitive to the costs to the individual property owner associated with the requirement to make connection to the public sewer system and has considered these potential costs in comparison to the costs and impacts of other options. The Township is also cognizant that health, safety, and welfare of the citizens of the Township and that they need to be protected. For the majority of the Study Area, including larger tracts of land within the RA – Rural Agricultural Zoning District, the selected alternative for sewage disposal is on-lot disposal systems with implementation of a Township-wide Sewage Management Program. In order to implement the OLDS alternatives, the Township will need to implement a Sewage Management Program. This program will require adoption of a Sewage Management Ordinance, which will require administrative changes to allow for proper record keeping of the properties responsible to operate and maintain OLDS in accordance with the aforementioned ordinance. The Township will need to determine a fee structure to cover the administrative costs, as well as costs of designated representatives for inspections and enforcement of the ordinance.

Portions of the Study Area are situated in close proximity to existing public sewers, which makes this a viable alternative for sewage disposal from a practical, economic, and environmental impact standpoint. Therefore, the selected alternative for these areas is public sewer with treatment and disposal at the PAWC Coatesville WWTP in the Borough of South Coatesville. In order to implement the PAWC conveyance and treatment alternative, a network of gravity mains, pump stations and force mains will need to be in place and are to be constructed as part of the respective developments at the developer's cost and expense. Other areas of existing development would need to be coordinated with PAWC as funding or reimbursement for the cost of the sewer extension projects would come directly from those property owners that benefit from the improvements. PAWC in the past has also contributed a substantial dollar amount per lot serviced for those "bona fide" customers to help offset the cost to individual property owners for connection to the public sewer system.

With the completion of the PAWC Coatesville Treatment Plant upgrades, in conjunction with the approval of the PAWC Tributary Act 537 Plan, expansion of public sewer to areas in need as a selected alternative may require additional capacity agreements with PAWC. At this juncture, available capacity is identified in the current East Fallowfield Township PAWC Agreement, as further outlined in Appendix B. The anticipated flow for Immediate Needs identified in this Plan are to be coordinated with PAWC so that there is consistency between this Plan and the PAWC Connection Management Plan (CMP) (Appendix C and D).

The Implementation Schedule is provided in Section VIII.C of this Plan.

I. PREVIOUS WASTEWATER PLANNING

A. Identify and Discuss Past Wastewater Planning

1. Previous Act 537 Planning

The original Sewage Facilities Plan of East Fallowfield Township was the County Master Sewer Plan (Revised Edition 1970). A sewage facilities plan, dated June of 1982, was approved by the DEP and is the current Act 537 Plan for East Fallowfield Township. A subsequent Feasibility Study was prepared to investigate installation of public sewer systems throughout the Township in 1973 but was not adopted as an Official Sewage Facilities Plan.

Since 1982, a plan was prepared by Grafton Associates dated February 20, 2000 to update the Township's Act 537 Plan. This plan was first revised in October of 2000 to address PADEP comments. Herbert E. MacCombie, Jr., P.E., Consulting Engineers and Surveyors, Inc. assisted in addressing outstanding comments to complete the Plan on April 30, 2003 for review and approval by the PADEP on January 25, 2005. However, an incorrect version of the Plan was submitted for review. Additional information was submitted to the DEP on December 14, 2005, December 21, 2005, and February 9, 2006. Due to turnover at the Township, DEP comments on the plan were never fully addressed. The DEP issued a letter to the Township dated November 9, 2012 requesting a status update by December 10, 2012 or the 2006 Plan would be considered withdrawn. A meeting was held at the PA DEP Southeast Regional Office on July 30, 2013 to discuss the feasibility of revising the 2006 Plan or to start a new Plan using some components of 2006 Plan. Ultimately, at the direction of the Board of Supervisors, since so much time had elapsed, it was decided to begin with a new plan using any relevant information from the 2006 Plan. A Plan of Study was prepared and submitted to the PA DEP on November 18, 2013 and was approved by the Department on January 28, 2014 allowing the Township to move forward with a new Official Plan Update.

2. Planning Not Done in Accordance with an Approved Implementation Schedule

1972 Plan stipulates implementation of an "On-lot Management Program" in certain areas if on-lot malfunctions should begin to occur on a frequent or area-wide basis.

3. Anticipated or Planned by Applicable Sewer Authorities or Approved Under a Ch 94 Corrective Action Plan

East Fallowfield Township is one of ten tributary municipalities which utilizes the Pennsylvania American Water Company's stream discharge wastewater treatment plant located in the Borough of South Coatesville. East Fallowfield Township is a Non-bulk customer of the Pennsylvania American Water Company. Non-bulk customers are those municipalities where PAWC owns, operates, and maintains the entirety of the sewage collection and conveyance facilities.

An Act 537 Sewage Facilities Plan Update for the Tributary Municipalities of Pennsylvania American Water Company was completed in March of 2009. This Plan Update included the expansion of the existing Coatesville Wastewater Treatment Plant and also planned for the current and future needs of the tributary municipalities. The currently available Act 537 planning data for East Fallowfield Township was incorporated into the Plan Update and an estimate of the future sewage needs of the Township was provided for inclusion in the Plan Update.

The 2009 PAWC Plan identifies East Fallowfield's projected sewage flows based on reasonable estimates at that time. The 2009 PAWC Plan anticipated 153,000 gpd within the first 5 years (through 2012) and another 37,350 gpd beyond 5 years as reflected in the Connection Management Plan (CMP). In addition, 148,750 gpd was anticipated for office/industrial zoned property along Route 82. Flows were extrapolated to project 5–10 year and beyond 10-year flow estimates. Approximately, 522 EDUs have been connected to the PAWC public sewer system since that time representing approximately 117,450 gpd of flow.

4. Planning via Planning Modules, Exemptions, and Addenda

The Township's current Act 537 Plan that was approved in June of 1982 together with existing subdivisions of Stottsville Estates, Valley Crossing, Strasburg Hunt, Willow Rock, Wilmont Circle, Carriage Crest, Brook Crossing, Branford Village, Wellington Hunt, Brinton Station, and also planning module approvals of the Cardinal Drive Area (1-15918-211-3J) consisting of 77 existing single-family residences, the Thompson Homes Subdivision – North (North Woods) (1-15918-207-3I) consisting of 27 single-family residences (built out), the Thompson Homes Subdivision – South (Manchester Farms) (1-15918-196-3H) consisting of 112 single-family residences (built out), the Mendenhall Subdivision (1-15918-208-3I) consisting of 74 single-family residences (9 connected), Robins Cove (Stone Creek) (1-15918-159-3H) (PS WQM Part II Permit No. 1503409) along the

southwesterly corner of Misty Patch Road and Goosetown Road consisting of 53 single-family residences as part of the subdivision as well as 9 existing single-family residences along Misty Patch Road (built out) (regional PS conveys flows to the PAWC gravity system in West Chester Road), the Ridgecrest Subdivision (1-15918-213-3J & 1-15918-213-3J-REV) along West Chester Road and South Caln Road consisting of 72 units at build-out (will connect by gravity to the existing gravity sewer within Goosetown Road began construction in 2018) form the basis of the Township's current Plan for public sewer as the selected method used for sewage disposal. Harkins Farm (1-15918-194-3J), which was situated along the northeast corner of South Caln Road and Goosetown Road was planned to consist of 21 single-family residences with a proposed pump station to convey Harkins Farm flows to the Robins Cove Regional Pump Station. However, the Harkins Farm has since been sold and subdivided (Chester County Subdivision # 20347) into two (2) large farmstead lots with on-lot sewage disposal systems.

In addition, a Sewage Facilities Planning Module (1-15918-245-2L) was initiated for the Bawa Property Subdivision, which proposes 24 single family detached dwellings to be serviced by individual on-lot sewage disposal systems and on-site wells but has not yet been approved.

The Township Board of Supervisors voted in 2013 to expand the public sewer service area to accommodate the Coatesville Area School District's (CASD) project to relocate the South Brandywine Middle School and provide public water and sewer to the project and some surrounding residential development. However, the CASD put the project on hold when bids came in much higher than anticipated leaving a funding gap. Future plans include demolition of the middle school and construction of a new elementary school on the site. However, this is not expected to occur until after several other new building projects. At this time, it is not expected to occur within the 5 or 10-year horizons within this Plan Update.

II. PHYSICAL AND DEMOGRAPHIC ANALYSIS

A. Identify Planning Area, Municipal Boundaries, and Service Area Boundaries Through Mapping

This Act 537 Plan Update is being prepared to address the sewage facilities needs of existing and proposed development in the northeastern, northwestern, and central portions of the Township. The existing public sanitary sewer service area is depicted on Figures 3 and 8. Refer to the Municipal Plan Map (Figure 4) that shows the boundaries for the planning areas addressed in this Act 537 Plan Update.

The overall municipal boundary can also be seen in the Municipal Plan Map (Figure 4). East Fallowfield Township is bordered by Caln Township at Robin Road, South Coatesville and Modena Boroughs, and Valley and Sadsbury Townships to the North; West Bradford Township at Bailey Road and Newlin Township to the East; West Marlborough Township to the South; and Highland Township at Buck Run to the West.

Existing service areas for East Fallowfield Township can be seen by referring to the Public Sewer Service Area Map (Figure 8). In general, the Northeastern portion or the area located north-east of the West Branch Brandywine Creek are accommodated. Public sewer service exists for the Glen at Providence Hill Subdivision, Manchester Farms Subdivision, Brinton Station Subdivision, Mendenhall, and Stone Creek. In addition to this area, another service area exists that is bordered by South Coatesville Borough to the east, Buck Run Road to the southeast, Strasburg Road to the southwest, and Strode Avenue to the west. This area provides public sewer service for Branford Village, Brook Crossing, and Hilltop Mobile Home Park (MHP). There is also a small service area located to the west of this previously discussed area that is bounded by Mount Carmel Road to the west and Valley Township to the north. Public sewer service exists here for the Strasburg Hunt neighborhood. Finally, in addition to these areas an expanded service area exists to the west of Strode Avenue, south of Horizon Drive, and north of Wilmington Road. This expanded area provides public sewer service for Carriage Crest and Towerville.

B. Identify the Physical Characteristics of the Planning Area

East Fallowfield Township is located in Chester County, southwest of the City of Coatesville. The Township is bounded to the north by Sadsbury, Valley, and Caln Townships and South Coatesville and Modena Boroughs, to the east by West Bradford and Newlin Townships, to the south by West Marlborough Township, and to the west by Highland Township.

The study area contains a low elevation of approximately 246 located along the Buck Run on the border of East Fallowfield Township and Newlin

Township. The highest elevation of approximately 636 can be found just north of Strasburg Road approximately halfway between its intersections with Old Wilmington Road and Mount Carmel Road. The township consists of rolling hills, dense forest areas, and farmland. In addition, the West Branch of Brandywine Creek can be found in the northeastern portion of the township. The southeastern portion contains Buck Run with much of the western portion of the township containing tributaries to the Buck Run. Dennis Run is situated in the central portion of the township.

There are three pending developmental areas that can be seen on the map in Figure 4. These areas include one region bordered to the north and east by Strasburg Road and Doe Run Road and to the south and west by Octagon School Lane and Wilmington Road. The elevation of this area is fairly consistent ranging from 555 to 560. No noted sloping can be found in this area. There are no rivers, streams, lakes, or ponds in this area. This region contains prime farmland.

The next pending developmental area is located in the central portion of the township bordered by Newlinville Road, Strode Avenue, and Hilltop MHP. The topography of this area consists of hill region. The lowest elevation point of 415 is on the border between East Fallowfield Township and South Coatesville Borough just to the west of Newlinville Road. The highest elevation point of 565 is located adjacent to the lowest point to the northwest. There are no rivers, streams, lakes, or ponds in this area. The border of the area can be described by steep to moderate slopes in particular on the eastern and northern portions of the area. The central and southern portions consist of prime farmland and farmland of statewide importance.

The final pending developmental area is located on the eastern portion of the township. This region is bounded by South Caln Road to the west and West Chester Road to the north. The lowest elevation point of 520 can be found at the southeastern portion of this area west of the river. The highest elevation of 595 can be found on the western edge of the region just east of South Caln Road. This elevation is seen again just south of West Chester Road. Steep to moderate sloping can be found along the river that runs through the southeastern portion of the developmental area. The farmland in this region is both prime and of statewide importance.

A Topographic Map is provided in Figure 5 for reference.

The Study Area lies within two major watersheds: the West Branch Brandywine Creek and the East Branch Brandywine Creek. The West Branch Brandywine Creek encompasses the large majority of the township and is comprised of several sub-watersheds: Buck Run, Sucker Run, Dennis Run, Doe Run and the main stem of the West Branch Brandywine Creek. There is only one sub-watershed of the East Branch Brandywine Creek within the

township and that is the Valley Run watershed, which is tributary to Beaver Creek.

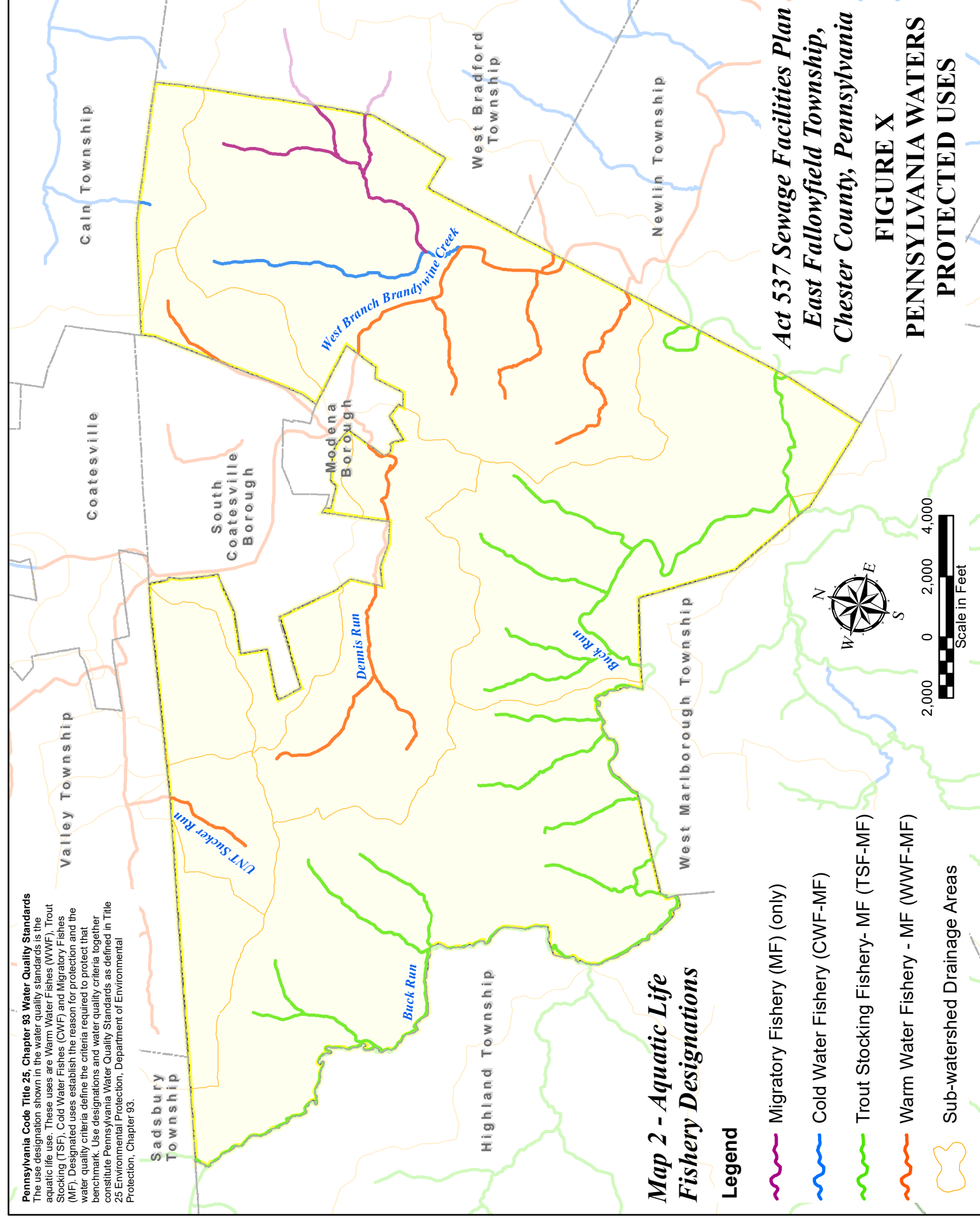
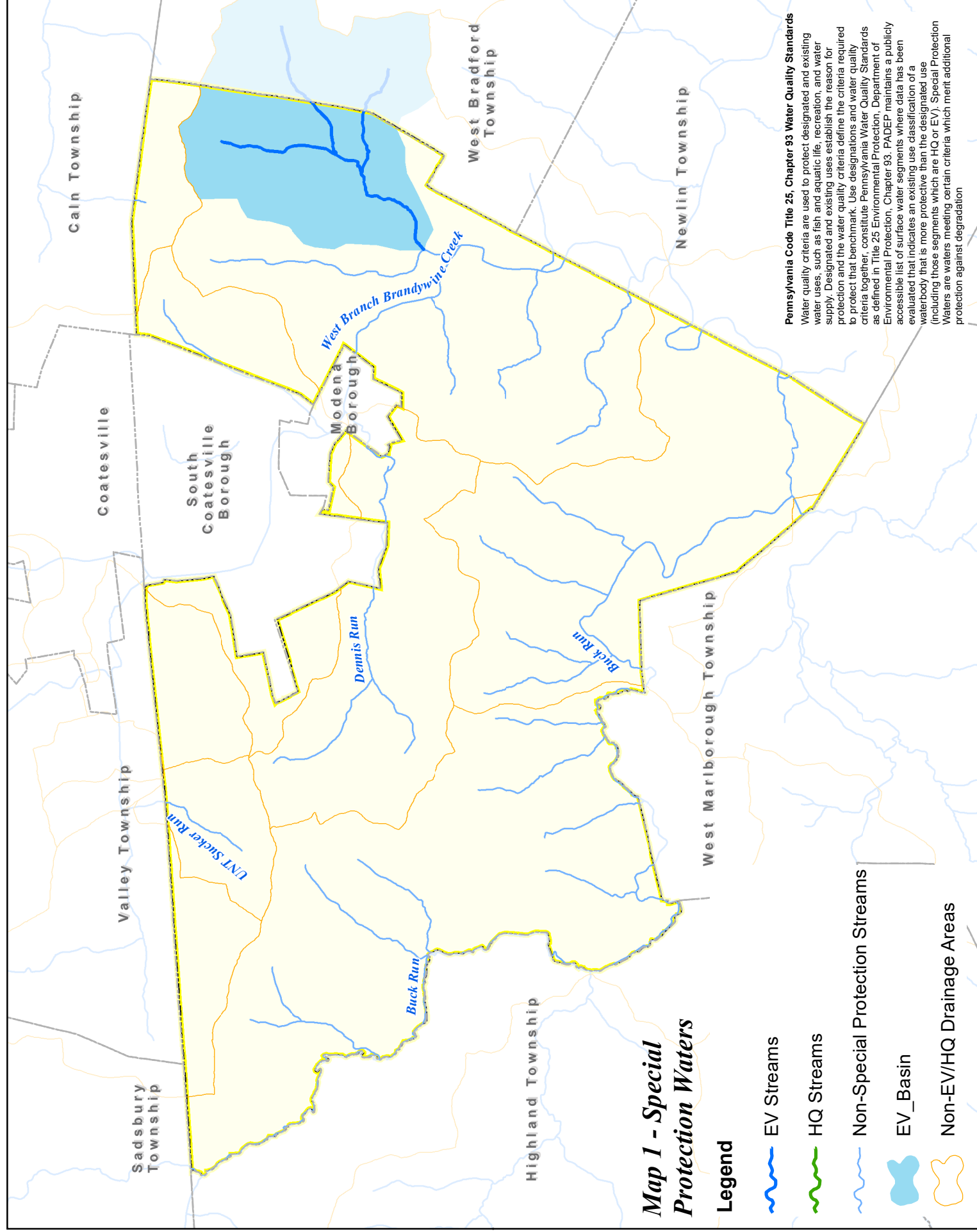
According to National Wetlands Inventory mapping, the majority of the wetlands found within the township are located along the border of the township with Highland and West Marlborough Townships. These wetlands can be found on the banks of current waterways. Additional wetlands can be found on the banks of the West Branch Brandywine Creek located in the northeastern portion of the township and on the banks of the Dennis Run west of Youngsburg Road.

The Buck Run watershed is generally situated in the western, southwestern, and southern portions of the township generally south of Strasburg Road and is the largest watershed within the township. According to PA Code, Chapter 93, the Water Quality Standard Classification is TSF, MF (Trout Stocking, Migratory Fishes) for the Buck Run. The Sucker Run watershed is generally situated within the northeasterly portion of the township north of Strasburg Road and along Doe Run Road (Route 82). According to PA Code, Chapter 93, the Water Quality Standard Classification is WWF, MF (Warm Water Fishes, Migratory Fishes). The Dennis Run watershed is situated generally in the central and northcentral portions of the township extending from its westerly limit at Park Avenue to approximately Ramsey Road in the east and including areas from Ercildoun in the south to the boundary of the township with the boroughs of South Coatesville and Modena in the north. According to PA Code, Chapter 93, the Water Quality Standard Classification is WWF, MF (Warm Water Fishes, Migratory Fishes). The main stem of West Branch Brandywine Creek watershed encompasses almost the entire eastern portion of the township extending in the north from about West Chester Road to the south just beyond Fairview Road where it meets the Buck Run watershed drainage divide. The western limit of the watershed is the drainage divide between the Dennis Run and Buck Run watersheds and the watershed extends to the municipal boundaries with the Borough of South Coatesville, Borough of Modena, West Bradford Township, and Newlin Township. According to PA Code, Chapter 93, the Water Quality Standard Classification for the West Branch Brandywine Creek in this portion of the township is WWF, MF (Warm Water Fishes, Migratory Fishes) with the exception of two unnamed tributaries. One of the tributaries generally flows from north to south along Misty Patch Road and the other flows from north/northeast to south from east of South Caln Road both joining prior to connecting with the West Branch Brandywine Creek in the vicinity of Mortonville Road and Sawmill Road. The unnamed tributary along Mist Patch Road, according to PA Code, Chapter 93, has a Water Quality Standard Classification of CWF, MF (Cold Water Fishes, Migratory Fishes). The unnamed tributary along South Caln Road, according to PA Code, Chapter 93, has a Water Quality Standard Classification of EV, MF (Exceptional Value, Migratory Fishes). Only a small portion of the township consists of the Doe Run watershed, which is situated in the southeasterly portion of the township adjacent to the Buck Run.

According to PA Code, Chapter 93, the Water Quality Standard Classification is TSF, MF (Trout Stocking, Migratory Fishes).

The Valley Run watershed, which is part of the Beaver Creek watershed comprises the northeastern most portion of the township north of West Chester Road and is the only watershed that is not tributary to the West Branch Brandywine Creek in the Township. Valley run is tributary to Beaver Creek, which is tributary to the East Branch Brandywine Creek and according to PA Code, Chapter 93, the Water Quality Standard Classification is CWF, MF (Cold Water Fishes, Migratory Fishes).

Refer to the Protected Uses maps below for a graphic representation of watersheds described above.



C. Soils Analysis

Refer to the Soils Map in Figure 9 and Soil Suitability for On-site Sewage Disposal Map in Figures 10a, b, c, & d.

All soils in the Study Area are either very or moderately limited with regards to in ground bed sewage disposal. The exception to this is a small area located southwest of South Forty Lane and north of Chelsey Drive and Wagner Lane, which is slightly limited. The pending developmental areas within the Study Area are not an exception to the above mentioned very to moderately limited soil for in ground bed sewage disposal. In fact, the majority of the areas anticipated for development consist of very limited soil in this regard. Please refer to Figure 10a for a visual depiction of the verbiage above.

Pertaining to the soil suitability for in-ground trench sewage disposal, the Study Area ranges from slightly, to moderately, to very limited. The northeastern portion of the area contains mostly moderately and very limited soil, with small pockets of slightly limited soil. However, this area is currently and will be in the future serviced by public sanitary sewer. The southern and northwestern portions of the Study Area contain mostly slightly-limited soil with regard to suitability for in-ground trench sewage disposal. However, pockets of moderately and very limited soil suitability can be found in these areas as well. Finally, in the central portion of the Study Area south of Modena Borough there is a small pocket of slightly limited soil located north of Dennis Run. The remainder of this central portion of the Study Area contains mostly very-limited soil suitability. Portions of the Study Area anticipated to be developed within areas to remain serviced by OLDS include the Bawa Muhaiyaddeen Fellowship in the west-central area of the Township. The soils in the area of this project consist chiefly of very-limited suitability for in-ground trench sewage disposal systems. A few small bands of moderately-limited and slightly-limited soils are present. These areas can be seen in Figure 10b.

In the matter of the soil suitability for sand mound sewage disposal the Study Area as a whole range from slightly limited to moderately limited to very limited soil suitability. The vast majority of the Study Area is slightly limited; however, areas of moderately and very limited soil suitability can be found dispersed throughout the Study Area. Area 1 of pending development contains slightly limited soil suitability. Area 2 of pending development contains equal portions of slightly, moderately, and very limited soil suitability. The slightly limited soil suitability is located within the central portion of this area surrounded by moderately limited soil and bordered to the northern portion of this area by very limited soil suitability. Area 3 of pending development contains mostly slightly limited soil suitability with a small amount of moderately and very limited soil suitability located on the

eastern-most portion of this developmental area. All areas can be seen in Figure 10c.

With reference to the soil suitability for drip irrigation sewage disposal the Study Areas contains areas of very limited, moderately limited, and slightly limited soil suitability. The vast majority of the area is slightly limited in this regard. Three notable areas of very limited soil suitability can be found bordering the West Branch of Brandywine Creek; bordering Buck Run in the southern portion of the Study Area; and located in the portion of the Study Area just south of the Valley Township line close to the border of South Coatesville Borough. Area 1 of pending development contains only slightly limited soil suitability. Area 2 of pending development contains very, moderately, and slightly limited soil suitability. The vast majority of this region is slightly limited; however, moderately limited soil can be found in the northern portion of this region and very limited soil can be found on the eastern portion of this region. Finally, Area 3 of pending development contains almost exclusively slightly limited soil suitability. A small area of moderately limited soil suitability can be found in the southeastern portion of the area. In addition, a small region of very limited soil suitability can be found in the eastern portion of this area. All areas described above can be seen in Figure 10d.

A number of regions in the Planning Area are Farmland of Statewide Importance and also Prime Farmland. These areas cannot be segregated to regions within the Study Area as these lands are dispersed throughout the Study Area. Please refer to Figure 9.

D. Geological Features of the Planning Area

Refer to Geologic Formations Map (Figure 11).

The following geologic formations¹ are present within the Planning Area:

- Conestoga Limestone
 - Located in the westernmost portion of the Township and Planning Area. Median well yields of 15 gallons per minutes can be expected. Yields of up to 175 gallons per minute may be achieved.
- Octoraro Phyllite
 - Located in the northeastern and northwestern portions of the Township and Planning Area. Median well yields of 7.5 gallons per minute can be expected. Yields of up to 300 gallons per minute may be achieved.
- Peters Creek Schist
 - Located in the central and southeastern portions of the Township and Planning Area. Median well yields of 9 gallons per minute can be expected. Yields of up to 60 gallons per minute may be achieved.
- Wissahickon Schist
 - Located in the southern portion of the Township and Planning Area. Well yield information was not available for this formation.

E. Topography

Refer to Topographic Map depicting steep slopes (Figure 5).

Refer to Section II.B.

F. Potable Water Supply Information

Public water in East Fallowfield Township is supplied by Pennsylvania American Water Company (PAWC). The remaining area is serviced by private on-site wells as permitted by the Chester County Health Department (CCHD).

Within the township some issues have been reported with the well water supply. Some households have needed to have water deliveries throughout the year to make up for the lack of supply generated from onsite water wells. In addition, the water quality in some of the wells is problematic requiring the

¹ U.S. Department of Interior and U.S. Geological Survey. (2002). *Geohydrology of Southeastern Pennsylvania*. New Cumberland, Pennsylvania: Dennis J. Low, Daniel J. Hippe, and Dawna Yannacci.

installation of treatment systems. Additional professional services to investigate well water supply and quality issues is recommended as well as the completion of a Comprehensive Water Resources Management Plan.¹

The State Water Plan is a management tool to guide in the conservation, development, and administration of the Commonwealth’s water and related land resources. A goal of the plan with regard to water supply is adequate quantity and quality to meet short and long-term needs. The objective of that plan that is directly related and impacted by this Act 537 Plan Update is to protect public drinking water supplies from degradation of quality and reduction in yield. Proper operation and maintenance of on-lot disposal systems and enforcement of the municipal requirements of the sewage management ordinance is consistent with this objective. Connection to the public sewer system also serves to prevent degradation of the quality of public drinking water supplies.

G. Wetlands

Refer to National Wetlands Inventory Map (Figure 6).

To the extent possible, wetlands have been identified utilizing the National Wetlands Inventory Maps prepared by the United States Fish and Wildlife Service. While these maps do not provide a complete wetlands delineation, they are satisfactory for planning purposes. In areas where new sewage facilities are being considered, an actual Wetlands Delineation must be performed in field prior to final design.

Wetlands Identification

Symbol	Ecological System	Ecological Subsystem	Class	Subclass	Modifying Terms
PSS1	Palustrine		Scrub-Shrub	Broad-Leaved Deciduous	
PEM5C	Palustrine		Emergent	Phragmites australis	Seasonally Flooded
PUBHh	Palustrine		Unconsolidated Bottom		Permanently Flooded; Diked/Impounded
PUBFh	Palustrine		Unconsolidated Bottom		Semipermanently Flooded; Diked/Impounded
PFO1A	Palustrine		Forested	Broad-Leaved Deciduous	Temporary Flooded
PEM5A	Palustrine		Emergent	Phragmites australis	Temporary Flooded

¹ East Fallowfield Township. (2015). *Comprehensive Plan for East Fallowfield Township*. East Fallowfield, Pennsylvania: Ray Ott & Associates.

Symbol	Ecological System	Ecological Subsystem	Class	Subclass	Modifying Terms
PEM5E	Palustrine		Emergent	Phragmites australis	Seasonally Flooded/Saturated
PFO1C	Palustrine		Forested	Broad-Leaved Deciduous	Seasonally Flooded

III. EXISTING SEWAGE FACILITIES IN THE PLANNING AREA

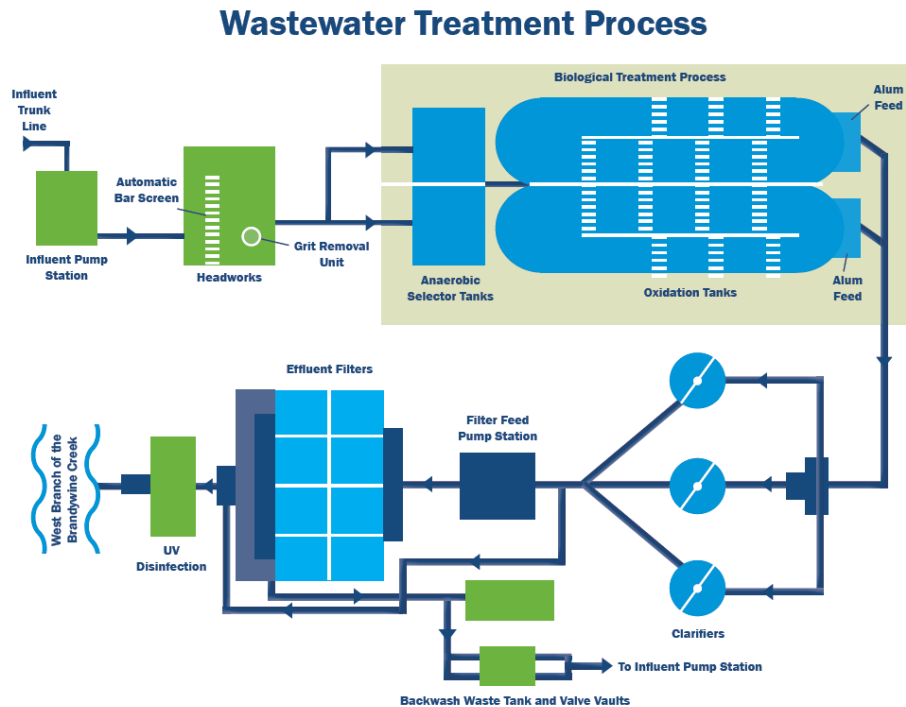
A. Identify and Describe Municipal Sewerage Systems in the Planning Area

1. Location, Size, and Ownership of Facilities

With the exception of On-Lot Sewage Disposal Systems the remainder of East Fallowfield Township is covered by public sanitary sewer. The public sanitary sewer is handled by the Pennsylvania American Water Company (PAWC) in the City of Coatesville and is ultimately conveyed to the Wastewater Treatment Plant owned and operated by PAWC located in the Borough of South Coatesville.

2. Narrative and Schematic Diagram of the Basic Treatment Process

The expanded PAWC Coatesville WWTP uses Oxidation Ditch with Activated Sludge treatment process¹ with discharge regulated under NPDES Permit No. PA0026859.



¹ PAWC Get to Know Us Fact Sheet, <https://amwater.com/paaw/water-quality/wastewater-treatment>

3. Description of Problems with the Existing Facility

Currently, there are no problems with the existing WWTP. PAWC continues to monitor and report on available capacity in the EETL and WETL. Portions of the sanitary sewer system continue to be repaired or upgraded to accommodate future flows.

4. On-Going Upgrades or Expansion of Facilities

The PAWC City of Coatesville WWTP was expanded to a capacity of 7.0 MGD in 2010 from the previous capacity of 3.85 MGD.

5. Operations and Maintenance Requirements for Small Flow Treatment Facilities and the Status of Past and Present Compliance

All On-Lot Sewage Disposal Systems (OLDS) are permitted by the Chester County Health Department (CCHD) and/or the PADEP. As such, all individual owners must abide by the limitations set forth within their permits. The only other sewage disposal means within East Fallowfield Township is public sewer which is owned and operated by the Pennsylvania American Water Company (PAWC).

The Chester County Health Department (CCHD) not only permits On-Lot Sewage Disposal Systems (OLDS), but also permits On-Lot Potable Water Wells. As such, they also monitor groundwater conditions via said wells.

6. Disposal Areas and Groundwater Limitations

All On-Lot Sewage Disposal Systems (OLDS) are permitted by the Chester County Health Department (CCHD) and/or the PADEP. The CCHD keeps record of nitrate levels in ground water wells. This is cross-referenced as applications for on-lot sewage disposal systems or planning modules are processed through the CCHD. When a well within $\frac{1}{4}$ mile of the property boundary has exceeded 5 mg/l of nitrate as nitrogen, 50 EDU's or flows in excess of 10,000 gpd are proposed, or known geological conditions may contribute to pollution, a standard Preliminary Hydrogeologic Analysis is required. A sample of water is collected from a source of groundwater within the site boundaries if available and a recharge area is plotted through the area of the proposed septic system(s). A mass balance using the dilution area and nitrate concentration in the groundwater is conducted. The result will be a mixture of the concentration of nitrate in the groundwater and the concentration you are applying via the septic system. The mixed concentration must be less than 10 mg/l to meet the EPA drinking water standards.

B. Individual and Community On-Lot Disposal Systems

DEP's publication titled *Sewage Disposal Needs Identification* was used to identify, map, and describe areas that utilize individual and community on-lot sewage disposal. The reported results of the sewage needs survey can be found in Appendix Q of this Plan.

C. Wastewater Sludge and Septage Generation

Private haulers are contracted by individual on-lot disposal system owners for sludge/septage removal. Haulers are required to be licensed by the Chester County Health Department and are required to dispose of sludge at an approved facility.

IV. FUTURE GROWTH AND LAND DEVELOPMENT

A. Municipal and County Planning

1. Land Use and Zoning

The Township currently has four (4) documents relating to planning which governs current land use and zoning within East Fallowfield Township.

- a. 2015 Comprehensive Plan, East Fallowfield Township, Chester County, PA, 7/27/2015.
- b. East Fallowfield Township Zoning Ordinance of 2002 (Chapter 27), as amended through Ordinance 2010-01, 3/23/2010.
- c. East Fallowfield Township Subdivision and Land Development Ordinance of 1982 (Chapter 22), as amended through Ordinance 2010-01, 3/23/2010.
- d. East Fallowfield Park Master Site Development Plan, 8/23/2004.
- e. Newlinville Village Master Plan, East Fallowfield Township, Chester County, PA, 4/27/2021.

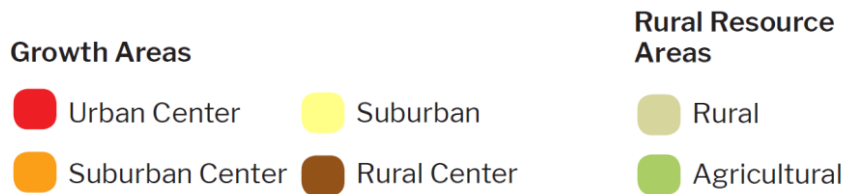
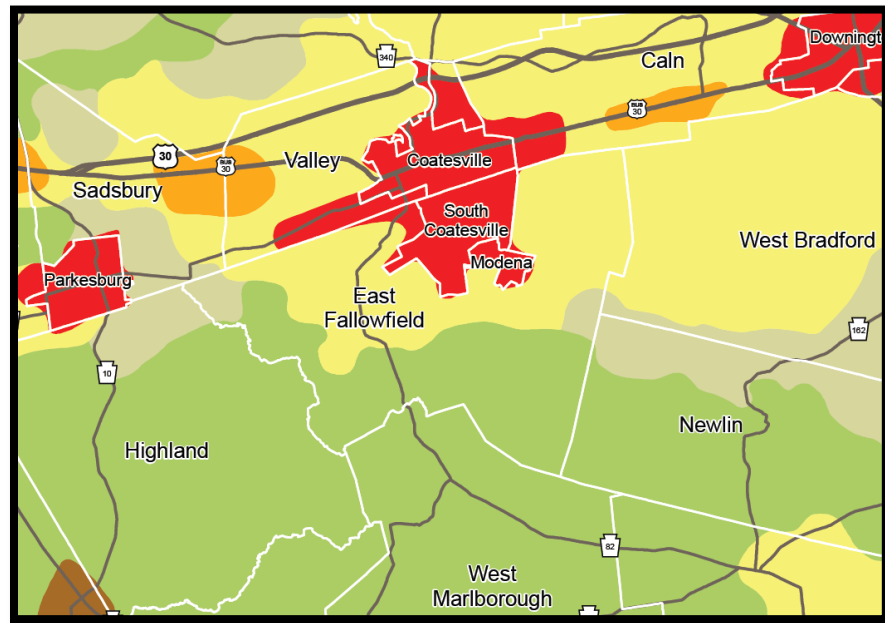
A Zoning Map has been included herein as Figure 2.

“Landscapes3, Chester County Comprehensive Plan” was adopted on November 29, 2018 superseding the previous plan “Landscapes2.” “Landscapes3” provides guidance in six (6) goal areas of preserve, protect, appreciate, live, prosper, and connect. Of the six (6) goals the following have direct application to East Fallowfield Township and this Act 537 Plan Update:

- a. Protect – Support Municipal On-lot Sewage Management Programs
- b. Connect – Integrate Water, Sewer, and Land Use Planning

The above noted “Landscapes3” goals are used as a tool to aid municipalities within Chester County in establishing prudent and responsible growth boundaries consistent with the structure of the Township’s Comprehensive Plan being a fluid document in directing future Township growth and growth patterns. In coordinating planning of sewer, “Landscapes3” recommends that “extension of sewer or water service outside of the growth areas should be avoided except where needed to address health or safety concerns.”

In addition, “Landscapes3” refined the “Landscapes Map.” The updated “Landscapes Map” depicts two (2) Growth Areas within the Township. The northwestern, northeastern, and central portions of the Township are classified as “Suburban” Growth Areas and areas immediately surrounding the Boroughs of South Coatesville and Modena are classified as “Urban” Growth Areas. The remainder of the Township falls within the “Rural Resource Area” of Landscapes3, which is comprised of “Rural” and “Agricultural” Areas. The west central and east central portions of the Township are classified as “Rural” with “Agricultural” making up the remainder of the central and southern portions of the Township. “Landscapes 3” was adopted by the Board of County Commissioners of Chester County on November 29, 2018 replacing “Landscapes 2” as the County’s Comprehensive Plan.



Livable Landscapes Map¹

¹ “Landscapes3, Chester County Comprehensive Plan,” prepared by the Chester County Planning Commission and adopted by the Board of County Commissioners on November 29, 2018. “Livable Landscapes Map,” page 30.

Planning principles are outlined for all Growth Areas and Rural Resource Areas. Suburban, Rural, and Agricultural landscapes, which comprise most of East Fallowfield Township are of particular importance. Within the Suburban landscape, “planned extension of sewer and water infrastructure for new development that does not leapfrog greenfield sites” is recommended. Within the Rural landscape, “very limited public or community sewer and water service to serve cluster development or concentrations of failing on-lot sewage systems; otherwise, on-lot sewage systems and individual wells” is recommended. Within the Agricultural landscape, “On-lot sewage disposal and individual wells, except where public health requires alternatives” is recommended.

2. Zoning or Subdivision Regulations that Establish Lot Sizes predicated on Sewage Disposal Methods

Zoning District		Minimum Lot Area (Acres)	
RA	Rural Agricultural District	20.0	Agricultural Uses
		1.0	Residential Uses (2 max.)
R-1*	Low Density Residential District	2.0	Single-family Detached Dwelling
		20.0	Golf Courses and Private Recreational Clubs
		5.0	All other Public and Private Recreational Uses
		2.0	All other Uses Permitted by Right, Special Exception, or Conditional Use
R-2*	Medium Density Residential District	1.0	Single-family Detached Dwelling
		20.0	Golf Courses and Private Recreational Clubs
		5.0	All other Public and Private Recreational Uses
		2.0	All other Permitted Non-Residential Uses
R-3*	High Density Residential District	29,000 s.f.	Single-family Detached Dwellings
		40,000 s.f.	Two-family Dwellings
		2.0 DU/Ac.	Max. Gross Density Townhouses and Multi-family Units
		1.0 Ac.	All other Permitted Uses
PF	Public Facilities District	None	Individual Establishments served by Both Public Water and Sewer
		1.0	Individual Establishments not served by <u>Both</u> Public Water and Sewer
MH	Mobile Home Park District	Within a Mobile Home Park:	
		10.0 Ac.	Contiguous Tract Area
		9,000 s.f.	per Mobile Home Lot
		5 Units	per Gross Acre with Public Water and Public Sewer or where On-lot Sewage Disposal and Water the

Zoning District	Minimum Lot Area (Acres)
	Density provisions of R-2 Medium Density Residential District shall be applicable 5.0 Ac. Contiguous Area for Addition to Existing Mobile Home Park Not within a Mobile Home Park: 30,000 s.f. Individually Owned Mobile Home Lot All other Permitted Residential Uses shall be in accordance with Minimum Required Lot Areas of the R-3 High Density Residential District
VC Village Commercial District	Single Use on a Lot: 40,000 s.f. When Served by Individual On-lot Sewer and Water Systems More than one (1) Use on a Lot: 20,000 s.f. Minimum Additional Area per Additional Use on the Lot when Served by Individual On-lot Sewer and Water Systems 3.0 Establishments per Acre Maximum Density for uses or establishments in the same building when Served by Either Community or Public Sewage Systems
O-I Office Industrial District	1.0 Municipal Uses 5.0 Nursing Home, Mini-warehouse, or Recycling Center 10.0 Hospital or Medical Center 25.0 Industrial or Office Park (Tract Size) Avg. Area of Individual Lots w/in Park shall be 3.0 Ac. Min., but no Individual Lot shall be less than 1.0 Ac. 25.0 Junkyard or Salvage Yard 100.0 Sanitary Landfill 3.0 All other Permitted Uses
MU Multi-use District	1.0
Open Space Design Option	
Natural Resources Protection Standards	
Hydric Soils	
Prime Agricultural Soils	
Flood Hazard District	

* **Sewage and Water Requirements:** Development within areas of this District where both community/public water and sewer services are not available shall conform to lot and yard requirements of the R-2 Medium Density Residential District.

- ** The Open Space Design Option is permitted by Conditional Use and is subject to various density and tract coverage provisions as well as open space requirements. Minimum lot sizes are permitted as follows:

Where individual residential lots are established, no individual lot shall be less than 8,000 square feet in area for single-family detached dwelling units nor less than 5,000 square feet in area for each individual dwelling unit within a two-family structure, nor less than 2,500 square feet for each individual dwelling unit within any multifamily structure.

Within an age-restricted community, where individual residential lots are established, no individual lot shall be less than 5,000 square feet in area for single-family detached dwelling units nor less than 3,000 square feet in area for each individual dwelling unit within a two-family structure, nor less than 2,000 square feet for each single-family attached dwelling unit.

3. Limitation and Plans Related to Floodplain, Stormwater Management, & Special Protection Areas

Natural Resources Protection Standards (Part 14) and a Flood Hazard District (Part 15) are included in the Zoning Ordinance as identified in the preceding section. In addition, Chapter 8 of the East Fallowfield Township Code is the Township's "Floodplain Management" Ordinance. Chapter 23 of the East Fallowfield Township Code of Ordinances is the "East Fallowfield Township Stormwater Management Ordinance."

B. Delineation and Description through Map, Text, and Analysis

1. Areas with Existing Development or Plotted Subdivisions

Figure 4 shows the location of proposed and existing development within the planning area. These subdivisions (and land developments) include:

- a. Mendenhall Tract
- b. Ridgecrest
- c. Coatesville Area School District
(South Brandywine Middle School)
- d. Scott Farm
- e. Etteleson Development
- f. Bonsall Farm
- g. Bawa Muhaiyaddeen Fellowship
- h. Sisk Farm
- i. PECO Property

2. Land Use Designations

Land use in East Fallowfield Township is governed by the Township’s Subdivision and Land Development Ordinance as well as the Township’s Zoning Ordinance. Land use is given the following designations per the Zoning Ordinance:

- RA Rural Agricultural District
- R-1 Low Density Residential District
- R-2 Medium Density Residential District
- R-3 High Density Residential District
- PF Public Facilities District
- MH Mobile Home Park District
- VC Village Commercial District
- O-I Office Industrial District
- MU Multi-Use District

Refer to Section IV.A.2 of this Act 537 Plan for the minimum lot sizes associated with these zoning designations. Since the planning area is Township-wide, all of the zoning designations are included in the study.

3. Future Growth Areas, Population and EDU Projections

Within the planning area identified in this Act 537 Plan, there are areas that have existing development and areas that are planned for growth.

Table 1 lists the proposed development and the Equivalent Dwelling Units (EDUs) associated with the respective developments. Table 2 details the projected population increase based on the EDU projections.

Table 1
Projected Dwelling Unit Connections Per Year

(Based on active proposed subdivisions with current applications or approvals with the Township)

Subdivision	Year					Future
	2022	2023	2024	2025	2026	
Mendenhall Tract (Pelham Place/Fieldstone Village)	2	4	4	4	4	43
Ridgecrest	10	10	10	10	10	12
Coatesville Area School District (South Brandywine Middle School)	0	0	0	0	0	75
Scott Farm	5	10	10	10	10	30
Etteleson Development	0	0	0	0	0	32
Bonsall Farm	0	0	0	0	0	20

Table 2
Population Projections

(Based on active proposed subdivisions with current applications or approvals with the Township)

Subdivision	Year					Future
	2022	2023	2024	2025	2026	
Mendenhall Tract (Pelham Place/Fieldstone Village)	6	11	11	11	11	118
Ridgecrest	28	28	28	28	28	33
Coatesville Area School District (South Brandywine Middle School)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Scott Farm	14	28	28	28	28	83
Etteleson Development	0	0	0	0	0	88
Bonsall Farm	0	0	0	0	0	55

Per 2020 Census Data: 2.74 persons per dwelling

4. Regulations relating to Development, Use, and Protection of Land and Water Resources

East Fallowfield Township has established guidelines for development, use, and protection of land within the Township’s boundaries. The guidelines are established in the Township’s Comprehensive Plan (Chapter 2 – July 27, 2015) and the Subdivision and Land Development Ordinance.

The purpose set forth in the Ordinance, is as follows:

- To assist in the orderly, efficient, and integrated development of land in accordance with the Comprehensive Plan, East Fallowfield Zoning Ordinance (Chapter 27), and 537 Sewage Facilities Plan;
- To promote thereby the health, safety, and general welfare of the residents of the Township;
- To facilitate the safe and efficient movement of traffic and to assure that streets in and bordering a subdivision or land development shall be coordinated and of such widths and grades and in such locations as deemed necessary to accommodate prospective traffic and facilitate fire protection;
- To ensure coordination and conformance of subdivision and land development plans with the public improvement plans of the Township;

- To ensure equitable handling of all subdivision and land development plans by providing uniform standards and procedures to be followed;
- To ensure that land which is subject to environmental constraints such as floodplains and steep slopes shall be either made safe for the proposed use of land or shall be set aside for uses which shall not endanger life or property or further aggravate, disrupt, or increase the existing condition;
- To ensure sound community growth and the safeguarding of the interests of the homeowners, the subdivider, the investor, and the local government by assuring that streets shall be graded and improved, and walkways, curbs, gutters, streetlights, fire hydrants, water and sewage facilities, and other improvements shall be installed where appropriate, in an acceptable manner; and,
- To provide open spaces through the innovation in design and layout of the land.

5. Required Sewage Planning for 5 and 10-year Planning Periods

The following sections of this Act 537 Plan will examine the technical alternatives necessary to meet the sewage facilities needs of the Township over a 5 and 10-year planning period.

The means for serving the needs of the planning area will be dependent upon the technical alternative that is selected and the capacity of that alternative to satisfy the needs. The PAWC Coatesville WWTP has capacity to serve East Fallowfield Township's public sewer service need in both the 5 and 10-year planning horizons. Details regarding the calculations of the proposed sewage flow for the planning area are summarized in Appendix D.

Implementation of a Sewage Management Program provides a method of assuring proper operation and maintenance of sewage facilities within East Fallowfield Township, which is considered an adequate means of sewage disposal. This method can be implemented effectively over a 5 and 10-year planning timeframe.

In addition, construction and installation of Community Sewage System(s) and implementation of Holding Tanks for Commercial uses are analyzed as part of this Act 537 Plan Update.

V. ALTERNATIVES TO PROVIDE NEW OR IMPROVED WASTEWATER DISPOSAL FACILITIES

A. Conventional Collection, Conveyance, Treatment, and Discharge Alternatives

To provide new or improved wastewater disposal facilities to meet the needs of existing and proposed development, a number of alternatives are considered:

- Installation of a collection and conveyance system to convey wastewater to the PAWC conveyance system for ultimate treatment and disposal at the PAWC facility.
- Installation of a community sewage system with land-based effluent disposal or stream discharge. Community treatment processes include:
 - Nitrification/Denitrification Package Plant with BNR
 - Sequencing Batch Reactor Plant
 - Oxidation Ditch
 - Septic Tanks with Subsurface Disposal

Effluent disposal methods include:

- Drip Irrigation
 - Seepage Beds
 - Spray Irrigation
 - Stream Discharge
- Individual On-Lot Disposal Systems with Implementation of a Sewage Management Program

Of the above alternatives considered, the alternative examining discharge to the PAWC system warrants further consideration. Some infrastructure is already in place (refer to Section V.A.2) and the PAWC treatment facility is an established DEP-permitted facility with adequate capacity to serve immediate needs, as evidenced by the PAWC Connection Management Plan revised March 2022. In addition, the collection and conveyance system upgrades by PAWC, to their East End Trunk Line (EETL) and West End Trunk Line (WETL) will provide for adequate capacity as well.

For the installation of a community sewage system and effluent disposal, the nitrification/denitrification package plant with biological nutrient removal, as well as the SBR and oxidation ditch are all proven technologies and warrant consideration for treatment. However, from an effluent disposal perspective (for the community treatment system alternative), spray irrigation, drip irrigation, and seepage beds warrant further study. These types of facilities are in place in other parts of Chester County and are operating satisfactorily.

Previous planning requires land applications to be designed for twice the anticipated flow in addition to 100% replacement area.

1. Potential for Regional Wastewater Treatment

The PAWC owns and operates the former City of Coatesville wastewater treatment plant. Currently, this plant is located in the Borough of South Coatesville adjacent to the West Branch of the Brandywine Creek. In 2021, the average hydraulic loading was 3.294 million gallons per day (MGD). Effluent is discharged to the West Branch of the Brandywine Creek under NPDES Permit Number PA0026859. The WWTP was upgraded to a design flow of 7.0 MGD.

During 2021, East Fallowfield Township discharged an average daily flow of 149,955 gallons per day (GPD). This flow originates from users in the northwest corner and northeast corner of the Township. Wastewater is collected and conveyed by a series of gravity mains, pump stations, and force mains that discharge to other portions of the PAWC public sewer system in Valley Township and the City of Coatesville. One portion of the PAWC public sewer within East Fallowfield Township discharges to the Valley Township sanitary sewer system on Mount Carmel Road. See Figure 8 – East Fallowfield Sewer Map. PAWC allocates 269,107 gpd of flow to East Fallowfield Township at the Coatesville WWTP. East Fallowfield Township is currently using about half of that allocated flow.

2. Extension of Existing Municipal or Non-Municipal Sewage Facilities to Areas in Need

Extension of public sewer to areas in need that are adjacent to or in close proximity to the existing sanitary sewer service area is a viable alternative that is evaluated in this study.

3. Potential for Continued Use of Existing Municipal or Non-Municipal Sewage Facilities

The existing sanitary sewer system within East Fallowfield Township is anticipated to continue to serve the respective service areas currently in place. There is also the possibility to accommodate flow from areas to which sewer is extended from the existing network of sewer currently in place. There are currently no municipally owned and/or operated sewage facilities within the Township.

4. Repair and Replacement of Existing Collection and Conveyance System Components

As stated in Part A.1. of this section, there are wastewater collection and conveyance facilities located in the northwestern and northeastern portions of the Township that collect and convey wastewater to the PAWC system at the City of Coatesville. The overall system is in good condition. There are currently no municipally owned and/or operated sewage facilities within the Township.

5. Need for Construction of New Community Sewage Systems

New Community Sewage Systems warrant consideration due to the rural nature of the Township. There are several areas that, because of the density of development, lot size, topography, and location, will be difficult to service cost effectively by any means other than individual OLDS.

6. Innovative/Alternative Methods of Collection/Conveyance to Serve Needs Areas Using Existing Wastewater Treatment Facilities

The PAWC WWTP, as previously mentioned, has already completed a plant expansion project to provide for more capacity for the surrounding municipalities, including East Fallowfield Township. This discussion is not applicable to municipal or community sewage disposal systems since there are currently none in the Township.

B. Use of Individual Sewage Disposal Systems

With the investigation of the public or community sewerage system options, individual on-lot disposal systems will be considered for this Act 537 Plan Update for areas not located within reasonable proximity to existing or future anticipated public sewer areas. In addition, other factors that were considered in evaluating whether individual OLDS are the selected alternative are soils suitability, topography, and economic viability of community and/or public sewer.

1. Soil and Slope Suitability

Refer to Section II.C, the Soils Map in Figure 9, and Soil Suitability for On-site Sewage Disposal Map in Figures 10a, b, c, & d.

2. Preliminary Hydrogeologic Evaluation

Refer to Section III.A.6.

3. Establishment of a Sewage Management Program (SMP)

Refer to Section F.

4. Repair, Replacement or Upgrading of Existing Malfunctioning Systems in Areas Suitable for OLDS

a. Existing Technology and Sizing Requirements

The Chester County Health Department (CCHD) is the local agency responsible for OLDS permitting for all municipalities in Chester County. The CCHD relies on provisions in 25 Pa. Code Chapter 73, Standards for On-lot Sewage Treatment Facilities with regard to general site location, absorption area requirements, and other sizing requirements.

b. Use of Expanded or Alternating Absorption Areas

Refer to section V.B.4.a above.

c. Use of Water Conservation Devices

Use of water conservation devices may be a condition of a permit for a repair, replacement, or upgrade of an existing malfunctioning OLDS, which would be reviewed and issued by the CCHD as the local agency responsible for OLDS permitting. There is no current regulation in the East Fallowfield Township Code with regard to water conservation devices. Water conservation provisions are to be adopted by the Township as part of a SMP Ordinance in connection with this Plan Update.

C. Small Flow Sewage Treatment Facilities

Refer to the discussion and text in Section V.A.5 above. Small flow treatment facilities require adequate operation and maintenance to prevent the creation of environmental problems or public health hazards associated with improperly treated sewage. This requires the control of small flow treatment facilities through specific restrictions on their use. This section assesses the use of a small flow sewage treatment facility and land treatment to serve as a replacement or repair system to abate an existing nuisance or public health hazards. They may also be used as a system to serve residential dwellings or commercial facilities, which generate domestic wastewater not containing industrial waste.

1. Treatment and Discharge Requirements

Small flow treatment facilities and their appurtenances shall meet applicable design, installation, operation and other standards established for small flow treatment facilities by the Department of Environmental Protection under sections 202 and 207 of The Clean Streams Law (35 P. S. §§ 691.202 and 691.207) and shall obtain a Clean Streams Law permit and if there is a discharge to surface water, a National Pollutant Discharge Elimination System (NPDES) permit, prior to construction and operation.

2. Soil Suitability

Refer to Section II.C, the Soils Map in Figure 9, and Soil Suitability for On-site Sewage Disposal Map in Figures 10a, b, c, & d. This alternative is only permitted when documentation is provided that soils are not suitable for the installation of individual or community on-lot sewage disposal systems or there is insufficient room to meet minimum isolation distances for installation of new or expansion of individual or community on-lot sewage disposal systems.

3. Preliminary Hydrogeologic Evaluation

Refer to Section III.A.6. For small flow treatment facilities this is applicable when the facility will use land disposal or a dry stream channel discharge for final disposal.

4. Municipality, Local Agency, or other controls over O&M Requirements through a SMP

Refer to Section F. O&M provisions related to small flow treatment facilities should be added to the Township's SMP. In addition to any requirements within the Township's SMP the CCHD and/or the PADEP may have additional O&M requirements.

D. Community Land Disposal

Refer to Section V.A.5. With the investigation of the public sewerage system option and the individual on-lot disposal system option, community sewerage systems will be considered for this Act 537 Plan Update for areas not located within reasonable proximity to existing or future anticipated public sewer areas. In addition, other factors that were considered in evaluating whether community systems are the selected alternative are soils suitability, topography, and economic viability.

1. Soil and Site Suitability

Refer to Section II.C, the Soils Map in Figure 9, and Soil Suitability for On-site Sewage Disposal Map in Figures 10a, b, c, & d.

2. Preliminary Hydrogeologic Evaluation

Refer to Section III.A.6.

3. Municipality, Local Agency, or other controls over O&M Requirements through a SMP

Refer to Section F.

4. Rehabilitation or Replacement of Existing Malfunctioning Community Land Disposal Systems

See Section V.B.4.a-c above.

E. Retaining/Holding Tank

Since Retaining/Holding tanks are designed and constructed to facilitate ultimate disposal of sewage at another site, specific restrictions on their use is warranted. Holding tanks require regular service and maintenance to prevent malfunction and overflow.

1. Commercial, Residential, and Industrial Use

Given consideration for implementation of either the PAWC option or the community-based treatment option, a "pump and haul" program would be considered as a temporary means of sewage disposal until the primary means of wastewater disposal is complete and functional. Holding tanks on a permanent basis would be considered for a commercial development using less than 800 gallons per day that is not in close proximity to public sewer and the use of land application is precluded by soil suitability and available land. Holding tanks will also be considered when the use is necessary to abate a nuisance or public health hazard.

2. Designated Conveyance Facilities (Pumper Trucks)

Pumpers must be registered with the CCHD and dispose of sewage at an approved facility.

3. Designated Treatment Facilities or Disposal Site

See V.E.2 above.

4. Implementation of a Retaining Tank Ordinance by the Municipality

East Fallowfield Township currently does not have a Holding Tank Ordinance. A draft Holding Tank Ordinance is included in Appendix I for adoption by the Township.

5. Financial Guarantees when Retaining Tanks are used as an Interim Sewage Disposal Measure

Requirements for O&M Agreements including Financial Guarantees are included within the draft Holding Tank Ordinance.

F. Septage Management Programs (SMPs) to Assure Future Operation and Maintenance (O&M) of Existing and Proposed Sewage Facilities

Currently, Chapter 18A of the Township Code regulates Individual On-lot (Part 1) and Community Sewer Systems (Part 2) but does not include regulations for a Septage Management Program. The 1972 Act 537 Plan contemplated a SMP. However, the Township has not implemented an “On-lot Management Program” or SMP as recommended in the 1972 Plan. Implementation of a SMP shall be addressed as part of implementation of this Plan.

1. Municipal Ownership or Control over O&M

The Township is evaluating using current staff, code enforcement consultant, or seeking third party agency assistance in administrating the SMP. In addition, an application is being developed in cooperation with the Chester County Health Department to streamline the reporting process. The application will be available for pumpers/system inspectors to download to a smartphone or tablet. The app will be linked to Chester County GIS information. When visiting a property, GPS coordinates will allow the app to auto populate the property owner information (owner names, property address, lot size, etc.). The app will also contain questions for the pumper/inspector to answer related to the type and condition of the on-lot system servicing the property. The answers to the questions will create a score, which will categorize the condition of the on-lot system enabling municipalities to quickly and efficiently see which properties are in compliance with the reporting requirements of the SMP as well as which on-lot systems may warrant additional maintenance, investigation, or enforcement action. The application is still under development but if it becomes

available in cooperation with the Chester County Health Department it would be the selected alternative for implementation as part of East Fallowfield Township's SMP.

2. Required Inspection of Sewage Disposal Systems

An initial inspection is required to be completed by a qualified professional (Professional Engineer, Pennsylvania Septage Management Association (PSMA) certified inspector, Sewage Enforcement Officer, etc.) at the onset of the SMP. The standard PSMA inspection form shall be completed for each OLDS to ensure consistency of inspections. Inspections shall also be completed after every other pumping cycle.

3. Required Maintenance of Sewage Disposal Systems

The SMP requires septic tanks to be pumped initially and at least once every three (3) years. Receipts from the licensed pumper/hauler shall be submitted to the Township prior to the end of the respective SMP cycle. Any other system than a standard OLDS, which has specific O&M requirements, shall be completed in accordance with the requirements and schedules related to each respective system. The O&M requirements shall be provided to the Township along with any required maintenance contracts or agreements between the owner of the system and the maintenance contractor.

4. Repair, Replacement, or Upgrading of Malfunctioning On-lot Sewage Systems

a. Aggressive Pro-Active Enforcement

In accordance with the SMP, a written notice of violation (NOV) will be issued to any property owner which is found to be served by a malfunctioning on-lot sewage disposal system or which is discharging sewage without a permit. Within seven (7) days of the NOV, the property owner shall make application for a permit to repair or replace the malfunctioning system. Within 30 days of initial notification by the Township, construction of the permitted repair or replacement shall commence. Within 60 days of the original notification by the Township, the construction shall be completed unless seasonal or unique conditions mandate a longer period, in which case the Township shall set an extended completion date. In addition, if an imminent health hazard exists due to failure of the property owner to respond to the NOV, there are provisions in the SMP giving the Township authority to complete the repair or replacement and charge the property owner for the work performed and, if necessary, file a lien on the property. There are also provisions for fines and jail time to address extreme cases of negligence.

b. Public Education Programs regarding proper O&M and Repair of Sewage Disposal Systems

“On-lot Sewage Systems, ‘An Owner’s Manual’” created by the CCHD will be provided by the Township as part of information packets to be included with the notices to property owners that the SMP is being implemented. In addition, information will be posted on the Township website and included in the Township newsletter.

5. Establishment of Joint Municipal SMPs

There appeared to be the possibility to partner with the CCHD through its pumping program since the CCHD is the permitting agency for OLDS for every municipality in Chester County. However, there have been challenges with collection of data from pumpers and dissemination of information to the municipalities. In addition, the need and scope of SMPs vary greatly by municipality making it difficult to create an across-the-board SMP at the County or Joint Municipal level. Therefore, East Fallowfield Township is committed to implementing the SMP that it feels to be appropriate for its property owners.

6. Requirements for Bonding, Escrow Accounts, Management Agencies or Associations to Assure O&M for Non-Municipal Facilities

According to Pa Code, Title 25, Chapter 71.71 “municipalities are required to assure the proper operation and maintenance of sewage facilities within their borders. As part of the Sewage Management Program, East Fallowfield Township is requiring property owners to provide information regarding pumping and maintenance of their on-lot systems. As part of compliance with the SMP property owners are required to pay a fee to offset the cost of administering the program as well as any enforcement actions that are necessary. The Township also has the ability to lien a property for non-compliance as well as to conduct the necessary maintenance and inspections and has the ability to assess the costs of such actions to the property owner.

G. Non-Structural Comprehensive Planning Alternatives

The Township Comprehensive Plan was updated July 27, 2015. From a comprehensive planning perspective, the updated Plan places more emphasis on utilizing groundwater recharge via the most current stormwater management practices. This places less emphasis on implementation of land application of wastewater effluent for ground water recharge. Non-structural comprehensive planning alternatives shall not be addressed as part of this Act 537 Plan Update. Refer to Appendix I for current ordinances related to on-site sewage maintenance.

1. Modifications of Existing Comprehensive Plans

a. Land Use Designations

Strasburg Road generally bisects the Township in an east-west direction. The current 2015 Comprehensive Plan generally designates Future Land Use for lands south of Strasburg Road for Residential Infill (RI), Agricultural Preservation (AP), and Conservation Easement Areas (CA) with some Village Development (V) interspersed. This is consistent with the recommendation in the Comprehensive Plan to keep public water and sanitary sewer facilities to generally areas north of Strasburg Road and the South Brandywine Middle School property unless necessary to protect public health and safety.

b. Densities

In general lands situated north of Strasburg Road are or will be developed at a higher density than lands south. Residential

Development (RD), Residential Infill (RI), and Mixed Use (MU) are generally designated north of Strasburg Road. The density of the RD is about 0.5 dwelling units per acre, RI is about 0.75 dwelling units per acre, and MU is designated for non-residential growth areas.

In contrast, the density of the AP is 0.1 dwelling units per acre and CA is “no development.” However, it should be noted that the existing Villages are estimated to have a density of 2 dwelling units per acre. All of one (1) and portions of two (2) other Villages are situated south of Strasburg Road.

c. Municipal Ordinances and Regulations

Refer to Section IV.A of this Act 537 Plan Update for discussion of Municipal Ordinances and Regulations. The Township’s Zoning Map is generally consistent with the Land Uses identified in its 2015 Comprehensive Plan. Therefore, no changes are anticipated.

d. Improved Enforcement

Implementation of a SMP for properties with OLDS and adoption of an ordinance to effectuate the program, which includes enforcement actions, will improve the Township’s ability to get corrected OLDS with problems.

e. Protection of Drinking Water Sources

There are no public drinking water sources within East Fallowfield Township. However, implementation of a SMP will reduce and/or eliminate sources of contamination to groundwater and surface waters from failing OLDS.

2. Local Comprehensive Plan assisting in producing Sound Economic and Consistent Land Development

As previously mentioned, the Township updated its Comprehensive Plan in 2015. See previous section for discussion of the 2015 Comprehensive Plan as it relates to Land Use and sewage facilities.

3. Alternatives for Creating or Changing Municipal Subdivision Regulations to Assure Long-Term Use of On-Site Sewage Disposal

The Township should continue to monitor its ordinance requirements as they relate to sewage disposal and make adjustments as the need arises.

4. Evaluation of Existing Local Agency Programs

The Township should consider partnering with the Chester County Health Department with regard to implementation of its SMP. If the Township moves forward with implementation of the SMP in-house, additional staffing, resources and training will be necessary to properly implement the SMP.

H. No Action Alternative

1. Water Quality and Public Health

If a wastewater collection and conveyance system is not implemented and wastewater treatment and disposal is not available, water quality and public health may be impacted. No public sewer systems would be constructed and there would be no means of addressing potential future failures or current failures of existing on-lot disposal systems. Not implementing a SMP would not ensure that proper Operation and Maintenance of individual OLDS is being done. In addition, the Township would not have the opportunity to gather information and monitor the condition of OLDS, not only on an individual basis, but evaluating whether there are areas of the Township where OLDS issues are clustered indicating a greater need for adequate sewage disposal.

2. Growth Potential

The potential for growth in the planning area would be impacted by a no action alternative. All proposed subdivisions may not go forward if wastewater collection, conveyance, and treatment are not available.

3. Community and Economic Conditions

With no-action to provide any means for collection, conveyance, and treatment of wastewater, development may not go forward. Consequently, future connections would be limited, thus restricting growth that might otherwise supplement the Township tax base.

4. Recreational Opportunities

A no action alternative would not impact recreational opportunities.

5. Drinking Water Sources

If the proposed collection, conveyance, and treatment system is not constructed, there will be no direct impact on drinking water sources.

With the on-lot sewage disposal system alternative as the selected alternative in the majority of the areas in this plan, implementation of a SMP is critical for protection of drinking water sources as many of the properties with on-lot disposal systems also have on-site private wells for water service. If the SMP is not enforced, then drinking water sources have a greater potential to be impacted.

6. Other Environmental Issues

If the proposed collection, conveyance, and treatment system is not constructed, there will be potential for pollution of local streams due to continued malfunctioning of “on-site” disposal systems. Potential pollution may also be tempered somewhat by implementation of an “on-lot” sewage operation and maintenance program.

VI. EVALUATION OF ALTERNATIVES

For the PAWC Alternative and/or the community treatment alternative, consistency was evaluated based on each of the following:

A. Consistency Determination

1. Clean Streams Law

The construction of a sanitary sewer collection, conveyance and treatment system for the Planning area does not conflict with the Clean Stream Law. Flow generated by the planning area will ultimately be treated at the PAWC's wastewater treatment plant, community wastewater treatment plant, and disposed of in accordance with requirements and limits set forth by PADEP.

2. Municipal Wasteload Management – Chapter 94 Report

The PAWC 2021 Chapter 94 Report information will account for the potential development in the planning area over the next five years. The flow projections contained therein will be provided to PAWC for consistency with their Connection Management Plan and Chapter 94 reports. The Connection Management Plan, prepared by PAWC and approved by PA DEP as well as the PAWC 2021 Chapter 94 Report, does indeed reflect adequate capacity to serve immediate and future needs of the planning area.

3. Clean Water Act (Title II)

This Act and the Federal Water Quality Act establish specific planning requirements for wastewater facilities planning. These requirements only apply to municipalities intending to apply for financial assistance from the Federal Government for the construction of sewage facilities. The funding of the construction of the alternatives would be through financial contributions by developers and the Township. Each alternative is therefore consistent with these criteria.

4. Comprehensive Plans

The Chester County Planning Commission (CCPC) Comprehensive Plan, entitled "Landscapes 3" was adopted by the Board of County Commissioners of Chester County on November 29, 2018 replacing "Landscapes 2" as the County's Comprehensive Plan. Landscapes 3 encourages municipalities to enforce Act 537 plans and limit public sewer infrastructure outside of designated service and growth areas. The objective of Landscapes 3 with regard to Wastewater and Water Facilities is to promote the integration of local, state, and regional

planning efforts with those of utility providers, water supply, and wastewater facility plans in order to provide a safe, sustainable drinking water supply and protect ground water and other natural resources. The alternatives to provide sanitary sewer service to any proposed development in the planning area is consistent with the implementation strategy, policies and goals of the current Landscapes 3 as shown on the Livable Landscapes Map in Section IV.A.1 of this Act 537 Plan. In addition, implementation of continued individual on-lot sewage disposal with implementation of a Septage Management Program is consistent with the goal of providing a sustainable drinking water supply.

The East Fallowfield Comprehensive Plan, dated 2015, identifies as a goal to “provide community facilities and services to meet current and future residential and business requirements in the Township,” among which is “public water and sewer service.” Although the implementation of a community sewage system does provide for the opportunity for groundwater recharge, the Township will look favorably upon other waste disposal alternatives given the implementation of recent stormwater management practices, which require infiltration. In addition, implementation of continued individual on-lot sewage disposal with enforcement of a Sewage Management Ordinance is consistent with the goal of meeting the need for adequate sewage disposal, currently and into the future.

5. Anti-degradation Requirements Contained in Chapters 93, 95 and 102 of the Clean Water Act

Implementation of any of the alternatives for this Plan will not impact the anti-degradation requirements contained in Chapters 93, 95, 102 of the Clean Water Act.

6. State Water Plans

For the alternatives considered in this Act 537 Plan Update, there are no anticipated conflicts with the State Water Plan.

7. Pennsylvania's Prime Agricultural Land Policy

East Fallowfield Township is committed to protecting prime agricultural land within the Township's boundaries. The Township's Comprehensive Plan and Zoning Ordinance are written such that Agricultural and Conservation/Recreation Zones are protected. For the planning area in this Act 537 Plan Update, the Township's Zoning Ordinance and Comprehensive Plan give the land area a rural residential, residential, and a rural mixed-use designation. The development of this land is consistent with its land use designation.

The Chester County Department of Open Space Preservation *Chester County Agricultural Easements Completed as of April 16, 2019* map and chart indicate that eleven parcels totaling 306 Acres within East Fallowfield Township are under an Agricultural Conservation Easement.

8. County Stormwater Management Plan

The Chester County Board of Commissioners adopted the water resources element of Landscapes entitled "*Watersheds*" in September 2002. A Watershed Action Plan has been developed for the Brandywine Creek Watershed. East Fallowfield Township has been identified as part of this watershed. Stormwater management planning is a part of the *Watershed's* program. From a consistency perspective, it appears that the plan to provide sewer service to potential development is consistent with a stormwater management plan. Stormwater management does not regulate the development - it simply regulates how the stormwater will be managed.

The Chester County Water Resources Authority (CCWRA) has developed a County-wide PA Act 167 stormwater management plan based on *Watersheds*. CCWRA has collected extensive feedback from municipalities through meetings and municipal questionnaires. The response from municipalities regarding the concept of a county-wide approach to the PA Act 167 was favorable. The Chester County Board of Commissioners, as well as the PADEP approved the draft Model Ordinance and all municipalities in Chester County were required to adopt the plan by January 2, 2014.

A County-wide PA Act 167 Plan Model Ordinance Update is currently proposed and all municipalities will need to update their respective current ordinances to be consistent with the new Act 167 Model Ordinance Update by October of 2022. The Ordinance Update will help reduce future flooding impacts and improve and protect water quality of the County's streams as well as promote groundwater recharge. It will also assist municipalities in addressing stormwater management needs and certain NPDES MS4 requirements. This Plan is consistent with the County-wide Act 167 Plan.

9. Wetlands Protection

As referenced in Section II.G of this Plan, the only wetlands within the planning area (as identified on the national Wetlands Inventory Map) are relatively limited. It is anticipated that development within the planning area will not adversely impact these wetlands. As projects develop which involve extension of public sewer infrastructure, more detailed wetlands investigations will be conducted as part of those

respective projects. Refer to the Wetlands Mapping found on Figure 6.

10. Protection of Rare, Endangered, or Threatened Plant and Animal Species (PNDI)

As a large project, A Large Project Pennsylvania National Diversity Inventory (PNDI) search was completed for the study area as a whole See Appendix E. A PNDI search will need to be completed for each proposed improvement project to the public sewer collection and conveyance system identified in this Act 537 Plan Update.

11. Historic and Archaeological Resource Protection

The Pennsylvania Historic and Museum Commission (PHMC) has been contacted to determine if there are any potential conflicts with the primary development sites. All potential concerns regarding these sites have been resolved. A PHMC review for the proposed sewerage facilities has been completed. The results of the PHMC's review for the proposed sewerage facilities can be found in Appendix F.

B. Resolution of Inconsistencies

Refer to Items 1 through 11 of the preceding section and the referenced Appendices for evidence of resolutions of inconsistencies.

C. Alternative Evaluation with Respect to Applicable Water Quality Standards and Effluent Limitations

For the areas in which the selected alternative is to provide a public sanitary sewer collection and conveyance system, that alternative will not impact water quality standards or effluent limitation. Wastewater will be discharged to either the existing public collection and conveyance system or the proposed community collection, conveyance, and treatment system that is consistent with applicable requirements. Ultimately, wastewater will be treated at the PAWC WWTP.

For the areas where the selected alternative is On-lot Sewage Disposal System (OLDS) with enforcement of the Township's SMP the effects on water quality through disposal of effluent is predominantly addressed through permitting of an OLDS or replacement OLDS through the Chester County Health Department (CCHD). The CCHD keeps record of nitrate levels in ground water wells. This is cross-referenced as applications for on-lot sewage disposal systems or planning modules are processed through the CCHD. When a well within $\frac{1}{4}$ mile of the property boundary has exceeded 5 mg/l of

nitrate as nitrogen, 50 EDU's or flows in excess of 10,000 gpd are proposed, or known geological conditions may contribute to pollution, a standard Preliminary Hydrogeologic Analysis is required. A sample of water is collected from a source of groundwater within your site boundaries if available and a recharge area is plotted through the area of the proposed septic system(s). A mass balance using the dilution area and nitrate concentration in the groundwater is conducted. The result will be a mixture of the concentration of nitrate in the groundwater and the concentration you are applying via the septic system. The mixed concentration must be less than 10 mg/l to meet the EPA drinking water standards.

D. Preliminary Cost Opinions

Preliminary cost opinions were developed for the public sewer and community on-lot disposal alternatives discussed in Section V. These cost opinions are summarized in Appendix H along with supporting concept plans.

In evaluating the estimated costs for alternative community on-lot systems, there were two types of systems that had been considered for comparison to the PAWC Alternative. As a result of soil limitations, one alternative system considered was a Drip Dispersion System, more commonly identified as “Drip Irrigation.” This option, if chosen, would be far more expensive than the PAWC Alternative. Not only would it require more land area to fully operate, but it would utilize many more materials and resources for the construction and operation of the wastewater treatment facility needed to treat and dispose of the expected volume of effluent. In addition, the second alternative option considered was an In-Ground Trench System. This option, if chosen, would also be more expensive than the PAWC Alternative due to the land requirements and resource components that contribute to constructing and operating the facilities. The cost per EDU is significantly higher in each case where the alternative community on-lot option would be used (both Drip Dispersion and In-Ground Trench). It is more economical to choose the PAWC Alternative in each case. There is clear indication that the two alternative systems would be unnecessary to implement in the township due to their excessive cost.

1. PAWC Alternative

Construction of a wastewater collection and conveyance system network to serve new and existing developments would convey wastewater to the PA-American Water Company's wastewater treatment plant in the Borough of South Coatesville. Costs for such a system will be paid for by private funding as the need arises for future development or on a case-by-case basis as funding is available.

2. Community Treatment System with Sewage Management Plan Alternative

New community wastewater collection, conveyance, treatment, and disposal system. Costs for such a system will be paid for by private funding as the need arises for future development. If the Township were to implement this alternative, it would incur greater cost than the public sewer alternative and would also be burdened with land acquisition suitable for this type of system. Two alternatives for community on-lot systems were compared to the PAWC Alternative in three separate areas in East Fallowfield Township. The first area where they were evaluated was the Stottsville Area (Northwest corner of township along the Strasburg Road Corridor). This section is planned to service 32 units at a total of 12,800 gpd. In this area, both Drip Dispersion and In-Ground Trench would require an area of land to be purchased where there exists a densely wooded area. The wooded area is where the facilities for both systems would have to be located due to the surrounding areas' soil limitations, thus creating an expenditure for tree excavation. As more components are included in planning and designing, it becomes apparent that the selection for community on-lot alternatives in this area (Stottsville) is not the most cost effective. The second area where they were evaluated was the Mount Carmel Area (Northwest corner of township, 1 mile Eastbound from the Stottsville Area along the Strasburg Road Corridor). This section is planned to service 25 units at a total of 10,000 gpd. In this area, both systems would require land to be purchased in order to build the treatment facilities. The area to be purchased is an existing crop field, where there are no soil limitations for either alternative community on-lot system. It becomes apparent that the cost effectiveness is minimal when circumventing the PAWC Alternative and implementing the community on-lot systems in this instance. The third area in East Fallowfield Township where the two community on-lot systems were evaluated was the South Brandywine Middle School Area (1.25 miles Eastbound on the Strasburg Road Corridor from the Mount Carmel Area). This section is planned to service 96 units at a total of 31,950 gpd. In this area, both systems would require land acquisition, and tree excavation due to soil limitations in surrounding areas. The land to be purchased would be a densely wooded area, and an open field. The community on-lot system alternatives are not only exorbitant for this area, but also for the vast majority of East Fallowfield Township's areas of interest for future sanitary sewage proposals. For a more in depth understanding of pricing, please view the cost opinions in Appendix H.

3. On-lot Sewage Disposal System with Sewage Management Plan Alternative

This alternative consists of continued use or implementation of on-lot sewage disposal systems with enforcement of the Township's Sewage Management Ordinance. This alternative should be self-sustaining when considering the cost to the Township since a fee structure should be implemented to cover the costs of administration of the ordinance. Costs to the individual property owner with an OLDS will be affected by the costs of providing pumping and maintenance in accordance with the ordinance and possibly by the requirement to repair or replace their system. However, the long-term savings of extending the service life of the OLDS far outweighs the annual O&M costs.

E. Analysis of Available Funding Methods

Since no specific project is proposed regarding this update funding discussions are more general in nature. This section of the Plan addresses methods available for financing alternatives. Four (4) financing alternatives appear to be reasonable for future projects as the need arises.

1. Municipal Bond Issue

a. General

There are several types of bonds; some are taxable, and some are tax-exempt. However, the general classification of municipal bonds usually refers to tax-exempt bonds. There are three types of municipal bonds generally used in financing public works.

- *General Obligation Bonds* are tax-free bonds that are secured by the pledge of the full faith, credit, and taxing power of the issuing agency. This means that this type of bond is backed by all of the taxes on real estates and personal property within the jurisdiction of the issuing agency. It involves minimum risk to the investor and therefore requires a lower rate of interest than other types of bonds.
- *Dedicated Tax Bonds* are payable only from the proceeds from a special tax and are not guaranteed by the full faith, credit, and taxing power of the issuing agency. Examples of special dedicated taxes are the special assessments against property, which is adjacent to, and the principal beneficiary of the improvement used to finance the project.

- *Revenue Bonds* are payable from revenues derived from the use of the improvement, sewer bills, or rents paid by the users of the improvement and do not otherwise represent an obligation of the issuing agency. Revenue bonds are typically self-liquidating and are not ordinarily subject to statutory or constitutional debt limitations. They are often issued by commissions, authorities, and other public agencies created for the specific purpose of financing, constructing, and operating essential public projects.

Typically, municipal bonds are sold to an investment-banking firm, which then resells the bonds to individual investors. The advantage of municipal bonds to the investor is their tax-free status. A bond discount (a percentage of the total bond issue) serves as the investment banker's commission. Before bonds are sold, they must be rated on the basis of risk to the investor by a rating agency such as Moody's. The higher the rating, the lower the risk to the investor and, consequently, the lower the interest rate paid on the bond.

The legal instrument, which sets the rules that must be observed by the issuing agency, is the Trust Indenture. The Trust Indenture is prepared by the Bond Counsel and must be printed along with the bonds. Due to specific requirements as to the denominations of the bonds and methods and materials for printing, printing costs can be substantial. A Trustee is required to administer the bond issue and ensure the terms of the Trust Indenture are observed. This results in an Annual Trustee Fee. Investment bankers indicate that it does not pay to extend the term beyond 25 years because the interest rate increases dramatically.

b. Advantages of Municipal Bond Issue Funding

- This program affords long-term fixed rate financing.
- Tax-exempt municipal bonds are in high demand.
- There is local investment opportunity.
- Municipal credit is established.
- It retains flexibility for future borrowing.

c. Disadvantages of Municipal Bond Issue Funding

- A Debt Service Reserve Fund is generally required.
- There are trustee fees and costs of preparing a Trust Indenture.

d. Funding of Choice

For projects in excess of \$1.0 million a municipal bond issuance is typically the most cost effective. Given the fact that East Fallowfield Township does not have an operating authority, the use of general obligation bonds appears to be the most appropriate.

2. Bank Loan

Another financing option for the implementation of future projects is the bank loan. There are four basic categories of bank loans:

- Real Estate Loans (Mortgage)
- Participation and Interbank Loans
- Installment Loans (Personal)
- Commercial and Industrial Loans

Of the four types, a commercial and industrial loan would be the most applicable. Commercial and industrial loans may be made on a demand or time basis. A demand basis loan allows the bank to call for repayment at any time, or the borrower can repay when convenient. A time basis loan provides for a specific loan maturity date. Most commercial and industrial loans are unsecured. The credit is extended on the basis of an analysis of all available information pertaining to the customer and the bank's confidence in that customer's ability and willingness to repay.

Advantages of the Bank Loan or Other Loan Financing

- Ability to shop around for a loan structure that best fits the customer's needs.
- Flexibility in establishing repayment schedules.
- Working with and through a local financial institution or Authority.
- Municipal credit is established.
- Ability to obtain fixed rate financing.

Disadvantages of Bank Loan Financing

- Interest rates are charged for loan repayment.
- Processing fees may be required.
- Processing and issuances fees may be expensive.
- Less flexible payment schedule.
- The amount of funding may be limited.

3. Direct Funding by Developers

A third financing option for the implementation of any anticipated project is direct funding by those who are developing the property in the planning area. This would involve capital expenditures by the developer from their own capital funds.

Advantages of Direct Funding by Developer

- Avoid any third-party involvement. Payment for services can be made directly to the contractor by the Developer.
- Bank processing and issuance fees are avoided.
- Removes the financial burden from the Township.

Disadvantages of Direct Funding

- There are no municipal disadvantages to this method of financing.

4. Funding by PAWC

This option would involve coordination with PAWC for design, bid, and construction of sewer extension projects with funding by PAWC.

Advantages of Funding by PAWC

- Avoid payment of prevailing wage, which inflates cost of construction.
- Removes the financial burden from the Township.

Disadvantages of Direct Funding

- PAWC would seek individual agreements with property owners to connect to the proposed system. This could take time and may prove to not be financially viable for PAWC or for private property owners.
- Could be costly to the individual property owner if the entire number of properties in a given area do not sign the agreement to connect which will raise the proportionate share to the other participants.
- There are no municipal disadvantages to this method of financing.

F. Immediate or Phased Implementation

Construction of the facilities infrastructure will be completed by private developers to service their respective proposed development. A pump and haul program can be put in place at each of the developments, as a temporary wastewater collection measure, until the infrastructure is complete and in place. A Township-wide SMP will be implemented immediately pursuant to a rotating schedule for each area of the Township.

G. Administrative Organizations and Legal Authority Necessary for Plan Implementation

The Township is well established and has the ability to implement future alternatives as the need arises.

VII. INSTITUTIONAL EVALUATION

A. Analysis of the Township, Past Actions, and Present Performance

1. Financial and Debt Status

The Township is a well-established entity that has the ability to oversee the implementation of the proposed technical alternatives. Financially, developers will be funding the construction of private developments as the PAWC will most likely take dedication of future facilities and will be required to operate and maintain them.

2. Available Staff and Administrative Resources

The Township is governed by five (5) Supervisors. This Board consists of a Chairman, Vice Chairman, and three (3) member supervisors. Others associated with the Township are:

- Township Secretary
- Township Solicitor
- Township Engineer
- Sewage/Sewer Consulting Engineer
- Code Enforcement Officer

The Township has the necessary staff and administrative resources already in place. The Township will need to evaluate the need for hiring additional staff or contracting with an outside agency for implementation of the SMP.

3. Existing Legal Authority

As provided for under Pennsylvania Law the Township has the legal authority to oversee the implementation of the technical alternatives presented in this Plan Update.

B. Institutional Alternatives Necessary to Implement the Technical Alternative

1. Need for a New Authority

With regard to public sewer, East Fallowfield Township is a non-bulk customer of the PAWC. Therefore, PAWC owns, operates, and maintains collection and conveyance system within the Township. There is no need for a new Authority.

2. Functions of Existing and Proposed Organizations

East Fallowfield Township does not have an Authority and does not intend to create an Authority.

3. Cost of Administration and Implementability

The PAWC will be given charge of operating and maintaining any new infrastructure components such as gravity sewer interceptors, pump stations, force mains, and treatment facilities. In addition, the Township is responsible for enforcing the proposed SMP, which may require changes administratively. The Township shall adopt a SMP ordinance and fee schedule for the administration of the ordinance.

C. Administrative and Legal Activities to be Completed and Adopted to Ensure the Implementation of the Selected Alternative

1. Incorporation of Authorities or Agencies

No new wastewater Authorities of Incorporation are necessary and there will be no changes to the current Township procedures to implement any projects. However, the Township should implement an administrative procedure for tracking information received as required by the SMP, inspections of on-lot and/or community sewage disposal systems, and enforcement of violations.

2. Required Ordinances, Standards, Regulations, and Inter-municipal Agreements

Currently, the Township has an inter-municipal agreement with the PA American Water Company for discharge of wastewater to the PAWC's City of Coatesville Wastewater Treatment Plant. If the PAWC alternative would be selected for the entire Study Area, this inter-municipal agreement may require revision. However, as only some areas within the overall Study Area have been designated for the PAWC alternative as the selected alternative, East Fallowfield Township will remain within the flows allocated through the aforementioned agreement for the foreseeable future. Flow is available to East Fallowfield Township at the PAWC WWTP on a first come first served basis. There is adequate capacity at the WWTP to accommodate the Township's immediate and future needs.

3. Provisions of Rights-of-Way, Easements, and Land Transfers

The wastewater collection and conveyance system that will serve potential development will extend along Township or State Roads and within easements where necessary. Any proposed future pump

stations may require the acquisition of rights-of-way and easements at their respective locations.

4. Adoption of Other Sewage Facilities Plan

It is anticipated that Sewage Facilities Planning Modules will be needed to be adopted as part of future projects within the planning area.

5. Legal Documents

It is not anticipated at this time that any further legal documentation will be necessary, other than what has been previously mentioned, for the implementation of the selected alternatives.

6. Dates and Timeframes of 1 Through 5 Above

The dates and timeframes for the items in this section are found in the Implementation Schedule in VIII.C of this Plan.

D. Institutional Alternatives for Implementing Chosen Technical Wastewater Disposal Alternatives

No new wastewater Authorities of Incorporation are necessary. There may be some changes to the current Township procedures in order to administer the SMP.

VIII. SELECTED WASTEWATER TREATMENT AND INSTITUTIONAL ALTERNATIVE

A. Identify the Chosen Technical Alternative

The alternatives selected above are recommended based on the following:

1. Existing Wastewater Disposal Needs

Within the planning area, wastewater disposal needs are met through the use of individual on-lot disposal systems, which are exhibiting signs of malfunction and/or failure in pockets within the Study Area. The PAWC alternative is a viable alternative for areas adjacent to or in close proximity to the existing sanitary sewer system within East Fallowfield Township because it is an established and permitted system and capacity is available at the PAWC facility, as evidenced by the recently-approved Connection Management Plan. This Plan recommends connection of the Stottsville, Mount Carmel, and South Brandywine Middle School Areas to the PAWC Public Sewer in the initial 5-year Plan horizon. In addition, for more remote areas or areas where lot sizes are adequate to support replacement OLDS, the SMP alternative is a viable alternative to ensure proper operation and maintenance of OLDS.

2. Future Wastewater Disposal Needs

At this juncture it does not appear prudent to extend public sewer to the south-central portions of the Township or to construct one or several small community systems from an economic and staffing perspective. A properly implemented SMP can serve to provide for future needs in this area.

3. Operations and Maintenance Considerations

Any public sanitary sewer extension projects would be undertaken by PAWC, which will ultimately own, operate, and maintain the infrastructure. O&M requirements for OLDS will be communicated to individual property owners as part of implementation of a SMP with reporting and enforcement provisions to ensure proper O&M is conducted.

4. Cost Effectiveness

Based on the Alternatives Analysis, it is apparent that connection to the PAWC Public Sanitary Sewer System is more cost effective than construction, operation, and maintenance of community on-lot sewage disposal systems. Refer to Appendix H for detailed cost estimates.

5. Available Management and Administrative Systems

PAWC has the available staff to administer and manage customers within its public sanitary sewer system.

6. Available Financing Methods

With regard to public sanitary sewer extensions, PAWC contributes money per bona fide or existing residential customer. Any cost above and beyond the total of all bona fide contributions will be the responsibility of the individual property owners by agreement with PAWC prior to the sewer extension project(s). If there are any property owners that fail to pay their portion, there will be a “true up” where the unpaid balance will be distributed among the remainder of the properties that completed connection to the system.

Implementation of a SMP will be supported by fees collected for administration and enforcement of the program. Any other infrastructure costs will be the responsibility of the individual property owner.

7. Environmental Soundness

Environmentally, PAWC's Coatesville WWTP can adequately treat the average and peak flows within the permitted concentration limits. Future proposed upgrades to the PAWC facility include tertiary treatment to further reduce the level of nitrogen and phosphorus in the effluent and a sludge dryer to produce Class A biosolids. The fact that the PAWC facility is in place and permitted by the DEP makes this alternative a viable option.

In addition, there was initial concern about the potential for lost groundwater recharge if the PAWC alternative is implemented. Given recent stormwater management regulations and practices that require stormwater retention and also given that proposed development will be using a public water system that draws primarily from sources outside the Township, the groundwater will not be affected by the implementation of the PAWC alternative. There is the potential for groundwater being affected by implementation of the on-lot sewage disposal system alternative if proper operation and maintenance is not practiced by the individual property owner and the Sewage Management Program is not properly implemented and enforced by the Township.

B. Selected Capital Financing Plan

Refer to Section VIII.A.6 above.

C. Implementation Schedule and Justification for Selected Technical and Institutional Alternatives

IMPLEMENTATION SCHEDULE		
	<u>Schedule Item</u>	<u>Months from PA DEP Planning Approval</u>
1.	Receipt of PA DEP Approval of Act 537 Plan.	
2.	Begin implementation of Sewage Management Program including adoption of an Individual Disposal System Sewage Management Ordinance for East Fallowfield Township, determining administrative staff necessary, development of standard forms, public education/information, preparing a schedule/phasing for administering the program, and development of a fee schedule.	12 to 18 months from PADEP Approval.
3.	Administer Sewage Management Program in accordance with adopted Individual Disposal System Sewage Management Ordinance for East Fallowfield Township	On-going following initiation of the Sewage Management Program.
4.	Design of proposed collection and conveyance Systems.	On-going as Projects Evolve.
5.	Submit Plan for Erosion and Sediment Control NPDES Permit to Chester County Conservation District.	On-going as part of the Subdivision and Land Development Process.
6.	Receipt of NPDES Erosion and Sedimentation Control Permits, appropriate approval after each submission.	6 Months.
7.	Submission of Part II WQM Permit application to PA DEP will need to be evaluated on an individual basis depending on the scope of the project. Projects requiring a Pump Station and/or connection of future project services to 250 or more EDU's or equivalent in the future will mandate such a submission.	To be submitted as required for lines serving 250 or more EDU's and /or requiring a pump station.
8.	Receipt of Part II Application Approval.	As Required.
9.	Begin Sanitary Sewer extension based upon permit approval, funding, and demand.	Upon Issuance of Permits and funding secured.
10.	Apply for Pump and Haul Permit(s).	As Applicable for each subdivision and individual basis.
11.	Receive Pump and Haul Permits	As Applicable.
12.	Completion of Collection and Conveyance Systems.	As required on an individual basis.

APPENDIX A



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

January 28, 2014

Ms. Denise Miller, Secretary
East Fallowfield Township
2264 Strasburg Road
Coatesville, PA 19320

Re: Act 537 - Plan of Study
East Fallowfield Township
Chester County

Dear Ms. Miller:

We have completed our review of your municipality's proposed plan of study, as prepared by Herbert E. MacCombie, Jr. Consulting Engineers & Surveyors, Inc., dated November 18, 2013.

The Plan of Study proposes to address the planning requirements necessary to adequate methods of sanitary sewage disposal throughout the Township.

Approval of this proposed Plan of Study is hereby granted. The estimated cost of the plan is \$54,990. Please be advised the approval of this scope of work is not a guarantee of eligibility of planning costs for reimbursement by the Commonwealth pursuant to Section 6 (a) of Act 537 and 25 Pa. Code Chapter 71 of the Department of Environmental Protection's (DEP) regulations.

This Plan of Study approval does not constitute a final action by DEP. When a completed plan is submitted to us, we will act upon it consistent with Pa. Code Title 25, Chapter 71.

Your municipality's Act 537 Official Plan Update is to be formatted as suggested in the "A Guide for Preparing Act 537 Update Revisions" including the necessary items listed in the "Act 537 Plan Content and Environmental Assessment Checklist." All necessary items must be included, and a copy of the completed checklist must be included with your Act 537 Plan. This form is available on our website at:

http://www.dep.state.pa.us/dep/deputate/watermgt/wqp/Forms/Act537/Forms_537Plan.htm

Also, please be advised that DEP will not pay grants under the act for planning costs incurred prior to the date of this Plan of Study approval or for information that has been completed previously under local, state, or federal funding programs.

Please note that any new land developments associated with this plan will not be eligible for exemptions from sewage facilities planning under Chapter 71, Section 71.51(b)(2), until after the receiving facilities have been constructed. Applicants proposing projects that will coordinate new development construction with the construction of municipal conveyance or treatment facilities must submit Sewage Facilities Planning Modules for adoption by the municipality and approval by DEP.

If you have any questions, please contact me at 484.250.5175.

Sincerely,



John M. Venezia
Sewage Planning Specialist 2
Clean Water

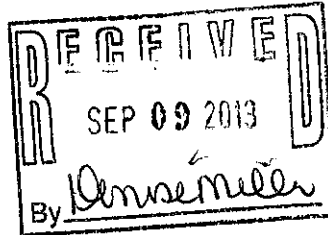
cc: Chester County Planning Commission
Chester County Health Department
Herbert E. MacCombie, Jr. Consulting Engineers & Surveyors, Inc.
Ms. Vollerio - RCSOB, 11th Floor, Sewage Facilities
Planning Section
Re 30 (GJE14CLW)028-9

610-356-9550
FAX 610-356-5032

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS & SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

James W. MacCombie, P.E., P.L.S.
Herbert E. MacCombie, III, Technician



REPLY TO:
P.O. BOX 118
BROOMALL, PA 19008-0118

September 3, 2013

Board of Supervisors
East Fallowfield Township
2264 Strasburg Road
East Fallowfield, PA 19320

Attn: Denise Miller, Secretary

Re: Act 537 Sewage Facilities Plan

Dear Board of Supervisors:

Please be advised that in order to prepare a plan of study, as well as a new Act 537 Sewage Facilities Plan as identified in the "Task/Activity Report" a fee of \$54,990.00 is anticipated of which \$6,720.00 of that amount is estimated to be for legal expenses. As such, the net cost for engineering services associated therewith would be \$48,270.00.

It should be noted that once the Act 537 Sewage Facilities Plan is approved by PADEP, the Township would be able to seek reimbursement from PADEP in the amount of 50% of eligible cost. However, the reimbursement payment may take two (2) years to receive.

The following is a breakdown of the engineering cost identified in the "Task/Activity Report":

Scope of Services

- | | | |
|------|--|------------|
| I. | Identify and discuss previous and existing wastewater planning. | \$2,390.00 |
| II. | Physical and Demographic Analysis | \$3,605.00 |
| III. | Existing Sewage Facilities in Planning Area including Identifications and descriptions of municipal sewerage systems within the planning area. | \$4,035.00 |

- IV. Provide description of future growth and develop through mapping, text and analysis for the planning area as defined by the study.
\$4,035.00

- V. Preparation of Alternatives Analysis to provide for appropriate Sewage Disposal, e.g. but not limited to On-Lot Sewage Disposal, Community On-Lot Systems, Public Sewer Option.
\$5,445.00

- VI. Evaluation of Alternatives Analysis for consistency with respect to the Clean Streams Law.
 - a. Plans developed under Municipal Wasteload Management Plan. (Chapter 94)
 - b. Plans developed under Title II of the Clean Water Act.
 - c. Comprehensive Plans developed under Act 247 the Pennsylvania Municipalities Planning Code.
 - d. Anti-degradation requirements as contained in Pa. Code, Title 25 Chapter 93, 95, and 102 and the Clean Water Act.
 - e. State Water Plans developed under the Water Resources Planning Act.
 - f. Pennsylvania Price Agricultural Land Policy.
 - g. The County Act 167 Stormwater Management Plan.
 - h. Wetlands Protection.
 - i. Protection of rare , endangered or threatened plant and animal species as identified by the PNDI.
 - j. Historical and Archeological Resource Protection.
\$3,225.00

- VII. Institutional Analysis relative to the Township, as well as PAWC with regard to present and past activity and the ability to undertake the recommendation contained within the plan.
\$3,385.00

VIII. Identify the alternatives that are most feasible from a technical, Financial and institutional standpoint and justify the alternative of choice based upon the following:

- a. Existing Wastewater Disposal needs.
- b. Future Wastewater Disposal needs.
- c. Operations and Maintenance consideration.
- d. Cost effectiveness.
- e. Available financing methods.
- f. Environmental soundness.

\$3,385.00

IX. Preparation of Plan of Study

\$945.00

X. Plan Coordination with East Fallowfield Township and PADEP.

\$2,180.00

XI. Revisions and Responses to PADEP comments.

\$5,850.00

XII. Project Management

\$1,750.00

XIII. Plan Reimbursement of Printing Expenses.

\$3,960.00

XIV. Meeting Attendance.

\$4,080.00

Attached please find our fee schedule.

If you have any questions, please don't hesitate to contact our office.

Very truly yours,



James W. MacCombie, P.E.

610-356-9550
FAX 610-356-5032

Herbert E. MacCombie, Jr., P.E.
CONSULTING ENGINEERS & SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

James W. MacCombie, P.E., P.L.S.
Herbert E. MacCombie, III, Technician

REPLY TO:
P.O. BOX 118
BROOMALL, PA 19008-0118

ENGINEERING SERVICES
FEE SCHEDULE
2013

Sr. Prof. Engineer (Principal) (James W. MacCombie, P.E., P.L.S.)	\$135.00 per/hr.
Sr. Prof. Engineer (David J. Biloon, P.E.)	105.00 per/hr.
Prof. Engineer (Dennis F. O'Neill, P.E.)	102.50 per/hr.
Sr. Technician (Class 1) (Herbert E. MacCombie, III)	85.00 per/hr.
Design Engineer (David M. Porter, E.I.T.)	80.00 per/hr.
Technician (Class 2) (Jeremiah MacCombie, Nathaniel I. MacCombie)	70.00 per/hr.
Draftsman-Technician (James C. Bevan, Arber Dhima)	65.00 per/hr.
SEO (James C. Bevan)	75.00 per/hr.
Survey Crew (2 man)	125.00 per/hr.
Survey Crew (3 man)	175.00 per/hr.
Survey Crew (4 man)	225.00 per/hr.
Zoning Officer	85.00 per/hr.

TASK / ACTIVITY REPORT

East Fallowfield Township
Municipality

Chester
County

Portion of East Fallowfield Township
Proposed Planning Area (Attach Map)

8/27/13
Date of Report

Date Completed Plan Will Be Submitted to DEP:

December 2014

Estimated Cost of Plan: \$54,990.00

TASK ACTIVITY NUMBER FROM APPENDIX I	PROJECT MANAGER		PROJECT ENGINEER		SENIOR ENGINEER		E.I.T.		CADD		DRAFTSMAN		CLERICAL		Q/M		EXPENSES		LEGAL EXPENSES		SUB TOTAL (\$)	
	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)	HR/ RATE	COST (\$)		
I	6	\$810	8	\$820	4	\$420	4	\$320													\$3,000	
II	4	\$540	14	\$1,435	4	\$420	4	\$320	6	\$420	6	\$390	2	\$80							\$3,755	
III	4	\$540	14	\$1,435	4	\$420	6	\$480	8	\$560	8	\$520	2	\$80							\$4,185	
IV	4	\$540	14	\$1,435	4	\$420	6	\$480	8	\$560	8	\$520	2	\$80							\$4,745	
V	6	\$810	30	\$3,075	4	\$420	6	\$480	8	\$560											\$5,975	
VI	6	\$810	14	\$1,435	4	\$420	6	\$480													\$3,935	
VII	6	\$810	14	\$1,435	4	\$420	8	\$640													\$4,935	
VIII	6	\$810	14	\$1,435	4	\$420	8	\$640													\$4,375	
Plan of Study	4	\$540	2	\$205			2	\$160													\$1,325	
Munic. Plan																						
Coord./Plan to DEP	6	\$810	12	\$1,230					2	\$140											\$575	
Respond to Comments	12	\$1,620	24	\$2,460	6	\$630	6	\$480	6	\$420			6	\$240						7	\$1,120	\$7,070
Proj. Mgmt.	6	\$810											1	\$40							\$100	
Q/M																					\$100	
Plan Reimburs.			12	\$1,230																	\$900	
Meetings	12	\$1,620	24	\$2,460					2	\$140			1	\$40							\$125	
Totals	82	\$11,070	196	\$20,090	38	\$3,990	56	\$4,480	40	\$2,800	22	\$1,430	24	\$960						42	\$6,720	\$54,990

James W. MacCombie, P.E., P.L.S.
Name of Person Completing Report

Signature

Senior Engineer

Title

Mark Toth

Vice Chairman, Board of Supervisors

APPENDIX B

**Water and Wastewater Service and
Asset Purchase Agreement
Between the
Township of East Fallowfield
and
Pennsylvania-American Water Company**

Dated as of *Sept. 30*, 2003

TABLE OF CONTENTS

I.	THE TRANSACTIONS.....	2
1.1	Incorporation of Recitals.....	2
1.2	Sale and Purchase of Assets.....	2
1.3	Description of Assets.....	2
1.4	Purchase Price.....	3
1.5	Closing.....	3
1.6	Deliveries at Closing by the Township to PAWC.....	4
1.7	Deliveries at Closing by PAWC to the Township.....	4
II.	REPRESENTATIONS AND WARRANTIES.....	5
2.1	Representations and Warranties of the Township.....	5
2.2	Representations and Warranties of PAWC.....	6
III.	COVENANTS.....	7
3.1	Mutual Covenants of the Township and PAWC.....	7
3.2	Covenants of the Township.....	7
3.3	Covenants of PAWC.....	9
IV.	CONDITIONS PRECEDENT.....	10
4.1	Conditions Precedent to PAWC's Obligations.....	10
4.2	Conditions Precedent to the Township's Obligations.....	12
V.	TERMINATION.....	13
5.1	Termination.....	13
5.2	Effect of Termination.....	14
VI.	INDEMNIFICATION.....	15
6.1	Definition of Damages.....	15
6.2	Indemnification by the Township.....	15
6.3	Indemnification by PAWC.....	15
6.4	General Indemnification Procedures.....	16
VII.	SURVIVAL.....	17
7.1	Survival.....	17
7.2	Limitations on Survival.....	17
VIII.	MISCELLANEOUS.....	17
8.1	Schedules.....	17
8.2	Entire Agreement.....	18
8.3	Amendment.....	18
8.4	Extension or Waiver of Performance.....	18
8.5	Assignment or Delegation.....	18
8.6	Successors and Assigns; Binding Effect.....	18
8.7	Governing Law.....	18
8.8	Notices.....	18
8.9	Captions.....	20
8.10	Construction.....	20
8.11	Cumulative Remedies.....	20
8.12	No Waiver.....	20
8.13	Time of the Essence.....	21
8.14	Jurisdiction.....	21

8.15	Third Party Beneficiaries	21
8.16	Counterparts	21

Water and Wastewater Service Agreement and Asset Purchase Agreement

This Agreement is made and entered into this th30 day of ~~Sept~~ 2003, by and between, the Township of East Fallowfield, a second class township organized and existing under the laws of the Commonwealth of Pennsylvania with its principal office located at 2264 Strasburg Road, East Fallowfield, Pennsylvania (the "Township"), and Pennsylvania-American Water Company, a Pennsylvania corporation and public utility, with its principal office located at 800 West Hershey Park Drive, Hershey, Pennsylvania ("PAWC").

WITNESSETH:

WHEREAS, the Township owns certain facilities for the purpose of (a) distributing water to the public ("Water System") within the Township; and, (b) collecting, and transporting wastewater and sewage for the public pursuant to certain Utility District and Lease Agreements between the Township and PAWC, as more specifically referenced herein ("Wastewater System") (collectively referred to as the "Systems");

WHEREAS, PAWC is a public utility engaged, *inter alia*, in the business of (a) collecting, treating, storing, supplying, distributing the selling water to the public in various areas of Pennsylvania; and, (b) collecting, treating, transporting and disposing of wastewater and sewage for the public in various areas of Pennsylvania through facilities it owns, maintains, and operates for such purposes;

WHEREAS, PAWC owns, operates and maintains, *inter alia*, public water supply systems and wastewater systems in various areas of Pennsylvania;

WHEREAS, PAWC provides public water and wastewater service in and around the Township as a public utility;

WHEREAS, PAWC currently operates, maintains, and utilizes the Systems to provide public water and wastewater services in East Fallowfield Township pursuant to leases with the Township;

WHEREAS, the Township and PAWC desire to terminate their existing leases pursuant to Utility District Agreements and have PAWC take ownership of the Systems as provided for in 4.1(h);

WHEREAS, subject to the terms and conditions set forth herein, the Township desires to sell, and PAWC desires to purchase, substantially all of the assets and other rights of the Township used in connection with the Systems;

WHEREAS, the Township desires to receive certain water and wastewater service from PAWC;

WHEREAS, the Board of Supervisors has determined that there is a need for a safe and adequate supply of public water and for the disposal of sewage in limited and identified parts of the Township as set forth more fully herein; and

WHEREAS, the parties hereto desire to set forth the terms and conditions that shall be applicable to the sale and delivery of water and collection and disposal of sewage by PAWC to customers in the Township on a permanent basis.

NOW THEREFORE, in consideration of the mutual covenants, warranties, representations and agreements set forth herein, and intending to be legally bound, the Township and PAWC (collectively referred to as the "Parties") agree as follows:

I. THE TRANSACTIONS

1.1 Incorporation of Recitals

The recitals set forth above are incorporated herein by reference and are a part of this Agreement.

1.2 Sale and Purchase of Assets

At Closing (as defined in Section 1.5 of this Agreement), subject to the terms and conditions of this Agreement, the Township shall sell, assign, transfer, deliver and convey to PAWC and PAWC shall purchase the Assets (as defined in Section 1.3 of this Agreement) for the Purchase Price (as defined in Section 1.4 of this Agreement).

1.3 Description of Assets

The term "Assets" means, all of the Township's right, title and interest in, under and to all of the assets, properties and rights related to the Systems or used in connection with the Systems as a going concern of every kind, nature and description existing on the Closing Date (as defined in Section 1.5 of this Agreement), wherever such assets, properties and rights are located and whether such assets, properties and rights are real, personal or mixed, tangible or intangible. The Systems and the Assets related to the Systems which are the subject of this Agreement, are listed in Schedule 1.3 attached hereto and incorporated herein. The Systems and the Assets do not include any community system not part of or connected to the Water System or Wastewater System.

Without limiting the generality of the foregoing, the Assets shall include the following:

- (a) all land and real property (together with all fixtures, buildings, structures and other improvements erected thereon), easements and rights-of-way (including, but not limited to those listed on Schedule 1.3), rights of use, licenses,

permits, hereditaments, tenements, privileges and other appurtenances belonging or related to the Systems (such as appurtenant rights in and to public streets);

(b) all water lines, pumping stations, pumps, water mains, service lines, distribution facilities, meters, curb boxes, curb stops, hydrants, valves, fittings, and other tangible personal property related to the Water System;

(c) all sewer lines, pumping stations, pumps, collection lines, conveyance lines, collection facilities, manholes, tanks, meters, valves, fittings and other tangible personal property related to the Wastewater System;

(d) all of the Township's rights under any written or oral contract, agreement, lease, plan, instrument, registration, license, sub-license (including any railroad crossing license or sub-license), permit, certificate, document, commitment, arrangement, undertaking, practice, authorization or approval of any nature relating to the Systems and entered into in the ordinary course of business consistent with past practice;

(e) all of the Township's rights under any permit, franchise, license, sub-license, approval, authorization, order, registration, certificate, variance, document and any other similar rights obtained from any authority relating to the Systems, if any and any pending applications therefor;

(f) all information, books, records, ledgers, files, documents, correspondence, data, plans, models, system maps, engineering records, mylars, planning studies, architectural plans, drawings and specifications, customer records and data, supplier lists, records of operations, quality control records and procedures, equipment maintenance records, manual and warranty information, laboratory books, intellectual property and goodwill (including any licenses and sub-licenses granted or obtained with respect thereto) and inspection processes relating to the Systems (Provided that the Township may retain copies of such information as it so desires, and PAWC agrees to reimburse to the Township at Closing the Township's reasonable costs for copying this information for PAWC); and

(g) all assets, property and rights relating to the Systems as more fully described in Schedule 1.3 attached hereto and incorporated herein.

1.4 Purchase Price

The total purchase price for the Assets to be paid by PAWC to the Township is the amount of one dollar (\$1.00) and other good and valuable consideration as set forth more specifically in Sections 3.3(d) and 3.3(f) of this Agreement.

1.5 Closing

The date of closing of this transaction ("Closing Date") shall occur on or before forty-five (45) days after satisfaction (or waiver) of the conditions to Closing set forth in Article 4 of this Agreement, or such other date mutually agreed to by the Parties in writing. On the Closing Date (at a time of day to be mutually agreed upon by the Parties), subject to the terms and conditions of this Agreement, the acts of closing pertaining to this transaction ("Closing") shall occur and title and possession of the Assets shall be sold, assigned, transferred, delivered and conveyed to PAWC. The Closing shall take place at the offices of PAWC at 800 West Hersheypark Drive, Hershey, Pennsylvania, or such other location as the Parties may mutually agree.

1.6 Deliveries at Closing by the Township to PAWC

Subject to the terms and conditions of this Agreement, at the Closing, the Township shall deliver (or cause to be delivered) to PAWC:

- (a) bills of sale and instruments of assignment to the Assets, duly executed by the Township;
- (b) consents of transfer, of all transferable or assignable contracts, agreements, licenses and permits to the extent specifically required hereunder;
- (c) the Township's Closing Certificates pursuant to Section 4.1(c) of this Agreement;
- (d) all agreements and other documents required by this Agreement;
- (e) the Township's Opinion of Counsel pursuant to Section 4.1(g) of this Agreement;
- (f) a receipt for the payment of the Purchase Price; and
- (g) all such other instruments of conveyance as shall be, in the reasonable opinion of PAWC and its counsel, necessary to transfer to PAWC the Assets in accordance with this Agreement and where necessary or desirable, in recordable form.

1.7 Deliveries at Closing by PAWC to the Township

Subject to the terms and conditions of this Agreement, at the Closing, PAWC shall deliver (or cause to be delivered) to the Township:

- (a) a PAWC check or cash in an amount equal to the Purchase Price to the Township;
- (b) PAWC's Opinion of Counsel pursuant to Section 4.2(g) of this Agreement;

- (c) PAWC's Closing *Certificates* pursuant to Section 4.2(c) of this Agreement;
- (d) all agreements and other documents required by this Agreement; and
- (e) all such other documents that are, in the reasonable opinion of the Township and its counsel, necessary to consummate the transactions contemplated by this Agreement.

II. REPRESENTATIONS AND WARRANTIES

2.1 Representations and Warranties of the Township

The Township represents and warrants to PAWC as follows:

(a) **Organization and Good Standing.** The Township is a second class township duly organized, validly existing and in good standing under the laws of the Commonwealth of Pennsylvania.

(b) **Authorization and Enforceability.** The Township has the full power and lawful authority to execute this Agreement and to consummate and perform the transactions contemplated hereby and has duly and validly authorized the execution of this Agreement (including such other necessary agreements, instruments and documents in connection herewith) and all necessary proceedings.

This Agreement constitutes the legal, valid and binding obligation of the Township, enforceable against the Township in accordance with its terms, except as such enforceability may be limited by applicable laws relating to bankruptcy, insolvency, fraudulent conveyance, reorganization or affecting creditor's rights generally.

(c) **No Violations of Laws or Agreements.** The Township's performance of this Agreement, as of the Closing Date, shall not (i) require any further approvals or consents from any other party; (ii) violate any law, ordinance or regulation; or, (iii) conflict with or result in a breach of, or constitute a default under, any contract, lease, permit or other agreement or commitment to which the Township is a party.

(d) **No Pending Litigation or Proceedings.** To the best of the Township's knowledge, there is no action, claim, litigation, arbitration, proceeding, judgment, injunction, audit or legal, administrative or governmental investigation pending or threatened against the Township which could reasonably be expected to have a Material Adverse Effect (as defined in Section 8.10 of this Agreement) on the transaction contemplated by this Agreement.

(e) **Brokerage.** The Township has not made any agreement or taken any other action which might cause any person to become entitled to a broker's or finder's fee or commission as a result of the transactions contemplated hereunder which could result in liability to PAWC.

2.2 Representations and Warranties of PAWC

PAWC represents and warrants to the Township as follows:

(a) **Organization and Good Standing.** PAWC is a corporation duly organized and validly existing and in good standing under the laws of the Commonwealth of Pennsylvania.

(b) **Authorization and Enforceability.** PAWC has the full power and lawful authority to execute this Agreement and to consummate and perform the transactions contemplated hereby and has duly and validly authorized the execution of this Agreement (including such other necessary agreements, instruments and documents in connection herewith) and all necessary proceedings.

This Agreement constitutes the legal, valid and binding obligation of PAWC, enforceable against PAWC in accordance with its terms, except as such enforceability may be limited by applicable laws relating to bankruptcy, insolvency, fraudulent conveyance, reorganization or affecting creditor's rights generally.

(c) **No Violations of Laws or Agreements.** PAWC's performance of this Agreement, as of the Closing Date, shall not (i) require any further approvals or consents from any other party; (ii) violate any law, ordinance or regulation; and, (iii) conflict with or result in a breach of any contract, lease of permit to which PAWC is a party.

(d) **No Pending Litigation or Proceedings.** To the best of PAWC's knowledge, there is no claim, litigation, arbitration, proceeding, judgment, injunction, audit or governmental investigation pending or threatened against PAWC which could reasonably be expected to have a Material Adverse Effect on the transaction contemplated by this Agreement.

(e) **Brokerage.** Neither PAWC nor any of its affiliates has made any agreement or taken any other action which might cause any person to become entitled to a broker's or finder's fee or commission as a result of the transactions contemplated hereunder which could result in liability to the Township.

III. COVENANTS

3.1 Mutual Covenants of the Township and PAWC

The Parties mutually covenant and agree that, except as otherwise approved by the other party in advance and in writing:

(a) **Cooperation.** The Parties shall cooperate and shall cause their respective officers, employees, agents and representatives to cooperate to ensure the orderly transition of the Assets and Service from the Township to PAWC and to minimize any disruption to the customers of the Systems from the transactions contemplated by this Agreement.

The Parties shall furnish to the other party any necessary information or reasonable assistance as the other party may request in connection with the consent, approval or authorization of, or registration with or filing or submission to any third party (including any governmental or regulatory agency).

(b) **Further Assurances.** The Parties shall cooperate and deliver such instruments and take such action as may be reasonably requested by the other party in order to carry out the provisions and purposes of this Agreement and the transactions contemplated hereby.

After the Closing, the Parties shall take such other actions and execute such other documents as may be reasonably requested by the other party (i) in order to transfer more effectively to PAWC or to put PAWC more fully in possession of any of the Assets; or, (ii) in connection with the preparation of any tax return, audit or examination by any governmental or taxing authority.

(c) **Expenses.** The Parties shall each bear their own respective accounting, legal and other expenses incurred in connection with the transactions contemplated by this Agreement except as otherwise expressly stated in this Agreement.

3.2 Covenants of the Township

The Township hereby covenants and agrees that, except as otherwise approved in advance in writing by PAWC:

(a) **Continuation of Business.** The Township shall consider and review extensions of the Systems until the Closing Date in the ordinary course of business, consistent with past practice.

(b) **Standstill Agreement.** Until the Closing Date, unless this Agreement is earlier terminated pursuant to Article 5 of this Agreement, the Township shall

not, directly or indirectly, solicit offers for the Assets or the Systems, or respond to inquiries from, share confidential information with, negotiate with or in any way facilitate inquiries or offers from, third parties who express or who have heretofore expressed an interest in accruing any or all of the Assets or the Systems.

(c) **Access.** The Township shall (i) give to PAWC and its representatives, from the date first written above until the Closing Date, full access during normal business hours, upon reasonable notice, to all the properties, books, data, contracts, agreements, documents and records connected to the Assets and/or the Systems; and, (ii) make available to PAWC and its representatives all other information with respect to the Assets and/or the business and affairs of the Systems as PAWC may reasonably request. Provided that PAWC agrees to reimburse to the Township at Closing the Township's reasonable costs for any copying of this information for PAWC.

(d) **FIRPTA Certificate.** The Township agrees to provide PAWC, at Closing, such certificate as is reasonably necessary to insure that a withholding is not required under the Foreign Investment in Real Property Tax Act ("FIRPTA") and Sections 1445 and 6039C of the Internal Revenue Code.

(e) **Contractual Consents.** The Township shall diligently pursue all approvals, authorizations and consents of transfer to all material transferable or assignable contracts, agreements, licenses and permits to the extent specifically required by the terms of such contracts, agreements, licenses or permits, if any to implement this Agreement.

(f) **Regulatory Consents.** The Township hereby agrees to support all PAWC filings and agrees to submit letters of support for the PAWC with the PaPUC or other regulatory body for these filings, e.g., the 537 Plan for the wastewater treatment plant upgrade filing with the Department of Environmental Protection, to implement this Agreement. The above referenced PaPUC filings will include expansion of PAWC's certificated service territory for water and wastewater service as indicated on Schedule 3.2(f).

To the extent applicable, the Township shall diligently pursue all approvals, authorizations, consents and permits required to be obtained by the Township for the Township to sell the Assets.

(g) **Permits and Easements.**

Provided the Township has the ability to do so, without incurring any special charges for same, the Township agrees to grant such permits or convey and/or lease to PAWC at no cost any and all easements in public streets and roads necessary for the construction of water and sewer mains and appurtenances pursuant to Section 3.3(d) hereof.

3.3 Covenants of PAWC

PAWC hereby covenants and agrees that, except as otherwise approved in advance in writing by the Township:

(a) **Regulatory Consents.** PAWC shall, at all times, use its best efforts and diligently pursue all approvals, authorizations, consents and permits required to be obtained to consummate the transaction contemplated by this Agreement, including, without limitation (i) the consent of the Pennsylvania Public Utility Commission; and, (ii) the approval of every regulatory agency of federal, state or local government that may be required.

PAWC shall (i) as promptly as practicable, make or cause to be made such filings and submissions under laws, rules and regulations applicable to it as may be required to consummate the terms of this Agreement; and, (ii) keep the Township apprised of the status of any filing or submission to the Pennsylvania Public Utility Commission or any other governmental or regulatory agency.

(b) **Taxes.** PAWC shall be responsible for all state and local sales, use, documentary stamp, and recording taxes arising from and with respect to the sale and purchase of the Assets.

(c) **Rates and Service.** PAWC is to provide public utility water and wastewater service in the Township in accordance with its duly filed and effective tariffs as amended and supplemented.

(d) **Sewer and Water Line Extensions.** PAWC shall construct a sewer line extension in the Cardinal Drive area and a water line extension in the Strasburg Road area, as indicated on the attached maps (attached hereto and incorporated herein as Schedules 3.3(d) A and B respectively), both at PAWC's expense, provided that the Township enacts and enforces a mandatory tap-in ordinance to the extent permitted by law. The water line extension will be substantially complete on or about eighteen (18) months after the Closing Date (as defined in Section 1.5 of this Agreement). The sewer line extension to the Cardinal Drive area will be substantially complete on or about eighteen (18) months after the transfer to PAWC of the off-site developer funded facilities. The sewer line extension to the Cardinal Drive area is contingent upon off-site developer funded facilities being in place prior to construction. The developer funded facilities include a pump station, gravity main and force main facilities sufficient to transmit the flow from the Cardinal Drive area to PAWC's existing wastewater system, including elimination of a bottleneck and upgrade of the East End trunk line. The sewer line extension in the Cardinal Drive area and water line extension in the Strasburg Road area will be constructed in accordance with the drawings and specifications prepared by the PAWC engineer and reviewed and approved by the

Township engineer, at the Township's expense, including any revisions thereto, which approval excepts all water and wastewater facility technical specifications and will not be unreasonably withheld or delayed, as being in compliance with applicable laws, regulations, and ordinances.

(e) **Future Water and Wastewater Line Extensions within PAWC's PaPUC Certified Area.** Future water and wastewater line extensions within PAWC's Pennsylvania Public Utility Commission ("PaPUC") certified area shall be provided in accordance with PAWC's duly filed and approved tariffs.

Any PAWC service area extension filings in the Township to the PaPUC outside of the area depicted in Schedule 3.2(f) shall either be consistent with the Township's 537 Plan and the Township's comprehensive plan or be subject to approval by the Township which approval shall not be unreasonably withheld or delayed by the Township.

(f) **Refunds.** PAWC will refund to the Township for a period of ten (10) years after the start-up of the booster station required for servicing the Robins Cove development and the upgrade of the East End trunk line, but in no event for a period of more than twenty (20) years after the Closing Date of this Agreement, \$1,000 for each new individually metered dwelling unit constructed and sold becoming a residential customer as defined in PAWC's duly filed and approved tariffs that takes both water and wastewater service from PAWC. The refund only applies to developer-funded water and wastewater extensions within the existing PaPUC service territory of PAWC as of the Closing Date of this Agreement. The refunds do not apply to PAWC funded extensions such as those discussed above for the Cardinal Drive area and Strasburg Road. The aggregate dollar amount that can be refunded to the Township under the Agreement is limited to one million dollars (\$1,000,000).

All such refund payments shall be due and payable to the Township quarterly after the respective water meter has been set and activated during the preceding quarter. Such refund payments will be made by PAWC to the Township within thirty (30) days after the end of each applicable calendar quarter.

IV. CONDITIONS PRECEDENT

4.1 Conditions Precedent to PAWC's Obligations

The obligation of PAWC to consummate the transactions contemplated by this Agreement is subject to the satisfaction, on or prior to the Closing Date, of each of the following conditions (any one or more of which may be waived in writing, in whole or in part, by PAWC, in its sole discretion):

(a) **Representations and Warranties.** The Township's representations and warranties contained in this Agreement or in any Schedule, list, certificate or

document delivered pursuant to the provisions of this Agreement shall be true in all material respects at and as of the time of Closing, except for changes in the ordinary course of business after the date first written above that are in conformity with the covenants, warranties, representations and agreements contained in this Agreement.

(b) **Performance of Agreements.** The Township shall have performed and complied, in all material respects, with all covenants, agreements and conditions required by this Agreement to be performed, or complied with by it prior to or at the Closing.

(c) **Closing Certificates.** The Township shall have delivered to the PAWC: (i) a certificate of the Secretary (or Assistant Secretary) of the Township, to the best of such Secretary's knowledge, certifying and attaching true and complete copies of the Articles of Incorporation and Bylaws of the Township as the same are in force on the Closing Date and of the resolutions adopted by its Supervisors relating to this Agreement and the transactions contemplated hereby; and, certifying the incumbency of the officers of the Township executing this Agreement or any documents delivered hereunder; and, (ii) a certificate signed by the Township, confirming, to the best of its knowledge, satisfaction of the conditions set forth in Subsections (a) to (c), inclusive, of Section 4.1 of this Agreement.

(d) **Closing Deliveries.** The Township shall have delivered the documents and other items described in Section 1.6 of this Agreement.

(e) **No Litigation.** There shall not be any pending, or to the knowledge of the Township, threatened action, proceeding or investigation by or before any court, arbitrator, governmental body or agency which shall seek to restrain, prohibit or invalidate the transactions contemplated hereby or which, if adversely determined, would result in a breach of a representation, warranty or covenant of either party herein.

(f) **Regulatory Consents.** PAWC shall have obtained the written, final and unappealable approvals, authorizations and consents (including consents for permit transfers) that are required to consummate the transactions contemplated by this Agreement, including, without limitation (i) the approval of the Pennsylvania Public Utility Commission; and, (ii) the approval of every regulatory agency of federal, state or local government that may be required in the opinion of either PAWC or the Township.

(g) **Opinion of Counsel.** The Township shall have delivered to PAWC a favorable written opinion of the Township's counsel, dated as of the Closing Date and addressed to PAWC, in form and substance satisfactory to PAWC, to the effect set forth in Schedule 4.1(g).

(h) **Utility District and Lease Agreements.** With respect to utility district agreements, all such agreements and leases are terminated and cancelled and any further expansion by PAWC within the Township will not require any type of utility district agreement. Provided, that within approved service areas, PAWC will have to secure all normal and customary permits and approvals from the Township regarding future water and sewer expansions within the Township including the payment of all permit and review fees associated therewith except for the extensions in Section 3.3(d) hereof, i.e., for Cardinal Drive and the Strasburg Road area. These would include, but not be limited to, road opening permits, building permits, and grading permits, which may be required by the Township. Such Agreements and Leases include, but are not limited to, the following: (1) Water and Wastewater Service Agreement East Fallowfield Township Water and Sewer District #1 dated July 17 and 25, 1991 between the City of Coatesville Authority and the Township of East Fallowfield, (2) Water and Wastewater Service Agreement East Fallowfield Township Water and Sewer District #2 dated July 17 and 25, 1991 between the City of Coatesville Authority and the Township of East Fallowfield, (3) Conveyance and Lease Agreement dated July 17, 1991 between the City of Coatesville Authority and the Township of East Fallowfield, (4) Water and Wastewater Service Agreement East Fallowfield Township Water and Sewer District #2 as Amended dated December 9, 1992 between the City of Coatesville Authority and the Township of East Fallowfield, and (5) Water and Wastewater Service Agreement East Fallowfield Township Water and Sewer District #2A and #2B as Amended dated March 10, 1993 between the City of Coatesville Authority and the Township of East Fallowfield.

4.2 **Conditions Precedent to the Township's Obligations**

The obligation of the Township to consummate the transactions contemplated by this Agreement is subject to the satisfaction, on or prior to the Closing Date, of each of the following conditions (any one or more of which may be waived in writing, in whole or in part, by the Township, in its sole discretion):

(a) **Representations and Warranties.** PAWC's representations and warranties contained in this Agreement or in any Schedule, list, certificate or document delivered pursuant to the provisions of this Agreement shall be true in all material respects at and as of the time of Closing, except for changes in the ordinary course of business after the date first written above that are in conformity with the covenants, warranties, representations and agreements contained in this Agreement.

(b) **Performance of Agreements.** PAWC shall have performed and complied, in all material respects, with all covenants, agreements and conditions required by this Agreement to be performed or complied with by it prior to or at the Closing.

(c) **Closing Certificates.** PAWC shall have delivered to the Township: (i) a certificate of the Secretary (or Assistant Secretary) of PAWC, to the best of such Secretary's knowledge, certifying and attaching true and complete copies of the resolutions of the Board of Directors of PAWC authorizing the execution and delivery of this Agreement and the transactions contemplated hereby and the performance of the obligations of PAWC hereunder; and, certifying the incumbency of the officers of PAWC executing this Agreement or any documents delivered hereunder; and, (ii) a certificate of the President (or Vice President) of PAWC confirming, to the best of such President's (or Vice President's) knowledge, satisfaction of the conditions set forth in Subsections (a) and (b) of Section 4.2 of this Agreement.

(d) **No Litigation.** There shall not be any pending, or to the knowledge of PAWC, threatened action, proceeding or investigation by or before any court, arbitrator, governmental body or agency which shall seek to restrain, prohibit or invalidate the transactions contemplated hereby or which, if adversely determined, would result in a breach of a representation, warranty or covenant of either party herein.

(e) **Regulatory Consents.** PAWC shall have obtained the written, final and unappealable approvals, authorizations and consents (including consents for permit transfers) that are required to consummate the transactions contemplated by this Agreement, including, without limitation (i) the approval of the Pennsylvania Public Utility Commission; and, (ii) the approval of every regulatory agency of federal, state or local government that may be required in the opinion of either PAWC or the Township.

(f) **Other Consents.** PAWC shall have obtained any other approvals, authorizations and consents that are required to enable PAWC to consummate the transactions contemplated by this Agreement and to operate the Systems.

(g) **Opinion of Counsel.** PAWC shall deliver to the Township a favorable written opinion of PAWC's counsel, dated as of the Closing Date and addressed to the Township, in form and substance satisfactory to the Township, to the effect set forth in Schedule 4.2(g).

V. TERMINATION

5.1 Termination

This Agreement may be terminated prior to the Closing Date only as follows and in each case only by written notice:

- (a) by the mutual written consent of the Township and PAWC;
- (b) by either the Township or PAWC, if the Closing has not occurred (other

than through the failure of any party seeking to terminate this Agreement to comply fully with its obligations under this Agreement) on or before the first (1st) anniversary of the date first written above, or such later date as the Parties may agree upon;

(c) by either the Township or PAWC, if a material breach of any covenant, warranty, representation, agreement or provision of this Agreement has been committed by the other party and such breach has not been (i) cured within thirty (30) days after the non-breaching party gives written notice of said breach to the breaching party; or, (ii) waived by the non-breaching party;

(d) by either the Township or PAWC, if the Pennsylvania Public Utility Commission does not approve of any of the following matters: (i) the acquisition by purchase of the Assets of the Systems; (ii) the right of PAWC to offer, render, furnish, or supply water and sewer service to the public in the area(s) served, respectively, by the Water System and the Wastewater System; (iii) the right of PAWC to charge applicable tariff rates.

(e) by PAWC, if any of the conditions in Section 4.1 of this Agreement (i) have not been satisfied as of the Closing Date; or, (ii) have become impossible (other than through the failure of PAWC to comply with its obligations under this Agreement); and PAWC has not waived such condition on or before the Closing Date; and

(f) by the Township, if any of the conditions in Section 4.2 of this Agreement (i) have not been satisfied as of the Closing Date; or, (ii) have become impossible (other than through the failure of the Township to comply with its obligations under this Agreement); and, the Township has not waived such condition on or before the Closing Date

5.2 Effect of Termination

Each party's right of termination under Section 5.1 of this Agreement is in addition to any other rights it may have under this Agreement or otherwise, and the exercise of a right of termination will not be an election of remedies.

If this Agreement is terminated pursuant to Section 5.1 of this Agreement, all further obligations of the Parties under this Agreement will terminate, except that the obligations in Sections 3.1(c) (Expenses) and 8.14 (Jurisdiction) of this Agreement shall survive. Provided, however, that if this Agreement is terminated by a party because of the breach of this Agreement by the other party or because one or more of the conditions to the terminating party's obligations under this Agreement is not satisfied as a result of the other party's failure to comply with its obligations under this Agreement, the terminating party's right to pursue all legal remedies will survive such termination unimpaired.

VI. INDEMNIFICATION

6.1 Definition of Damages

For purposes of this Agreement, "Damages" means the aggregate amount of all damages, claims, losses, obligations, liabilities (including any governmental penalty, fines or punitive damages), deficiencies, interest, costs and expenses arising out of or relating to a matter and any actions, judgments, costs and expenses (including reasonable attorney's fees and all other expenses incurred in investigating, preparing, or defending any litigation or proceeding, commenced or threatened) incident to such matter or to the enforcement of this Agreement.

6.2 Indemnification by the Township

The Township agrees to indemnify, defend and hold harmless PAWC, and its affiliates, and their respective officers, directors and agents from and against any and all Damages arising out of or resulting from:

- (a) any misrepresentation, breach of warranty, or non-fulfillment of any covenant or agreement made by the Township in this Agreement or in any Schedule, statement, certificate or other document furnished or to be furnished to PAWC in connection with the transactions contemplated by this Agreement;
- (b) any and all liabilities of the Township of any nature, (whether due or to become due), (whether accrued, absolute, contingent or otherwise), existing prior to the Closing Date or arising out of any transaction entered into, any state of facts existing or any event occurring prior to the Closing Date; and
- (c) the successful enforcement of this Section of this Agreement.

The Township's obligations under this Section of this Agreement shall be discharged, and all amounts payable hereunder (including costs and fees in the defense of any litigation), shall be paid to PAWC as they are incurred by PAWC.

6.3 Indemnification by PAWC

PAWC agrees to indemnify, defend and hold harmless the Township and its respective officers, directors and agents from and against any and all Damages arising out of or resulting from:

- (a) any misrepresentation, breach of warranty, or non-fulfillment of any covenant or agreement made by PAWC in this Agreement or in any Schedule, statement, certificate or other document furnished or to be furnished to the Township in connection with the transactions contemplated by this Agreement;

(b) the ownership, operation or use of the Assets or Systems on or after the Closing Date, excepting only liabilities resulting from unlawful acts by the Township or breaches by the Township of covenants, warranties, representations and agreements hereunder;

(c) the successful enforcement of this Section of this Agreement.

PAWC's obligations under this Section of this Agreement shall be discharged, and all amounts payable hereunder (including costs and fees in the defense of any litigation), shall be paid to the Township as they are incurred by the Township.

6.4 General Indemnification Procedures

(a) During the applicable survival period specified in Article 7 of this Agreement, a party seeking indemnification pursuant to Article 6 of this Agreement (an "Indemnified Party") shall give prompt written notice to the party from whom such indemnification is sought (the "Indemnifying Party") of the assertion of any claim, the incurrence of any Damages, or the commencement of any action, suit or proceeding, of which it has knowledge in respect of which indemnity may be sought hereunder, and will give the Indemnifying Party such information with respect thereto as the Indemnifying Party may reasonably request, but failure to give such required notice shall relieve the Indemnifying Party of any liability hereunder only to the extent that the Indemnifying Party has suffered actual prejudice thereby.

The Indemnifying Party shall have the right exercisable by written notice to the Indemnified Party after receipt of notice from the Indemnified Party of the commencement of or assertion of any claim or action, suit or proceeding by a third party in respect of which indemnity may be sought hereunder (a "Third Party Claim"), to assume the defense of such Third Party Claim which involves (and continues to involve) solely monetary damages; provided, that (i) the Indemnifying Party expressly agrees in such notice that, as between the Indemnifying Party and the Indemnified Party, solely the Indemnifying Party shall be obligated to satisfy and discharge the Third Party Claim; (ii) such Third Party Claim does not include a request or demand for injunctive or other equitable relief; and, (iii) the Indemnifying Party makes reasonably adequate provision to assure the Indemnified Party of the ability of the Indemnifying Party to satisfy the full amount of any adverse monetary judgment that is reasonably likely to result.

(b) Neither the Indemnified Party nor the Indemnifying Party shall settle any Third Party Claim without the prior written consent of the other, which consent shall not be unreasonably withheld or delayed.

(c) The Indemnifying Party or the Indemnified Party, as the case may be, shall have the right to participate (but not control), at its own expense, in the

defense of any Third Party Claim which the other party is defending as provided in this Agreement.

(d) Notwithstanding any other provision of Article 6 of this Agreement, no claim for indemnification may be asserted under Article 6 of this Agreement, and no indemnification shall be due and owing from any party unless and until the aggregate of all such claims which may be made against such party exceeds Ten Thousand Dollars (\$10,000).

VII. SURVIVAL

7.1 Survival

All covenants, warranties, representations and agreements made by the Parties in this Agreement or in any Schedule, document, statement or certificate furnished in connection with the transaction contemplated by this Agreement shall survive the Closing.

7.2 Limitations on Survival

(a) The covenants, warranties, representations and agreements set forth in Section 3.1 and Section 3.2 of this Agreement shall survive the Closing for a period of five (5) years.

(b) Article 6 of this Agreement shall survive the Closing for the applicable period(s) of the indemnified covenants, warranties, representations and agreements as limited by this Article 7.

(c) The covenants, warranties, representations and agreements of PAWC in Section 3.3 shall survive the Closing for a period of twenty (20) years.

(d) The covenants, warranties, representations and agreements that are not explicitly limited by Subsections (a) to (b), inclusive, of Section 7.2 of this Agreement shall survive the Closing for a period of one (1) year.

VIII. MISCELLANEOUS

8.1 Schedules

All Exhibits and Schedules ("Schedules") annexed or referred to in this Agreement are hereby incorporated in and made a part of this Agreement as if set forth in full herein.

Schedules are made to the best of the parties' knowledge as of the date first written above. Prior to Closing, the Parties shall promptly deliver an amended or supplemented Schedule when any change in fact, condition or information requires an

amendment or supplement to such Schedule.

8.2 Entire Agreement

This Agreement constitutes the entire agreement between the Parties concerning the sale and purchase of the Assets, and supersedes all prior oral or written agreements, understandings, representations and warranties, and courses of conduct and dealing between the Parties on the subject matter hereof.

8.3 Amendment

This Agreement may be amended or modified only by a writing executed by all of the Parties.

8.4 Extension or Waiver of Performance

Either the Township or PAWC may extend the time for or waive the performance of any of the obligations of the other, waive any inaccuracies in the warranties or representations by the other, or waive compliance by the other with any of the covenants, conditions or agreements contained in this Agreement, provided that any such extension or waiver shall be in writing and signed by the waiving party in the case of a waiver, or by both the Township and PAWC in the case of an extension.

8.5 Assignment or Delegation

The Parties may assign, delegate or otherwise transfer any of their duties, rights or obligations under this Agreement without the prior written consent of the other party.

8.6 Successors and Assigns; Binding Effect

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and assigns.

8.7 Governing Law

This Agreement shall be governed by and construed under the laws of the Commonwealth of Pennsylvania.

8.8 Notices

All notices provided for in this Agreement shall be in writing, addressed to the Township or PAWC, as the case may be, at the addresses set forth in this Paragraph and may be (a) delivered in person; (b) sent by United States registered or certified mail, return receipt requested; (c) sent by Federal Express or any other overnight courier or delivery service from which a receipt may be obtained; or, (d) sent by facsimile or

telefax transmission during regular business hours (9:00 a. m. to 5:00 p. m., Monday-Friday, excluding holidays):

To the Township:

Robert Sparr, Chairman
Board of Supervisors
East Fallowfield Township
2264 Strasburg Road
East Fallowfield, PA 19320
(610) 384-7144
Fax: (610) 384-7143

With a copy to:

Vincent M. Pompo, Solicitor
East Fallowfield Township
Windle and McErlane, P.C.
24 East Market Street
P.O. Box 565
West Chester, PA 19381-0565
(610) 430-8000
Fax: (610) 692-6210

To PAWC:

Robert M. Ross, President
Pennsylvania-American Water Company
800 West Hershey Park Drive
P.O. Box 888
Hershey, PA 17033-0888
(717) 531-3200
Fax: (717) 531-3252

With a copy to:

Velma A. Redmond, Esquire
Corporate Counsel
Pennsylvania-American Water Company
800 West Hershey Park Drive
P.O. Box 888
Hershey, PA 17033-0888
(717) 531-3210
Fax: (717) 531-3252

The Parties shall have the right to designate a new address for the receipt of

notices by written notice to the other party as provided in Section 8.8 of this Agreement.

8.9 Captions

The headings and captions used with the subsections, sections and articles of this Agreement are for convenience or reference only and shall not be deemed to modify or limit the provisions of this Agreement.

8.10 Construction

The Parties have participated jointly in the negotiation and drafting of this Agreement. In the event any ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the Parties and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

Any reference to any federal, state, local or foreign statute shall be deemed to refer to all rules and regulations promulgated thereunder, unless the context requires otherwise.

Words used herein, regardless of the number and gender specifically used, shall be deemed and construed to include any other number, singular or plural, and any other gender, masculine, feminine or neuter, as the context may require. The word "Including" means included, without limitation.

"Material Adverse Effect" means a change or effect (or series of related changes or effects) which has or is reasonably likely to have a material adverse change in or effect upon the business, assets, condition (financial or otherwise), or results of operations of the Systems or Assets, taken as a whole.

8.11 Cumulative Remedies

In the event of default by PAWC in the performance of its obligations under this Agreement, the Township shall have the right, in addition to any other remedies available at law or in equity, to seek specific performance of the obligations set forth in this Agreement, or both, and PAWC shall pay reasonable attorney's fees incurred in the enforcement of any rights of the Township following default by PAWC. The remedies afforded in this Agreement are cumulative to each other and to all other remedies provided by law. The remedies afforded in this Agreement are cumulative to each other and to all other remedies provided by law.

8.12 No Waiver

No delay of or omission in the exercise of any right, power or remedy accruing to any party as a result of any breach or default by any other party under this

Agreement shall impair any such right, power or remedy; nor shall it be construed as a waiver of or acquiescence in any such breach or default, or any similar breach or default occurring later; nor shall any waiver of a single breach or default be deemed a waiver of any other breach or default occurring before or after that waiver.

8.13 Time of the Essence

Time is of the essence in this Agreement.

8.14 Jurisdiction

The Parties each irrevocably submit to the exclusive jurisdiction of (a) the Court of Common Pleas for Chester County in the Commonwealth of Pennsylvania and (b) the United States District Court for the Eastern District of Pennsylvania, for the purposes of any suit, action or other proceeding arising out of this Agreement or any transaction contemplated by this Agreement.

When the above-mentioned courts may properly exercise jurisdiction over an action, suit or proceeding relating to this Agreement, the Parties agree not to commence or maintain any such action, suit or proceeding in a court or forum other than the above-mentioned courts.

8.15 Third Party Beneficiaries

Nothing herein expressed or implied is intended or should be construed to confer upon or give to any person (other than the Parties and the Township) any rights or remedies under or by reason of this Agreement.

8.16 Counterparts

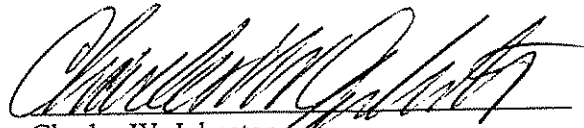
This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original copy of this Agreement and all of which, when taken together, shall be deemed to constitute one and the same agreement.

[Signatures Appear on Next Page]

INTENDING TO BE BOUND HEREBY, the respective parties herein have executed this Agreement as of the date and year first written above.

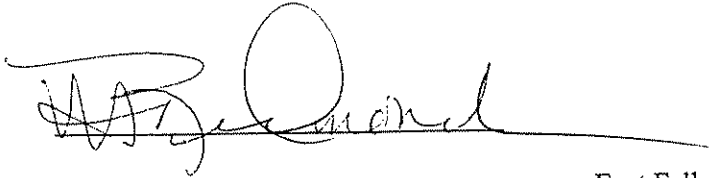
Pennsylvania-American Water Company

BY:



Charles W. Johnston
Vice President - Business Development

ATTEST:

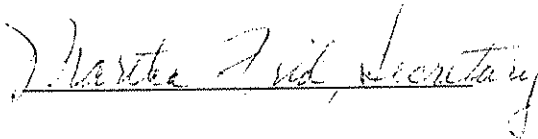


East Fallowfield Township

BY:

R. A. SPARK, CHAIR
Title

ATTEST:



List of Schedules

- 1.3 Assets, Property, and Rights
- 3.2(f) Current and Proposed PAWC water and wastewater certificated service territories
- 3.3(d) A. Sewer and Water Line Extensions
- 3.3(d) B. Future Water and Wastewater Line Extensions within PAWC's PaPUC Certified Area

- 4.1(g) Form of Opinion of Counsel for the Township's Counsel
- 4.2(g) Form of Opinion of Counsel for PAWC's Counsel


Schedule 1.3

Lands bounded by Route 82, Strasburg Road, Buck Run Road, South Coatesville Borough and Valley Township, with the exception of the franchise territory of the former Chester County Utilities, Ltd. as to sewer service only – water and sewer (District # 1)

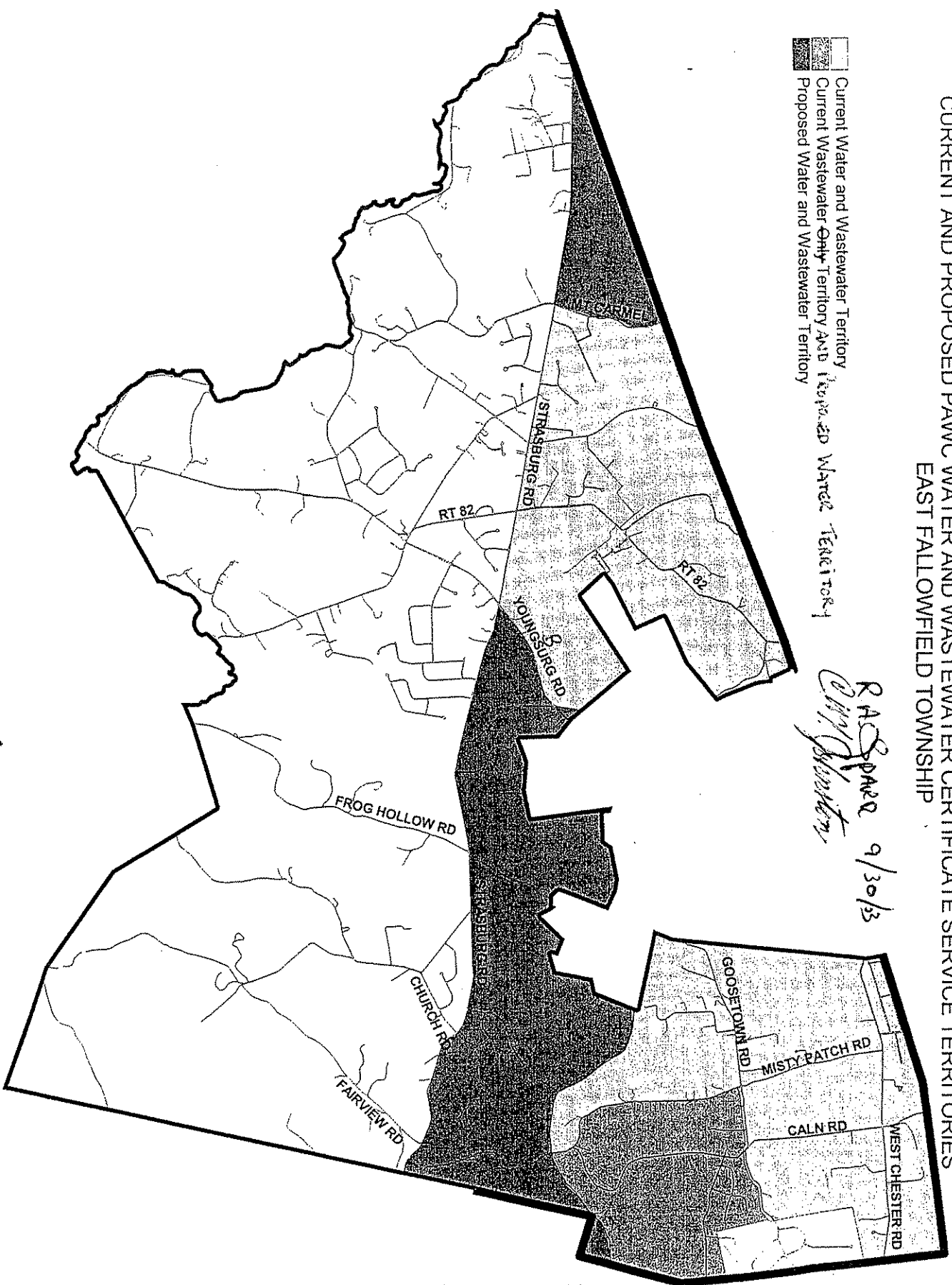
Strasburg Hills (a.k.a Strasburg Hunt) - water and sewer (District # 2 and # 2A)

Willow Rock and other existing residential properties on Rebecca and Elizabeth Drives, Hannum Drive and the western side of Park Avenue - water only (District # 2B)

PENNSYLVANIA-AMERICAN WATER COMPANY
 CURRENT AND PROPOSED PAWC WATER AND WASTEWATER CERTIFICATE SERVICE TERRITORIES
 EAST FALLOWFIELD TOWNSHIP


 Current Water and Wastewater Territory
 Current Wastewater Only Territory And Proposed Water Territory
 Proposed Water and Wastewater Territory

RASPAK 9/30/33
[Signature]




PENNSYLVANIA-AMERICAN WATER COMPANY
SEWER LINE EXTENSION
EAST FALLOWFIELD TOWNSHIP

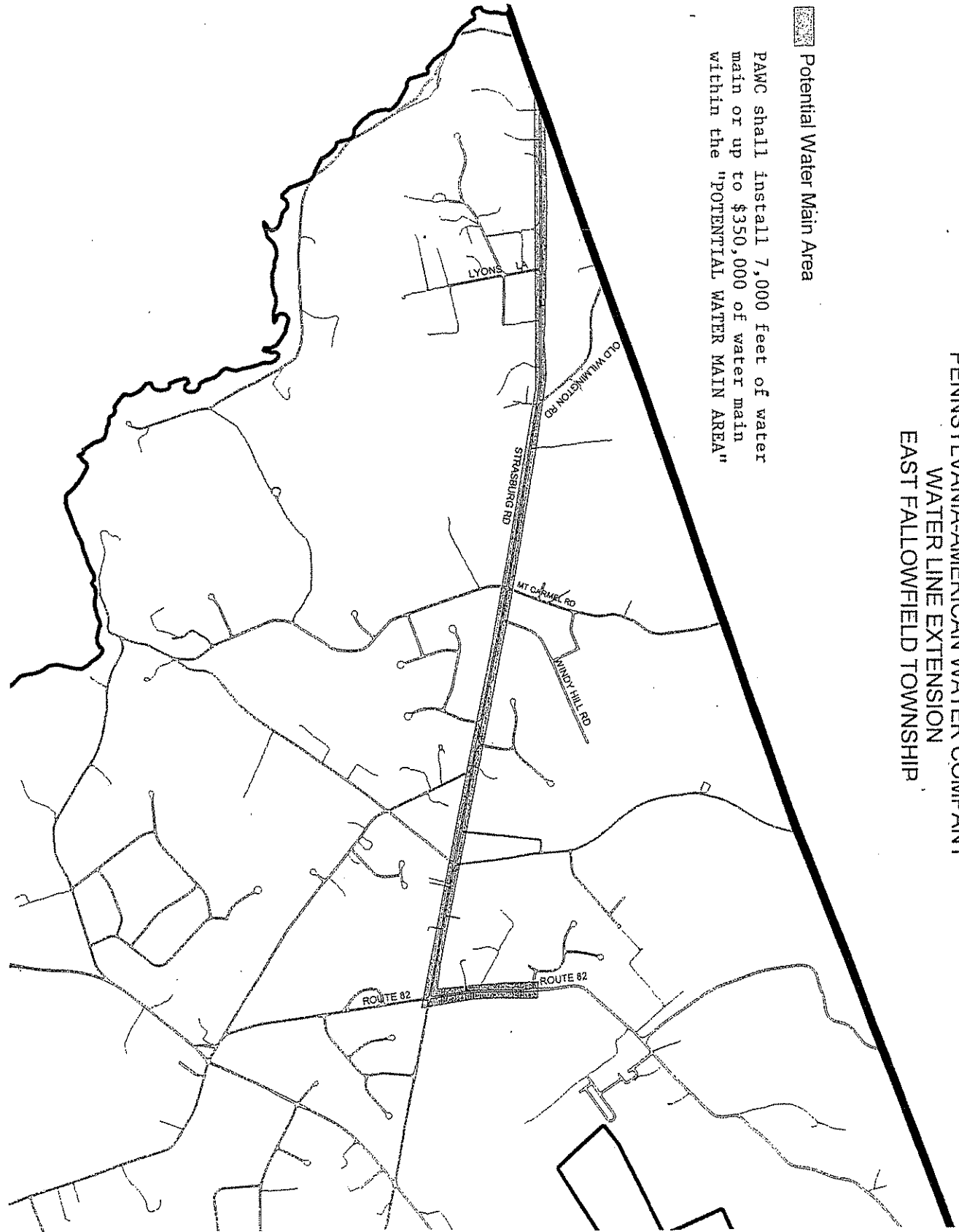


SCHEDULE 3.3(d)A

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER LINE EXTENSION
EAST FALLOWFIELD TOWNSHIP

 Potential Water Main Area

PAWC shall install 7,000 feet of water main or up to \$350,000 of water main within the "POTENTIAL WATER MAIN AREA"



SCHEDULE 3.3(d)B

Schedule 4.1(g)
Form of Opinion for the Township's Counsel

_____, 2003

Pennsylvania-American Water Company
800 West Hersheypark Drive
P.O. Box 888
Hershey, Pennsylvania 17033-0888

Ladies and Gentlemen:

I have acted as counsel for the Township of East Fallowfield, a second class township organized and existing under the laws of the Commonwealth of Pennsylvania (the "Township"), in connection with the execution and delivery by the Township of the Water and Wastewater Service and Asset Purchase Agreement between the Township and Pennsylvania-American Water Company ("PAWC") (the "Agreement") dated _____, 2003. This opinion is delivered to you pursuant to Paragraph 4.1(g) of the Agreement. All capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Agreement unless otherwise noted.

In connection with the opinions expressed below, I have made such examination of law and have examined the originals, or copies, certified or otherwise identified to my satisfaction, of the Agreement and all other agreements and instruments to be executed by the Township in connection with the Agreement, if any, and such other documents and records of the Township, certificates of public officials and of officers of the Township, and such other documents as I have deemed necessary or appropriate.

Based upon and subject to the foregoing, it is my opinion that as of the date hereof:

1. The Township is validly existing and in good standing under the laws of the Commonwealth of Pennsylvania as a second class township.
2. The Township has full power and lawful authority to execute and deliver, to perform its obligations under, and to consummate the transactions contemplated by the Agreement to which it is party, and to own, lease and operate the Assets and the Systems as presently being conducted.
3. The execution and delivery and performance by the Township of the Agreement to which it is a party, and the consummation of the transaction contemplated thereby, have been duly authorized by all necessary action of such party and do not and will not contravene any provision of the organizational documents of the Township.

4. Upon due execution and delivery by the parties thereto, the Agreement to which it is a party will be a legal obligation of the Township, enforceable against the Township in accordance with its terms, except as such enforceability may be limited by applicable laws relating to bankruptcy, insolvency, fraudulent conveyance, reorganization or affecting creditors' rights generally.

5. All proceedings required to be taken by or on the part of the Township to authorize the execution, delivery and performance of the Agreement and the consummation of the transactions thereby, have been duly and properly taken. The Agreement to which the Township is a party has been duly and validly executed and delivered by appropriate officers of the Township.

6. All consents, approvals, authorizations or orders of any court or governmental authority of the United States or of the Commonwealth of Pennsylvania required for the consummation by the Township of the transactions contemplated by the Agreement, except for those consents, approvals, authorizations or orders required to be obtained by PAWC, have been obtained by the Township.

7. Neither the execution and delivery of the Agreement by the Township nor the consummation of the transactions contemplated thereby will, to the best of my knowledge, conflict with, or result in a breach of, the terms, conditions or provisions or, constitute a default under, the terms of any agreement or instrument to which the Township is a party or by which the Assets may be bound or affected. The execution, delivery and performance of, and compliance with, the Agreement by the Township will not violate any provision of any law, rule, regulation, or to my knowledge, order, permit, certificate, writ, judgment, injunction, decree, determination, award or other decision of any court, arbitrator, or governmental authority by which the Township is bound or to which it is subject.

8. I have no knowledge that (i) there are any actions, suits, investigations or proceedings pending against or threatened against or affecting the Township, the Systems or any of the Assets before any court or arbitrator or authority which individually or in the aggregate, would have a Material Adverse Effect and (ii) there are currently any outstanding judgments, decrees, or orders of any court or authority against the Township, which relates to or arise out of the ownership, condition or operation of the Systems or the Assets which individually or in the aggregate would have a Material Adverse Effect.

The opinions herein are given only with respect to the laws of the Commonwealth of Pennsylvania and the federal laws of the United States of America, as applicable, in each case as enacted and construed on the date hereof.

The foregoing opinions are solely for the use of PAWC, have been expressed solely in connection with the transaction contemplated by the Agreement and are given for no other purpose and shall not be delivered to or relied upon by any other person or party except PAWC.

Sincerely,

Vincent M. Pompo, Solicitor
East Fallowfield Township

W:\JAF\PAWC\Schedule 4.1(g).doc

Schedule 4.2(g)
Form of Opinion for PAWC's Counsel

_____, 2003

Township of East Fallowfield
2264 Strasburg Road
East Fallowfield, Pennsylvania 19320

Ladies and Gentlemen:

I have acted as counsel for the Pennsylvania-American Water Company, a Pennsylvania corporation ("PAWC"), in connection with the execution and delivery by the PAWC of the Water and Wastewater Service and Asset Purchase Agreement between the Township of East Fallowfield and PAWC (the "Agreement") dated _____, 2003, between PAWC and the Township of East Fallowfield, a second class township organized and existing under the laws of the Commonwealth of Pennsylvania (the "Township"). This opinion is delivered to you pursuant to Paragraph 4.2 of the Agreement. All capitalized terms used herein without definition shall have the respective meanings ascribed to them in the Agreement unless otherwise noted.

In connection with the opinions expressed below, I have made such examination of law and have examined the originals, or copies, certified or otherwise identified to my satisfaction, of the Agreement and any other agreements and instruments to be executed by PAWC in connection with the Agreement, and such other documents and records of PAWC, certificates of public officials and of officers of PAWC, and such other documents as I have deemed necessary or appropriate.

Based upon and subject to the foregoing, it is my opinion that as of the date hereof:

1. PAWC is a corporation duly organized and validly existing and in good standing under the laws of the Commonwealth of Pennsylvania.
2. PAWC has full power and lawful authority to execute and deliver, to perform its obligations under, and to consummate the transactions contemplated by the Agreement to which it is party, and to own, lease and operate the Assets and the Systems as contemplated by the Agreement.
3. The execution and delivery and performance by PAWC of the Agreement to which it is a party, and the consummation of the transaction contemplated thereby, have been duly authorized by all necessary action of such party and do not and will not contravene any provision of the organizational documents of PAWC.
4. Upon due execution and delivery by the parties thereto, the Agreement to which it is a party will be a legal obligation of PAWC, enforceable against

PAWC in accordance with its terms, except as such enforceability may be limited by applicable laws relating to bankruptcy, insolvency, fraudulent conveyance, reorganization or affecting creditors' rights generally.

5. All proceedings required to be taken by or on the part of PAWC to authorize the execution, delivery and performance of the Agreement and the consummation of the transactions thereby, have been duly and properly taken. The Agreement to which PAWC is a party has been duly and validly executed and delivered by appropriate officers of PAWC.

6. All consents, approvals, authorizations or orders of any court or governmental authority of the United States or of the Commonwealth of Pennsylvania required for the consummation by PAWC of the transactions contemplated by the Agreement have been obtained by PAWC, except for those consents, approvals, authorizations or orders required to be obtained by the Township, if any.

7. Neither the execution and delivery of the Agreement by PAWC nor the consummation of the transactions contemplated thereby will, to the best of my knowledge, conflict with, or result in a breach of, the terms, conditions or provisions or, constitute a default under, the terms of any agreement or instrument to which PAWC is a party or by which the Assets may be bound or affected. The execution, delivery and performance of, and compliance with, the Agreement by PAWC will not violate any provision of any law, rule, regulation, or to my knowledge, order, permit, certificate, writ, judgment, injunction, decree, determination, award or other decision of any court, arbitrator, or governmental authority by which PAWC is bound or to which it is subject.

8. I have no knowledge that (i) there are any actions, suits, investigations or proceedings pending against or threatened against or affecting PAWC, the Systems or any of the Assets before any court or arbitrator or authority which individually or in the aggregate, would have a Material Adverse Effect and (ii) there are currently any outstanding judgments, decrees, or orders of any court or authority against PAWC, which relates to or arise out of the ownership, condition or operation of the Systems or the Assets which individually or in the aggregate would have a Material Adverse Effect.

The opinions herein are given only with respect to the laws of the Commonwealth of Pennsylvania and the federal laws of the United States of America, as applicable, in each case as enacted and construed on the date hereof.

The foregoing opinions are solely for the use of the Township, have been expressed solely in connection with the transaction contemplated by the Agreement and are given for no other purpose and shall not be delivered to or relied upon by any other person or party except the Township.

Sincerely,

Velma A. Redmond

W:\JAF\PAWC\Schedule 4.2(g).doc

APPENDIX C



**PENNSYLVANIA
AMERICAN WATER**

**COATESVILLE DISTRICT
CHESTER COUNTY**

**CONNECTION MANAGEMENT PLAN
WASTEWATER TREATMENT PLANT
AND
COLLECTION SYSTEM**

REPORTING Data REVISED: October 2021

**PREPARED BY:
PENNSYLVANIA - AMERICAN WATER COMPANY
COATESVILLE DISTRICT
GERALD A. DeBALKO, P.E.
4 WELLINGTON BLVD.
WYOMISSING, PA 19610
T: (484) 855-1006**

**CONNECTION MANAGEMENT PLAN
CONVEYANCE
&
COLLECTION SYSTEM
REPORTING Data REVISED: October 2021**

SUMMARY OF CORRECTIVE ACTION PLANS

East End Trunk Line Corrective Action Plan (CAP)

Previous Connection Management Plans (CMP) identified various East End Trunk Line (EETL) segments as the most critical section. The EETL segments previously awarded for replacement (sections 19 through 26 and 29 through 31) were completed in 2007. In 2014, PAWC completed the replacement of additional segments of the EETL (sections 36 through 46) that were previously identified as a projected overload. With growth projections based on the 2013 Chapter 94 report data received from each municipality and updated in this October 2014 revised CMP, there are up to three segments of the EETL that are under a projected hydraulic overload. 2010 metered flow data throughout the Coatesville collection system was utilized in comparison of the hydraulic capacity of each segment to determine the remaining hydraulic capacity.

Table B1 of the CMP highlights the EETL segments of MH EE 015 to MH EE 018 as a projected hydraulic overload. Previous manhole numbering systems relating to the same segments MH 26 to MH 29, and MH 430, MH 433, MH 434, and MH 1044. The remaining hydraulic capacity equates to 1256 EDU's allowed prior to the upgrade of these sections. 1204 EDU's are projected in 5 years from the areas contributing to these segments, West Brandywine Township, Caln Township, the eastern section of East Fallowfield, and portions of Coatesville Basin C6 and C7. Starting with 2010 as the base flow, Table B1 shows 135 EDU's connected through March 2021. These connections will be monitored by PAWC and the improvements will be completed prior to the connection of the 1256th EDU.

Below is a schedule of corrective actions PAWC has and will take in the future to improve this projected hydraulic overload.

- PAWC has completed the design and DEP issued the Part II Permit on April 27, 2005 for the entire EETL.
- PAWC completed construction of MH #16 to #18 of the EETL and placed into service on 5/10/06.
- PAWC completed construction of MH sections 19 through 26 and 29 through 31 of the EETL and placed into service on 1/25/07.
- PAWC completed construction of MH sections 36 through 46 of the EETL and placed into service on 6/30/14.
- PAWC will continue to monitor the growth rate upstream of these developments, continue flow monitoring, and Sewer Gems modeling of the EETL.
- PAWC will reissue bidding documents when the projected overload is within two years.
- PAWC will award a contract for the necessary improvements with 120 days after the receipt of bids.
- PAWC will issue the Notice to Proceed within 90 days after the Notice of Award.
- PAWC will substantially complete construction of the necessary improvements within 180 days after the Notice to Proceed.

West End Trunk Line Corrective Action Plan (CAP)

Previous Connection Management Plans (CMP) identified various West End Trunk Line (WETL) segments as the most critical section. All WETL segments previously awarded for replacement (WWTP through Mittal property to Strode Avenue) are now complete. With growth projections based on the 2014 Chapter 94 report data received from each municipality and updated in this October 2015 revised CMP, there are up to seventeen segments of the WETL that are under a projected hydraulic overload, with the most critical area being segments between WE 013 to WE 020. 2010 metered flow data throughout the Coatesville collection system was utilized in comparison of the hydraulic capacity of each segment to determine the remaining hydraulic capacity.

Table B2 of the CMP highlights the WETL segments of WE 013 to WE 020 as a projected hydraulic overload. The remaining hydraulic capacity equates to 1361 EDU's allowed prior to the upgrade of these sections. 1188 EDU's are projected in 5 years from the areas contributing to these segments, West Sadsbury Township, West Caln Township, Parkesburg Borough, Sadsbury Township, Highland Township, portions of Valley Township, and portions of Coatesville Basin C1 and C2. Starting with 2010 as the base flow, Table B2 shows 958 EDU's connected through March 2018. These connections will be monitored by PAWC and the improvements will be completed prior to the connection of the 1361st EDU.

Below is a schedule of corrective actions PAWC has and will take in the future to improve this projected hydraulic overload.

- In 2020 the last segment of the WETL replacement is being constructed.
- In 2021 PAWC intends to submit the Certificate of Completion to close the Part II permit.
- PAWC has completed the design for improvements of the WETL from Strode Avenue to the discharge point of the Parkesburg pump station on Valley Road by January 2011.
- PAWC has submitted a WQM Part II permit for the improvements in April 2011.
- PAWC receipt of WQM Part II permit from DEP in September 2011.
- PAWC has completed the replacement of sections WE 013 through WE 018 in 2016 and the line has been placed in service.
- Now that WE 013 to WE 018 has been replaced, there are additional critical segments upstream of WE 018 that need to be replaced as per the existing WQM Part II permit.
- PAWC will continue to monitor the growth rate upstream of these developments, continue flow monitoring, and Sewer Gems modeling of the WETL.
- PAWC will reissue bidding documents when the projected overload is within two years.
- PAWC will award a contract for the necessary improvements with 120 days after the receipt of bids.
- PAWC will issue the Notice to Proceed within 90 days after the Notice of Award.
- PAWC will substantially complete construction of the necessary improvements within 180 days after the Notice to Proceed.

Parkesburg Pump Station Corrective Action Plan (CAP)

The Parkesburg Pump Station and its related force main was identified in the PAWC sponsored Act 537 plan as a projected overload given the Act 537 Plan growth within five years. The 2014 Chapter 94 report identifies that the station is not projected to be overloaded within the two year projection provided in the CMP revised October 2015. However, the station is projected to be hydraulically overloaded with five years given the growth projections based on the 2014 Chapter 94 report data received from each municipality and updated in this October 2015 revised CMP. 2010 metered flow data throughout the Coatesville collection system was utilized in comparison of the hydraulic capacity of each segment to determine the remaining hydraulic capacity.

Table B3 of the CMP highlights the Parkesburg Pump Station as in a projected hydraulic overload. The remaining hydraulic capacity equates to 356 EDU's allowed prior to the upgrade of these sections. 314 EDU's are projected in 5 years from the areas contributing to these segments, West Sadsbury Township, West Caln Township, Parkesburg Borough, and Highland Township. Starting with 2010 as the base flow, Table B3 shows 281 EDU's connected through March 2021. These connections will be monitored by PAWC and the improvements will be completed prior to the connection of the 356th EDU.

Below is a schedule of corrective actions PAWC has and will take in the future to improve this projected hydraulic overload.

- PAWC has completed construction of the Parkesburg Phase III improvements which increase the design capacity to 5.508MGD. Post Construction Certification will be submitted in 2021 and should close the CAP.
- PAWC has started the design for improvements of the Parkesburg Pump Station in August 2011.
- PAWC did submit a WQM Part II permit for the improvements in July 2012.
- PAWC receipt of WQM Part II permit from DEP in January 2013.
- PAWC has started the Phase 1 improvements in November 2015 and was completed in the summer of 2015.
- PAWC will continue to monitor the growth rate upstream of these developments, continue flow monitoring, and Sewer Gems modeling of the Parkesburg Pump Station.
- PAWC will reissue bidding documents for Phase 2 improvements when the projected overload is within two years.
- PAWC will award a contractor for the Phase 2 improvements with 120 days after the receipt of bids.
- PAWC will issue the Notice to Proceed within 90 days after the Notice of Award.
- PAWC will substantially complete construction of the necessary improvements within 365 days after the Notice to Proceed.

Borough of Parkesburg Collection System - Corrective Action Plan (CAP)

PAWC has signed planning modules for three developments with the Borough of Parkesburg, the Davis Tract 324 EDU's, Crystal Springs 129 EDU's, and HDC Site 75 EDU's. PAWC performed a capacity analysis and identified the combined total of additional EDU's will cause specified segments to be greater than its design capacity. A restriction shall be placed upon these three developments that prior to connection of a combined total of 232 EDU's, pipe segments must be replaced. To assist the developers, PAWC will coordinate the design, permitting and construction of the improvements and offer the following Corrective Action Plan (CAP).

- PAWC has begun design efforts in October 2007.
- PAWC has submitted the Part II permit to DEP in March 2008.
- PAWC will receive bids for construction pending developer's construction schedule.
- Notice of Award and Proceed issued two months after receipt of bids.
- Construction timeframe – six months to final completion after Notice of Award.

TABLE 2

PROJECTED TOTAL PER CMP, REVISED March 2021 - BASED ON ANNUAL AVERAGE (GPD)								
	Act 537 Approved Contracted Allocation	Chapter 94 Flow 2020	2021	2022	2023	2024	2025	5-year Net Increase
City of Coatesville	*	1,535,949	1,544,324	1,564,124	1,596,974	1,634,774	1,668,974	133,025
Valley Township	1,540,000	833,100	839,625	862,575	879,675	895,650	911,625	78,525
Calm Township	800,000	169,151	192,826	250,026	326,126	366,476	377,051	207,900
West Brandywine Township	345,000	168,073	185,398	206,998	226,348	254,473	282,598	114,525
Sadsbury Township	410,750	185,523	194,523	208,923	237,723	270,573	294,873	109,350
West Sadsbury Township	*	112,921	113,146	113,371	115,846	122,821	132,046	19,125
East Fallowfield Township	*	169,589	172,739	176,789	182,414	188,039	193,664	24,075
Borough of Parkesburg	*	346,628	348,353	352,428	357,853	363,953	370,978	24,350
West Caln Township	*	45,274	46,624	48,199	51,799	55,399	58,774	13,500
Veterans Hospital	*	131,994	131,994	131,994	131,994	131,994	131,994	-
Highland Township		675	900	2,250	4,725	7,200	9,675	9,000
Bulk Delivery		75,886	75,886	75,886	75,886	75,886	75,886	-
Ave. Total Flow (GPD)		3,774,763	3,846,338	3,993,563	4,187,363	4,367,238	4,508,138	733,375
3-Month Max (GPD)		3,948,643	4,023,515	4,177,522	4,380,249	4,568,410	4,715,801	767,157
Peak Factor		1.046	1.046	1.046	1.046	1.046	1.046	

PROJECTED TOTAL PER CMP, REVISED March 2021 - BASED ON 5 YEAR ADJUSTED AVERAGES

Ave. Total Flow (GPD)		3,649,784	3,721,359	3,868,584	4,062,384	4,242,259	4,383,159	733,375
3-Month Max (GPD)		4,301,612	4,385,969	4,559,488	4,787,899	4,999,899	5,165,963	864,351
Peak Factor		1.179	1.179	1.179	1.179	1.179	1.179	

Contract and Planning Allocations For WWTF Expansion

	Allocation	Contracted Capacity
City of Coatesville	2,271,413	
Valley Township		1,540,000
Calm Township		800,000
West Brandywine Township		533,100
Sadsbury Township		410,750
West Sadsbury Township	380,399	
East Fallowfield Township	269,107	
Borough of Parkesburg	654,921	
West Caln Township	508,225	
Veterans Hospital	96,078	
Highland Township	48,375	
Totals:	4,228,518	3,283,850
		7,512,368

**TABLE 3
SUMMARY OF CONNECTIONS**

SOURCE	2016		2017		2018		2019		2020		5 Year Totals	
	New Flow	Equiv. EDU's	New Flow	Equiv. EDU's	New Flow	Equiv. EDU's	New Flow	Equiv. EDU's	New Flow	Equiv. EDU's	New Flow	Equiv. EDU's
Bulk Customers												
Valley Twp.	6,525	29	10,575	47	3,600	16	0	0	675	3	21,375	95
Caln Twp.	0	0	0	0	7,650	34	0	0	225	1	7,875	35
W. Brandywine Twp.	675	3	0	0	0	0	0	0	7,200	32	7,875	35
Sadsbury	2,025	9	5,400	24	5,850	26	0	0	12,150	54	25,425	113
Subtotal	9,225	41	15,975	71	17,100	76	0	0	20,250	90	62,550	278
Billed Customers ⁽¹⁾												
	3,150	14	1,350	6	0	0	0	0	11,925	53	16,425	73
Veteran's Hospital	(1,096)	(5)	20,356	90	(10,719)	(48)	49,221	219	0	0	57,762	257
TOTAL	11,279	50	37,681	167	6,381	28	49,221	219	32,175	143	136,737	608

⁽¹⁾ Net EDU addition for City of Coatesville, East Fallowfield Twp., Parkesburg Boro, West Sadsbury, West Caln, & Bulk Haulers

Note: One EDU = 225 GPD

Base Flow Determination

	2016	2017	2018	2019	2020	5-YR Adjusted Average
Actual Annual Average	3.220	4.212	3.343	3.480	3.775	
Flow Adjustments 2016		0.011	0.011	0.011	0.011	0.011
Flow Adjustments 2017			0.038	0.038	0.038	0.038
Flow Adjustments 2018				0.006	0.006	0.006
Flow Adjustments 2019					0.049	0.049
Flow Adjustments 2020						
Total Adjustment	0.000	0.011	0.049	0.055	0.105	
Equivalent Flow	3.220	4.223	3.392	3.535	3.879	3.650

**CONNECTION MANAGEMENT PLAN - REPORTING Data REVISED: October 2021
PROJECTED NEW CONNECTIONS**

LINE	DEP Code No.	NAME	TOTAL EQ. EDU's	EDU EO. ACTIVE	EDUS REMAINING	REMAINING	PLANNING (b) MODULE	EETL AW/EFL MFL	START	BUILD-OUT	TYPE	2021	2022	2023	2024	2025	TOTAL IN 5-YEARS	TOTAL BEYOND 5-YEARS
1		City of Coatesville																
2	1-15001-035-3J	Cambria Terrace	69	54	15	3,375	Y (TOC)	16	2004	2006	R	6	6	3		15	-	-
3	1-15001-037-3J	Greenwood (Mount Pleasant Street)	13	13	0	638	Y (TOC)	23	2005	2006	R		10	20	20	70	568	-
4		Pulver Office Building 1	638	8	630	143,550	Y (TOC)	578			C	8				8	-	-
5		Marriott Hotel	47	47	0	1,800	Y (TOC)	578			C					31	-	-
6		Marriott Restaurant	31	31	0	6,975	Y (TOC)	578			C					60	-	-
7		Chetty Towers 1 - Residential	60	60	0	13,500	Y (TOC)	23	2006		R					60	-	-
8		Chetty Towers 1 - Commercial	10	10	0	2,250	Y (TOC)	23	2006		R					60	-	-
9		Chetty Towers 2 - Residential	150	150	0	33,750	Y (TOC)	16	2006		R					150	-	-
10		Chetty Towers 2 - Commercial	25	25	0	5,625	Y (TOC)	16	2006		R					25	-	-
11		701 ELH - Residential	9	9	0	1,400	Y (TOC)	33	2006		R					9	-	-
12		731 ELH - Residential	9	9	0	1,400	Y (TOC)	33	2006		R					9	-	-
13		Coatesville VotTech	4	4	0	900	Y (TOC)	33	2006		R					4	-	-
14		McColl-Coatesville Condominium	8	8	0	1,800	Y (TOC)	33	2006		R					8	-	-
15		Flatts Tract	200	200	0	45,000	Y (TOC)	33	2006		R/C					150	50	-
16		Gateway Development (Lipkin Building)	38	38	0	8,550	Y (TOC)	33	2006		R/C					38	-	-
17		Coatesville Misc (2 or less EDU's)	15	7	8	1,800					R					8	-	-
18		1404A, 1138 West Chester Rd	3	3	0	-					R					3	-	-
19		6820 Chester Rd	3	3	0	-					R					3	-	-
20		116 N 2nd Ave-Mill City Properties/cold 8 sewer capacity fees-meter installed 2/2020,5 units	8	8	0	-					R					8	-	-
21		116 N 2nd Ave-Mill City Properties/cold 8 sewer capacity fees-meter installed 11/2020)	8	8	0	-					R					8	-	-
22		Total EDU	1,348	1,317	1,211	272,075					EDU	30	88	146	168	618		
23		Total Flow	303,300	30,825	272,475						FLOW	8,375	19,800	32,850	37,800	133,025	139,050	
24		Valley Township (d)																
25		Hilview	512	165	347	5,175	Y	16	2003	2008	R	12	11			23	-	-
26	1-15956-117-3H	Oak Crest (Daque)	188	2	186	2,225	Y	578	2005	2008	R	1				1	-	-
27	1-15956-134-3J	Lambert Subdivision	3	3	0	675	Y	578	2005	2009	R					3	-	-
28	1-15956-124-3J	Valley Farms Comp. Center Phase I, II, III	102	91	11	11,250	Y	578	2005	2008	R					11	-	-
29	1-15956-125-3J	Valley Farms (Striped Commercial)	340	340	0	76,500	Y	578	2005	2008	R/C					140	200	-
30	1-15956-126-3J	Valley Farm & Mt. Alty Road	81	55	26	5,850	Y	16	2005	2008	R					40	-	-
31	1-15956-128-3J	London Tract	14	14	0	3,150	Y	578	2006		R					140	200	-
32	1-15956-135-3J	Concorn	3	3	0	675	Y	578	2006		R					3	-	-
33	1-15956-133-3J	Bone Tract (Valley View Lot 5)	3	3	0	675	Y	578	2006		R					3	-	-
34	1-15956-151-3J	Laurence Professional Center	2	2	0	450	Y	578	2006		R					2	-	-
35	1-15956-149-X	Hendry Lot	1	1	0	225	Y	578	2006		R					1	-	-
36	1-15956-147-X	Valley Farms Associates (Minesal Springs Property)	1	1	0	225	Y	578	2006		R					1	-	-
37		Valley Farms Business Park Lot 8 Townhomes	115	115	0	25,875	Y	578	2006		R					115	-	-
38		John Woodhead	1	1	0	225	Y	578	2006		R					1	-	-
39		Olinck Lot	1	1	0	225	Y	578	2006		R					1	-	-
40		Saunders Lot	1	1	0	225	Y	578	2006		R					1	-	-
41		Albert W Gauff Lot	1	1	0	225	Y	578	2006		R					1	-	-
42		Weaver Lot	1	1	0	225	Y	578	2006		R					1	-	-
43		Remainder of Valley View Business Park (Lots 6,7,9)	312	312	0	70,088	Y	578	2006		R					36	278	-
44		Airport Expansion	111	111	0	24,975	Y	578	2006		C					106	5	-
45		1125 W Lincoln Highway	3	3	0	675	Y	578	2006		R					3	-	-
46		1125 W Lincoln Highway	47	47	0	10,575	Y	578	2006		R					47	-	-
47		Dollar General	2	2	0	450	Y	578	2006		R					2	-	-
48		Spruce Street Residences	4	4	0	900	Y (TOC)	578	2006		R					4	-	-
49		James J. Terry Funeral Home	2	2	0	450	Y (TOC)	578	2006		R					2	-	-
50		Dvita Dyalvis Med Center - 1129 W Lincoln Highway	31	27	4	900	Y (TOC)	578	2006		R					1	1	-
51		1895 Valley Rd	1	1	0	225	Y (TOC)	578	2006		R					1	-	-
52		923 West Chestnut St	1	1	0	225	Y (TOC)	578	2006		R					1	-	-
53		1125 W Lincoln Lane	3	3	0	675	Y (TOC)	578	2006		R					3	-	-
54		115 Ghensert Rd	1	1	0	450	Y (TOC)	578	2006		R					1	-	-
55			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
56			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
57			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
58			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
59			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
60			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
61			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
62			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
63			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
64			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
65			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
66			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
67			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
68			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
69			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
70			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
71			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
72			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
73			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
74			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
75			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
76			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
77			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
78			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
79			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
80			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
81			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
82			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
83			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
84			1	1	0	450	Y (TOC)	578	2006		R					1	-	-
85			1															

CONNECTION MANAGEMENT PLAN - REPORTING Data REVISED: October 2021

TABLE B1

EETL Allocation until Expansion is Complete from MH EE 015 to MH EE 018 ⁽⁴⁾

Township	Development	Total Connections (1)	Connections Allowed (2)	2011 and Beyond Connections Made (3)	Connections Remaining (3)
City of Coatesville					
	701 ELH - Residential	7		0	7
	731 ELH - Residential	9		0	9
	Coatesville VoTech	4		0	4
	Coatesville Misc (2 or less EDU's)	15		7	8
Caln Township					
	Hillview (aka Hill Farm)	99		0	99
	Southwoods (Weiss)	20		0	20
	Hills of Thorndale Woods(Southdown/Duca)	262		0	150
	RG Carwash	7		7	0
	Toomey Estates (elio Colavito)	40		0	0
	Caln Road	40		0	40
	Dogwood & Scott Drive Sewer Extension	72		41	31
	Caln Plaza Shopping Center	4		4	0
	Flow Diversion Municipal Pump Station	981		0	510
	Caln Misc (Infill & OLDS Convers. To public)	236		3	85
West Brandywine Township					
	Existing Unconnected EDU's	24		0	12
	Traditions of America	227		107	120
	Culbertson Village Residential/Cross Creek	178		0	136
	TOA #2 Baldwin/Overlook	184		0	112
	TOA #3 Beechwood/Overlook	265		0	112
	Hunters Crossing	14		0	0
East Fallowfield Township					
	Harkins Farm	0		0	0
	Stone Creek (Robins Cove)	53		4	0
	North Woods (Thompson North)	27		5	0
	Mendenhall Tract	74		0	16
	Providence Hill (Chen Tract)	218		0	0
	Manchester Farms (Thompson South)	112		3	0
	Ridgecrest (Martin)	72		17	50
	Cardinal Drive Area	77		1	1
	Coatesville SD - Brandywine MS	75		0	0
	Scott Farm	75		0	35
	Etteleson Development	32		0	0
	Bonsall farm	20		0	0
	East Fallowfield Misc (2 EDU's or less)	13		8	5
Borough of South Coatesville					
	1140 & 1138 West Chester Road	2		0	2
	Subtotal		1256	207	1564

NOTE

- (1) - Total projected new connections upstream of critical section.
- (2) - Connection allowed prior to completion of EETL replacement of Manhole EE 015 to Manhole EE 018
- (3) - Connections made since January 2011 and remaining in next 5 years, from 2012 Chapter 94 Report.
- (4) - This table is not a commitment of capacity by PAWC, but rather a summary of each municipalities projections in the Chapter 94 Report. These tables will be updated every 6 months based upon changes to the projections and actual connections.

CONNECTION MANAGEMENT PLAN - REPORTING Data REVISED: October 2021

TABLE B2

WETL Allocation until Expansion is Complete from MH WE 013 to MH WE 020 ⁽⁴⁾

Township	Development	Total Connections (1)	Connections Allowed (2)	2011 and Beyond Connections Made (3)	Connections Remaining (3)
City of Coatesville					
	Flatts Tract	150		0	150
	Coatesville Misc (2 or less EDU's)	10		0	10
Valley Township					
	Oak Crest (Dague)	188		165	23
	Lambert Subdivision	3		2	1
	Highlands Corp. Center Phase I, II, III	102		91	11
	Valley Suburban (Stoltzfus Commercial)	340		0	140
	Valley Farm & Mt. Airy Road	81		55	0
	London Tract	14		14	0
	Concern	3		3	0
	Bone Tract (Valley View Lot 5)	3		3	0
	Laurence Professional Center	2		0	2
	Hendry Lot	1		0	1
	Valley Farms Associates Mineral Springs Property	1		0	1
	Valley View Business Park Lot 8 Townhomes	115		0	115
	John Woodward	1		0	1
	Olinick Lot	1		0	1
	Saunders Lot	1		0	1
	Albert W Gauff Lot	1		0	1
	Weaver Lot	1		0	1
	Remainder of Valley View Business Park (Lots 6,7,9)	312		0	36
	Airport Expansion	111		0	5
	Rainbow Village	30		0	0
	1126 W. Lincoln Highway	1		0	0
	Dollar General	2		0	0
	Spruce Street Residences	4		0	0
	James J. Terry Funeral Home	2		0	1
	Divita Dialysis Med Center - 1129 W Lincoln Highway	31		27	4
Highland Township					
	Woodview Acres	54		0	54
	Highland Misc (2 EDU's or less)	5		0	5
Sadsbury Township					
	Bellaire Business Center Overall - (CTDI expansion)	139		56	11
	Rock Holdings (Lot 7B Independence Way)	9		0	
	Sadsbury Park	461		204	125
	Lincoln Crest MHP (additional EDU's)	50		0	0
	Lafayette Square	125		40	85
	Sadsbury Township Existing Residents	80		17	20
	Sadsbury Commons	240		0	125
	Sadsbury Commons - Medical Office Building	3		0	3
Parkesburg Borough					
	Parkesburg Knoll	41		35	6
	Crystal Springs Expansion (Heritage)	129		0	15
	Lindale Village	31		0	15
	Davis Tract	324		0	35
	MK Builders	3		0	3
	Phillips Site	4		0	4
	Parkesedge Apartments	32		0	20
	Siti Crook - Maple Alley	2		0	0
	Octorara Avenue	3		0	0
	Parkesburg Misc (2 EDU's or less)	20		6	14
West Caln Township					
	Calnshire West	28		1	27
	Sands Property	309		0	11
	Lawrence Development	72		0	12
	Lapp Tract	3		0	3
	West Caln Misc (2 EDU's or less)	5		0	5
West Sadsbury Township					
	Lower Valley Road Partners, LP (Victory)	311		232	40
	Mast Property	600		0	40
	Upper Valley Road - Daycare/Apartment	6		6	0
	West Sadsbury Misc (2 EDU's or less)	6		1	5
	Subtotal		1361	958	1188

NOTE

- (1) - Total projected new connections upstream of critical section.
- (2) - Connection allowed prior to completion of WETL replacement of Manhole WE 013 to Manhole WE 020
- (3) - Connections made since January 2011 and remaining in next 5 years, from 2012 Chapter 94 Report.
- (4) - This table is not a commitment of capacity by PAWC, but rather a summary of each municipalities projections in the Chapter 94 Report. These tables will be updated every 6 months based upon changes to the projections and actual connections.

CONNECTION MANAGEMENT PLAN - REPORTING Data REVISED: October 2021

TABLE B3

WETL Allocation until Expansion is Complete for Parkesburg Pump Station ⁽⁴⁾

Township	Development	Total Connections (1)	Connections Allowed (2)	2011 and Beyond Connections Made (3)	Connections Remaining (3)
Highland Township					
	Woodview Acres	54		0	54
	Highland Misc (2 EDU's or less)	5		0	5
Parkesburg Borough					
	Parkesburg Knoll	41		35	6
	Crystal Springs Expansion (Heritage)	129		0	15
	Lindale Village	31		0	15
	Davis Tract	324		0	35
	MK Builders	3		0	3
	Phillips Site	4		0	4
	Parkesedge Apartments	32		0	20
	Siti Crook - Maple Alley	2		0	0
	Octorara Avenue	3		0	0
	Parkesburg Misc (2 EDU's or less)	20		6	14
West Caln Township					
	Calnshire West	28		1	27
	Sands Property	309		0	11
	Lawrence Development	72		0	12
	Lapp Tract	3		0	3
	West Caln Misc (2 EDU's or less)	5		0	5
West Sadsbury Township					
	Lower Valley Road Partners, LP (Victory)	311		232	40
	Mast Property	600		0	40
	Upper Valley Road - Daycare/Apartment	6		6	0
	West Sadsbury Misc (2 EDU's or less)	6		1	5
	Subtotal		356	281	314

NOTE

- (1) - Total projected new connections upstream of critical section.
- (2) - Connection allowed prior to completion of upgrades to the Parkesburg Pump Station
- (3) - Connections made since January 2011 and remaining in next 5 years, from 2012 Chapter 94 Report.
- (4) - This table is not a commitment of capacity by PAWC, but rather a summary of each municipalities projections in the Chapter 94 Report. These tables will be updated every 6 months based upon changes to the projections and actual connections.

**TABLE 4
PAWC Pump Stations - 2020 Chapter 94 Report**

Pump Station Name	Number of Pumps	Permitted Capacities				Present Flows				Projected Flows			
		AA Permitted Capacity (gpd)	Hydraulic Design Capacity (gpm)	Annual Average Flows (gpd)	Peak Hourly Flow (gpd)	Peak Hourly Flow (gpm)	Peaking Factor	2-Year Additional Flow (gpd)	(1)	2-Year AA Flow (gpd)	2-Year Projected Maximum Flow (gpd)	(1)	
Branford Village Lift Station #1	2	149,000	311	57,099	200,400	139	3.51	0	57,099	200,400	0	57,099	200,400
Branford Village Lift Station #2	2	65,000	71	18,669	43,704	30	2.34	0	18,669	43,704	0	18,669	43,704
Brinton Station Lift Station #1	2	22,000	62	5,152	11,880	8	2.31	0	5,152	11,880	0	5,152	11,880
Brinton Station Lift Station #2	2	3,000	9		Combined with #1		2.14	0	0	0	0	0	0
Derry Lane Pump Station (Fieldstone)	2	19,425	57	3,130	1,454	1	0.46	1,575	4,705	2,186	1,575	4,705	2,186
Millview Lift Station	2		178	20,527	42,192	29	2.06	0	20,527	42,192	0	20,527	42,192
Northwoods Lift Station	2	7,100	21	4,434	14,496	10	3.27	0	4,434	14,496	0	4,434	14,496
Parkeburg Lift Station	4	1,451,826	3,825	462,400	1,336,393	928	2.89	46,800	509,200	1,471,651	46,800	509,200	1,471,651
Providence Hill Lift Station	2	51,450	250	30,031	69,713	48	2.32	225	30,256	70,235	225	30,256	70,235
Robins Cove #1 Lift Station	2		55		Combined with #2		3.66	0	0	0	0	0	0
Robins Cove #2 Lift Station	2	163,418	550	82,456	220,512	153	2.67	2,475	84,931	227,131	2,475	84,931	227,131
Sandy Hill Lift Station	2	100,000	276	43,579	135,312	94	3.10	4,725	48,304	149,983	4,725	48,304	149,983
Strasburg Hunt Lift Station #1	2		43		Combined with #2		3.00	0	0	0	0	0	0
Strasburg Hunt Lift Station #2	2		52	24,882	74,646	52	3.00	0	24,882	74,646	0	24,882	74,646
West Sadsbury Lift Station	2	100,000	174	2,515	30,072	21	11.96	0	2,515	30,072	0	2,515	30,072
West Sadsbury Commons Lift Station	2	40,000	150	26,408	34,704	24	1.31	0	26,408	34,704	0	26,408	34,704
West Sadsbury Lower Valley Road	2	214,560	149	83,998	160,392	111	1.91	2,475	86,473	165,118	2,475	86,473	165,118

(1) - Based upon Connection Management Plan Revised March 2021

APPENDIX D

EAST FALLOWFIELD TWP.
Projection of EDU Connections and Flows (GPD)
2022 Act 537 Plan Update

Project Name	Plan Status	Total EDUs	Prior to 2021	2021	Remaining EDUs	2022	2023	2024	2025	2026	Total in 5 Years	Total Beyond 5 Years
Stone Creek (Robins Cove)	1-15918-159-3H	53	53	-	0	-	-	-	-	-	0	0
North Woods (Thompson North)	1-15918-207-3I	27	27	-	0	-	-	-	-	-	0	0
Mendenhall Tract (Pelham Place/Fieldstone Village)	1-15918-208-3I	74	11	2	61	2	4	4	4	4	18	43
Providence Hill (Chen Tract)	1-15918-211-3I	218	218	-	0	-	-	-	-	-	0	0
Manchester Farms (Thompson South)	1-15918-196-3J	112	112	0	0	-	-	-	-	-	0	0
Ridgecrest (Martin)	1-15918-213-3J	72	0	10	62	10	10	10	10	10	50	12
Cardinal Drive Area		77	76	1	0	-	-	-	-	-	0	0
Coatesville School District - South Brandywine MS		75	-	-	75	-	-	-	-	-	0	75
Scott Farm	Final Plan Approved	75	-	-	75	5	10	10	10	10	45	30
Etteleson Development	Preliminary Plan	32	-	-	32	-	-	-	-	-	0	32
Bonsall Farm	Preliminary Plan	20	-	-	20	-	-	-	-	-	0	20
East Fallowfield Twp MISC		13	8	1	5	1	1	1	1	1	5	0
TOTAL EDUs ⁽¹⁾		848	505	14	330	18	25	25	25	25	118	212
TOTAL FLOW (GPD) @ 225 GPD/EDU		190,800	113,625	3,150	74,250	4,050	5,625	5,625	5,625	5,625	26,550	47,700

⁽¹⁾ Does Not Include Existing Connections
Allocation (Planning) for WWTP Expansion = 269,107 GPD

APPENDIX E

1. PROJECT INFORMATION

Project Name: **East Fallowfield Township Act 537 Plan Update**

Date of Review: **5/18/2022 05:03:43 PM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewage module/Act 537 plan**

Project Area: **10,010.10 acres**

County(s): **Chester**

Watersheds HUC 8: **Brandywine-Christina**

Watersheds HUC 12: **Beaver Creek; Buck Run; Doe Run; Sucker Run; Upper West Branch Brandywine Creek**

Decimal Degrees: **39.950725, -75.818479**

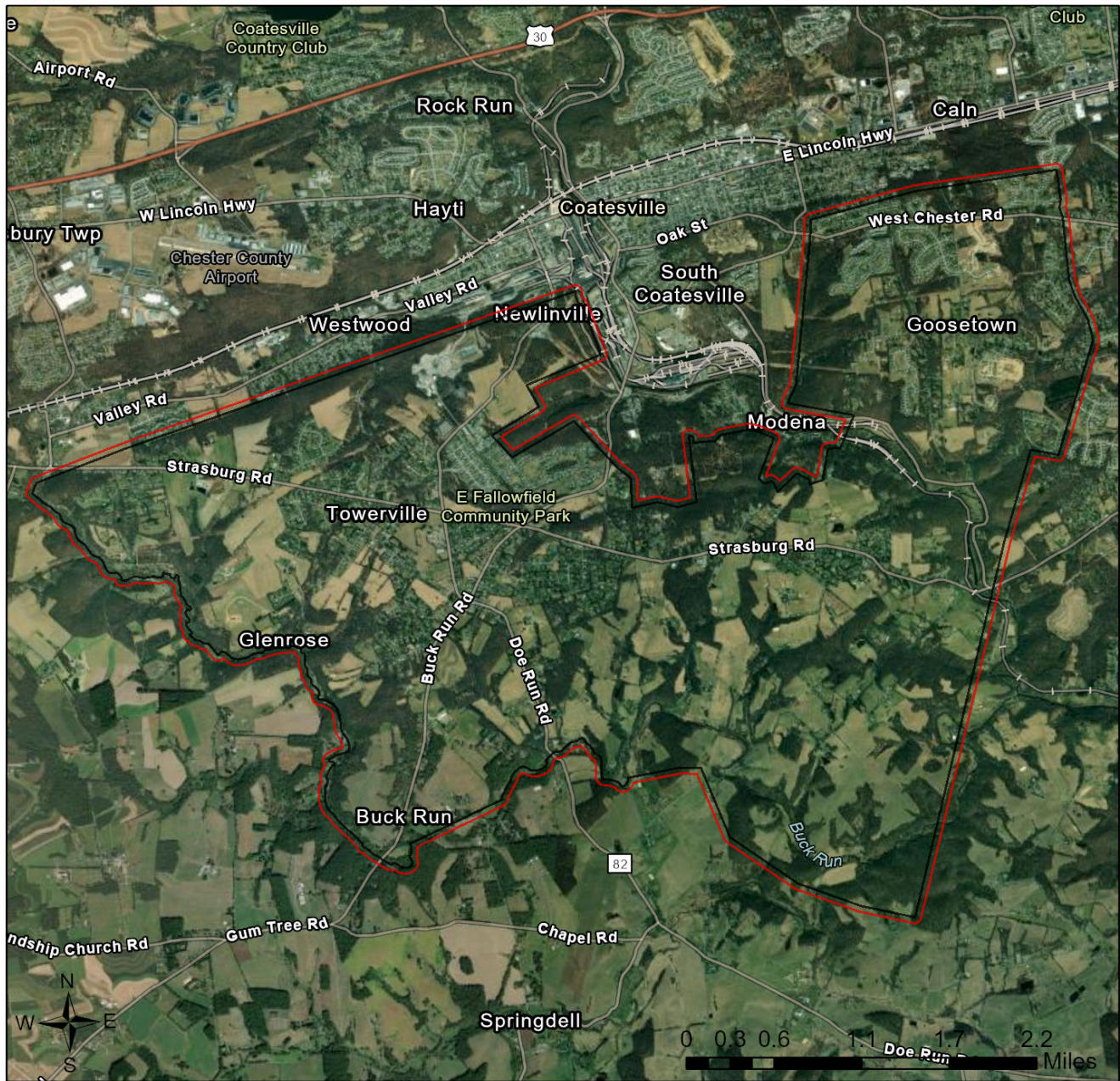
Degrees Minutes Seconds: **39° 57' 2.6115" N, 75° 49' 6.5258" W**


2. SEARCH RESULTS - LARGE PROJECT

Agency	Results	Response
PA Game Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response

Large Project. The project area is greater than 10 miles and/or 5,165 acres and therefore is categorized as a Large Project, and is not analyzed by the PNDI tool. Coordination is therefore required with the four jurisdictional agencies to determine if potential impacts to threatened and endangered and/or special concern species and resources within the project area. Please see the DEP Information section of the receipt if a PA Department of Environmental Protection Permit is required.

East Fallowfield Township Act 537 Plan Update

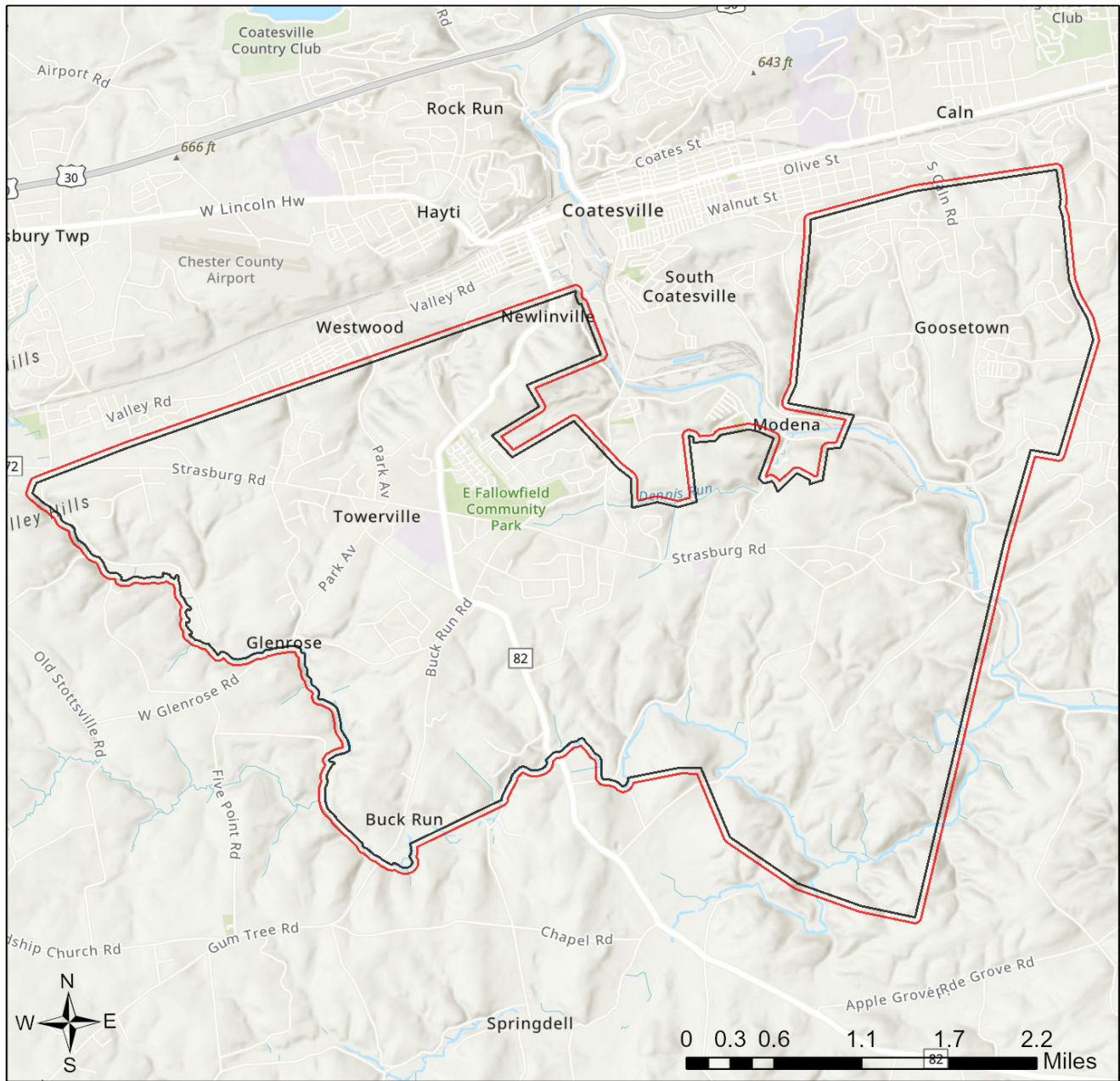




-  Buffered Project Boundary
-  Project Boundary

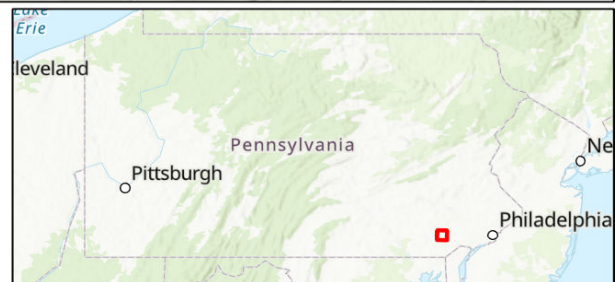


Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

East Fallowfield Township Act 537 Plan Update



-  Buffered Project Boundary
-  Project Boundary



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

U.S. Fish and Wildlife Service

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).

*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

Check-list of Minimum Materials to be submitted:

✓ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

✓ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

✓ **SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.

___ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

✓ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

PA Fish and Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Game Commission

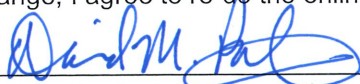
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: DAVID M. PORTER
Company/Business Name: HERBERT E. MACCOMBE, JR., P.E., CONSULTING ENGINEERS AND SURVEYORS, INC.
Address: P.O. Box 118
City, State, Zip: BROOMALL, PA 19008
Phone: (610) 356-9550 Fax: (610) 356-5032
Email: dporter@hemenginc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.


applicant/project proponent signature

5/18/22
date

**SUPPLEMENTAL PROJECT NARRATIVE
FOR
ENVIRONMENTAL IMPACT COORDINATION**

DESCRIPTION OF OVERALL PROJECT

An Act 537 Plan Update is being prepared at the request of East Fallowfield Township (Township) in order to address current and future planning needs. The intent of the Act 537 Plan Update is to be in substantial compliance with Act 537 entitled *The Pennsylvania Sewage Facilities Act, PA Code Title 25, Chapter 71*, in order to appropriately plan for the future needs of the Township and its residents. In addition, the tributary municipalities of the Pennsylvania American Water Company (PAWC) City of Coatesville, Chester County Wastewater Treatment Plant (WWTP) are required to complete Act 537 Planning to be consistent with the PAWC Regional Act 537 Plan and to provide for use of Post-Plant Expansion Capacity.

The Act 537 Plan Update will contain the requisite Environmental Checklist addressing the planning requirements necessary in order to provide public sanitary sewer service, as applicable, generally in the portion of the Township north of Strasburg Road, as well as continued use of On-lot Sewage Disposal Systems with a Sewage Management Program for the remainder of the Township, while evaluating other alternatives for adequate sewage disposal to meet the immediate and future needs of the Township and its residents.

WORK TO BE PERFORMED

The Act 537 Plan Update will identify and evaluate various aspects of alternatives in a prudent manner in order to solve the problems and adequately satisfy the sewage disposal needs identified in this plan. The alternatives considered and evaluated include the background and means by which public sewer service currently exists as well as the merits of providing future service to both residential and commercial development within the overall planning area considered, as well as considering continued use of individual on-lot sewage disposal systems (OLDS) or community on-lot disposal systems (COLDS) in areas where public sewage disposal is not viable. Implementation of a Sewage Management Program will be evaluated as a method of assuring proper long term operation and maintenance of individual OLDS and COLDS. As part of the Alternatives Analysis, the practicality, environmental impact, and cost effectiveness of the various methods of sewage disposal will be considered in determining the Selected Alternatives for different areas of the Township within this Plan. In addition to this Environmental Impact Coordination, other outside agencies and municipalities will be coordinated with, including the Chester County Planning Commission, the Chester County Health Department, the Pennsylvania Historic and Museum Commission (PHMC), Pennsylvania American Water Company (PAWC) and various adjacent municipalities.

PHYSICAL CHARACTERISTICS

East Fallowfield Township is located in Chester County, south of the City of Coatesville. The Township is bounded to the north by Sadsbury Township, Valley Township, the Borough of South Coatesville, the Borough of Modena, and Caln Township, bounded to the east by West Bradford Township and Newlin Township, bounded to the south by West Marlborough Township, and bounded to the west by Highland Township.

The Study Area lies within two major watersheds: the West Branch Brandywine Creek and the East Branch Brandywine Creek. The West Branch Brandywine Creek encompasses the large majority of the township and is comprised of several subwatersheds: Buck Run, Sucker Run, Dennis Run, Doe Run and the main stem of the West Branch Brandywine Creek. There is only one subwatershed of the East Branch Brandywine Creek within the township and that is the Valley Run watershed, which is tributary to Beaver Creek.

The Buck Run watershed is generally situated in the western, southwestern, and southern portions of the township generally south of Strasburg Road and is the largest watershed within the township. According to PA Code, Chapter 93, the Water Quality Standard Classification is TSF, MF (Trout Stocking, Migratory Fishes) for the Buck Run. The Sucker Run watershed is generally situated within the northeasterly portion of the township north of Strasburg Road and along Doe Run Road (Route 82). According to PA Code, Chapter 93, the Water Quality Standard Classification is WWF, MF (Warm Water Fishes, Migratory Fishes). The Dennis Run watershed is situated generally in the central and northcentral portions of the township extending from its westerly limit at Park Avenue to approximately Ramsey Road in the east and including areas from Ercildoun in the south to the boundary of the township with the boroughs of South Coatesville and Modena in the north. According to PA Code, Chapter 93, the Water Quality Standard Classification is WWF, MF (Warm Water Fishes, Migratory Fishes). The main stem of West Branch Brandywine Creek watershed encompasses almost the entire eastern portion of the township extending in the north from about West Chester Road to the south just beyond Fairview Road where it meets the Buck Run watershed drainage divide. The western limit of the watershed is the drainage divide between the Dennis Run and Buck Run watersheds and the watershed extends to the municipal boundaries with the Borough of South Coatesville, Borough of Modena, West Bradford Township, and Newlin Township. According to PA Code, Chapter 93, the Water Quality Standard Classification for the West Branch Brandywine Creek in this portion of the township is WWF, MF (Warm Water Fishes, Migratory Fishes) with the exception of two unnamed tributaries. One of the tributaries generally flows from north to south along Misty Patch Road and the other flows from north/northeast to south from east of South Caln Road both joining prior to connecting with the West Branch Brandywine Creek in the vicinity of Mortonville Road and Sawmill Road. The unnamed tributary along Misty Patch Road, according to PA Code, Chapter 93, has a Water Quality Standard Classification of CWF, MF (Cold Water Fishes, Migratory Fishes). The unnamed tributary along South Caln Road, according to PA Code, Chapter 93, has a Water Quality Standard Classification of EV, MF (Exceptional Value, Migratory Fishes). Only a small portion of the township consists of the Doe Run watershed, which is situated in the southeasterly portion of the

township adjacent to the Buck Run. According to PA Code, Chapter 93, the Water Quality Standard Classification is TSF, MF (Trout Stocking, Migratory Fishes).

The Valley Run watershed, which is part of the Beaver Creek watershed comprises the northeastern most portion of the township north of West Chester Road and is the only watershed that is not tributary to the West Branch Brandywine Creek in the Township. Valley Run is tributary to Beaver Creek, which is tributary to the East Branch Brandywine Creek, and according to PA Code, Chapter 93, the Water Quality Standard Classification is CWF, MF (Cold Water Fishes, Migratory Fishes).

According to National Wetlands Inventory mapping, the majority of the wetlands found within the township are located along the border of the township with Highland and West Marlborough Townships. These wetlands can be found on the banks of current waterways. Additional wetlands can be found on the banks of the West Branch Brandywine Creek located in the northeastern portion of the township and on the banks of the Dennis Run west of Youngsburg Road.

The study area contains a low elevation of approximately 240 located along the Buck Run on the border of East Fallowfield Township and Newlin Township. The highest elevation of approximately 635 can be found just north of Strasburg Road approximately half way between its intersections with Old Wilmington Road and Mount Carmel Road. The township consists of rolling hills, dense forest areas, and farmland.

All soils in the Study Area are either very or moderately limited with regards to In-ground Bed Sewage Disposal. The exception to this is a small area located southwest of South Forty Lane and north of Chelsey Drive and Wagner Lane, which is slightly limited.

Pertaining to the soil suitability for In-ground Trench Sewage Disposal, the Study Area ranges from slightly to moderately to very limited. The northeastern portion of the Study Area contains mostly moderately and very limited soil, with small pockets of slightly limited soil seen. The southern and northwestern portions of the Study Area contain mostly slightly limited soil suitability for in-ground trench sewage disposal; however, pockets of moderately and very limited soil suitability can be found. Finally, in the central portion of the Study Area south of Modena Borough there is a small pocket of slightly limited soil located north of Dennis Run. The remainder of this central portion of the Study Area contains mostly very limited soil suitability.

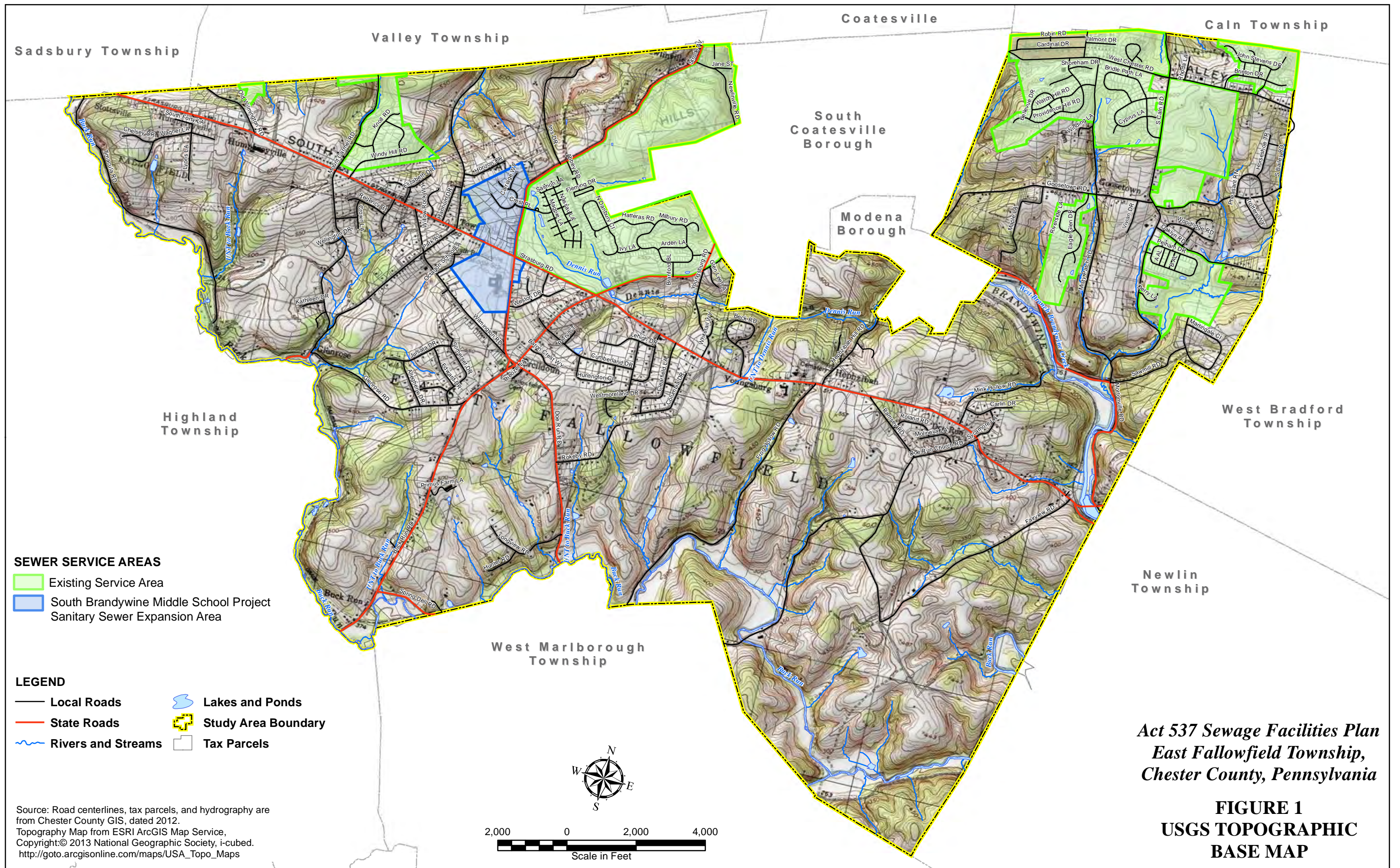
In the matter of the soil suitability for Sand Mound Sewage Disposal the Study Area as a whole ranges from slightly limited, to moderately limited, to very limited soil suitability. The vast majority of the Study Area is slightly limited; however, areas of moderately and very limited soil suitability can be found dispersed throughout the Study Area.

Finally, with regard to the soil suitability for Drip Irrigation Sewage Disposal, the Study Areas contains areas of very limited, moderately limited and slightly limited soil suitability. The vast majority of the area is slightly limited in this regard. Three notable areas of very limited soil suitability can be found bordering the West Branch of Brandywine

Creek; bordering Buck Run in the southern portion of the Study Area; and located in the portion of the Study Area just south of the Valley Township line close to the border of South Coatesville Borough.

AREA TO BE IMPACTED

The area to be impacted will be evaluated on a case-by-case basis as specific projects commence. Each specific project will need to address potential environmental impacts specifically related to that particular project, such as PNDI searches, wetlands delineation, general permits, and/or erosion and sediment pollution control and NPDES permitting, etc., as applicable. In general, extension of public sewer service within the township will likely be limited to areas north of Strasburg Road. In addition, the remaining areas of the township will likely be serviced by On-lot Sewage Disposal Systems under a Sewage Management Program administered by the township. Other methods of sewage disposal such as Community On-lot Disposal Systems (COLDS), package treatment plants for individual lot use, and holding tanks, will also be evaluated in the Act 537 Plan Update and may be recommended on a case-by-case basis.



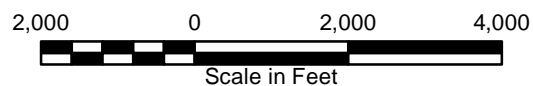
SEWER SERVICE AREAS

- Existing Service Area
- South Brandywine Middle School Project Sanitary Sewer Expansion Area

LEGEND

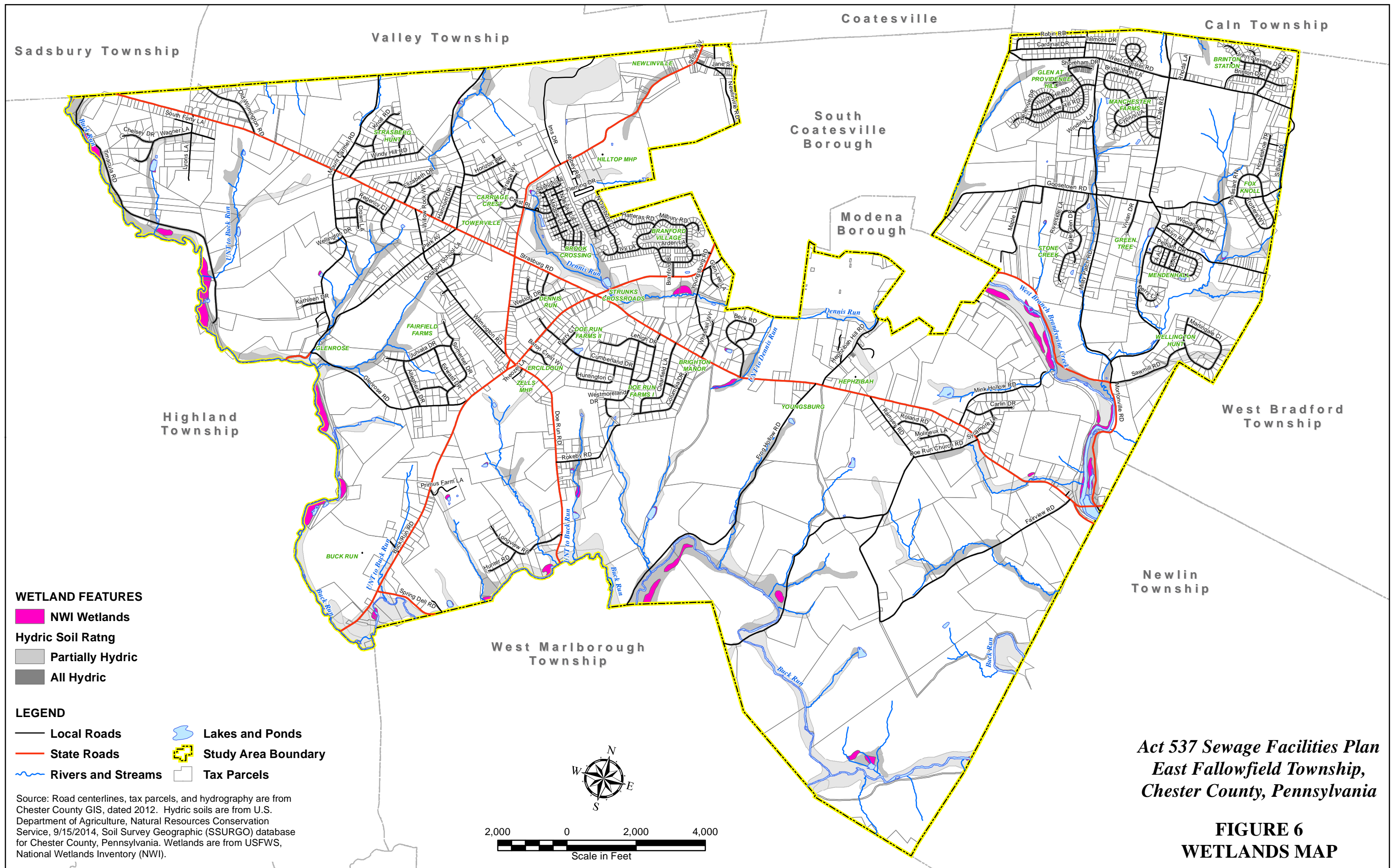
- Local Roads
- State Roads
- Rivers and Streams
- Lakes and Ponds
- Study Area Boundary
- Tax Parcels

Source: Road centerlines, tax parcels, and hydrography are from Chester County GIS, dated 2012.
 Topography Map from ESRI ArcGIS Map Service,
 Copyright:© 2013 National Geographic Society, i-cubed.
http://goto.arcgisonline.com/maps/USA_Topo_Maps



*Act 537 Sewage Facilities Plan
 East Fallowfield Township,
 Chester County, Pennsylvania*

**FIGURE 1
 USGS TOPOGRAPHIC
 BASE MAP**



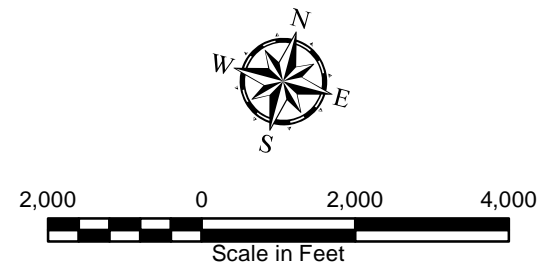
WETLAND FEATURES

- NWI Wetlands
- Hydric Soil Ratng**
- Partially Hydric
- All Hydric

LEGEND

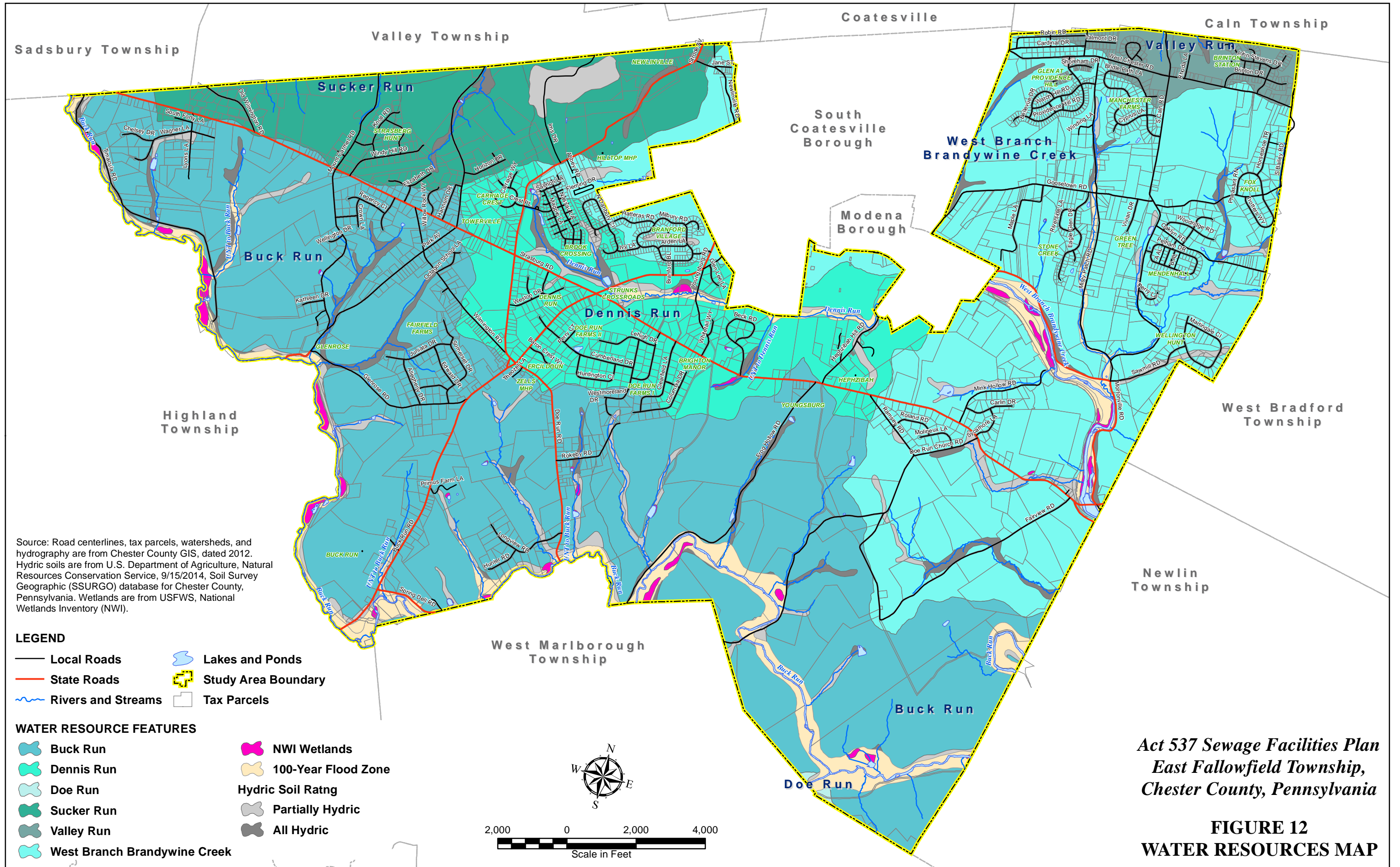
- Local Roads
- State Roads
- Rivers and Streams
- Lakes and Ponds
- Study Area Boundary
- Tax Parcels

Source: Road centerlines, tax parcels, and hydrography are from Chester County GIS, dated 2012. Hydric soils are from U.S. Department of Agriculture, Natural Resources Conservation Service, 9/15/2014, Soil Survey Geographic (SSURGO) database for Chester County, Pennsylvania. Wetlands are from USFWS, National Wetlands Inventory (NWI).



*Act 537 Sewage Facilities Plan
East Fallowfield Township,
Chester County, Pennsylvania*

**FIGURE 6
WETLANDS MAP**



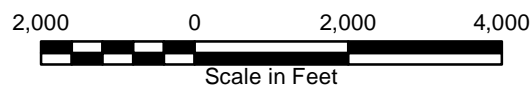
Source: Road centerlines, tax parcels, watersheds, and hydrography are from Chester County GIS, dated 2012. Hydric soils are from U.S. Department of Agriculture, Natural Resources Conservation Service, 9/15/2014, Soil Survey Geographic (SSURGO) database for Chester County, Pennsylvania. Wetlands are from USFWS, National Wetlands Inventory (NWI).

LEGEND

- Local Roads
- State Roads
- Rivers and Streams
- Lakes and Ponds
- Study Area Boundary
- Tax Parcels

WATER RESOURCE FEATURES

- Buck Run
- Dennis Run
- Doe Run
- Sucker Run
- Valley Run
- West Branch Brandywine Creek
- NWI Wetlands
- 100-Year Flood Zone
- Hydric Soil Rating**
- Partially Hydric
- All Hydric



*Act 537 Sewage Facilities Plan
East Fallowfield Township,
Chester County, Pennsylvania*

**FIGURE 12
WATER RESOURCES MAP**

APPENDIX F

610-356-9550
FAX 610-356-5032

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS & SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

James W. MacCombie, P.E., P.L.S.
Herbert E. MacCombie, III, Technician

REPLY TO:
P.O. BOX 118
BROOMALL, PA 19008-0118

July 13, 2020

CERTIFIED MAIL

Pennsylvania Historical and Museum Commission
Bureau of Historic Preservation
400 North Street, Second Floor
Harrisburg, PA 17120-0093

RE: Cultural Resource Notice
East Fallowfield Township, Chester County
Act 537 Plan Update

To Whom It May Concern:

An Act 537 Plan Update is being prepared at the request of East Fallowfield Township (Township), Chester County in order to provide public sanitary sewer service, as well as continued use of On-lot Sewage Disposal Systems with a Sewage Management Program for the remainder of the Township, while evaluating alternatives for adequate sewage disposal to meet the immediate and future needs of the Township and its residents. The Plan Update enhances the 1982 Act 537 Plan to address needs and proposed development in the northeastern, northwestern, and central portions of the Township as well as within the Township public sewer service area tributary to the Pennsylvania American Water Company (PAWC) Coatesville Wastewater Treatment Plant (WWTP) in the Borough of South Coatesville. The PAWC has service areas in the Township, and the Township is a Non-bulk customer of PAWC.

Section C of the PHMC Project Review Form identifies the requirement of PHMC Coordination. Please find attached for your reference a copy of the following documents:

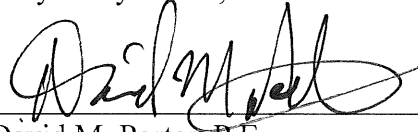
- Completed Cultural Resource Notice
- Project Narrative
- USGS Site Location Map
- Historic Resources Map
- Historic Resources Inventory

We request a review for potential impact on historical and archaeological resources for this Act 537 Plan Update. Funding will be determined as specific projects undergo planning, design, and permitting in the future.

PHMC Coordination
East Fallowfield Township Act 537 Plan Update
7/13/20
Page 2

Please review this documentation and respond with any comments or concerns at your earliest convenience. Thank you for your cooperation in this matter.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "David M. Porter", written over a horizontal line.

David M. Porter, P.E.



Pennsylvania
Historical & Museum
Commission

PROJECT REVIEW FORM

Request to Initiate SHPO Consultation on State and Federal Undertakings

SHPO USE ONLY		Reviewers: ____/____
DATE RECEIVED:	DATE DUE:	
ER NUMBER:	HRSF: _____	

REV: 06/2018

SECTION A: PROJECT NAME & LOCATION

Is this a new submittal? YES NO OR This is additional information for ER Number:

Project Name East Fallowfield Township Act 537 Official Plan County Chester Municipality East Fallowfield Township

Project Address 2264 Strasburg Road City/State/ Zip East Fallowfield PA 19320

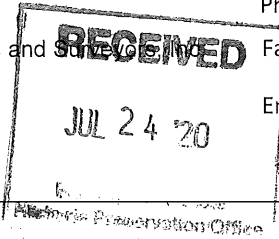
SECTION B: CONTACT INFORMATION & MAILING ADDRESS

Name David Porter Phone (610) 356-9550

Company Herbert E. MacCombie, Jr., P.E., Consulting Engineers and Surveyors Fax (610) 356-5032

Street/PO Box PO Box 118 Email dporter@hemenginc.com

City/State/Zip Broomall PA 19008



SECTION C: PROJECT DESCRIPTION

This project is located on: Federal property State property Municipal property Private property

(check all that apply)

List all federal and state agencies and programs providing funds, permits, licenses.	Agency Type	Agency/Program/Permit Name	Project/Permit/Tracking Number (if applicable)
	State	PADEP Bureau of Clean Water	

Proposed Work – Attach project description, scope of work, site plans, and/or drawings

Project includes (check all that apply): Construction Demolition Rehabilitation Disposition

Total acres of project area: 9990 +/- Total acres of earth disturbance: N.A.

Are there any buildings or structures within the project area? Yes No Approximate age of buildings: See Attached

Does this project involve properties listed in or eligible for the National Register of Historic Places, or designated as historic by a local government?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Unsure <input type="radio"/>	Name of historic property or historic districts	See Attached
---	--------------------------------------	--------------------------	------------------------------	---	--------------

<p>Please print and mail completed form and all attachments to:</p> <p>PHMC State Historic Preservation Office 400 North St. Commonwealth Keystone Building, 2nd Floor Harrisburg, PA 17120-0093</p>	<p>Attachments – Please include the following information with this form</p> <p><input checked="" type="checkbox"/> Map – 7.5' USGS quad showing project boundary and Area of Potential Effect</p> <p><input checked="" type="checkbox"/> Description/Scope – Describe the project, including any ground disturbance and previous land use</p> <p><input checked="" type="checkbox"/> Site Plans/Drawings – Indicate past and present land use, location and dates of buildings, and proposed improvements</p> <p><input type="checkbox"/> Photographs – Attach prints or digital photographs showing the project site, including images of all buildings and structures keyed to a site plan</p>
---	--

SHPO DETERMINATION (SHPO USE ONLY)

There are **NO HISTORIC PROPERTIES** in the Area of Potential Effect The project will have **NO ADVERSE EFFECTS WITH CONDITIONS** (see attached)

The project will have **NO EFFECT** on historic properties **SHPO REQUESTS ADDITIONAL INFORMATION** (see attached)

The project will have **NO ADVERSE EFFECTS** on historic properties:

SHPO REVIEWER: _____ DATE: _____



Pennsylvania
Historical & Museum
Commission

PROJECT REVIEW FORM

Request to Initiate SHPO Consultation on State and Federal Undertakings

SHPO USE ONLY	Reviewers: ___/___/___
DATE RECEIVED:	DATE DUE:
ER NUMBER:	HRSF: _____

REV: 06/2018

SECTION A: PROJECT NAME & LOCATION

Is this a new submittal? YES NO OR This is additional information for ER Number:

Project Name East Fallowfield Township Act 537 Official Plan County Chester Municipality East Fallowfield Township
 Project Address 2264 Strasburg Road City/State/ Zip East Fallowfield PA 19320

SECTION B: CONTACT INFORMATION & MAILING ADDRESS

Name David Porter Phone (610) 356-9550
 Company Herbert E. MacCombie, Jr., P.E., Consulting Engineers and Surveyors, Inc. Fax (610) 356-5032
 Street/PO Box PO Box 118 Email dporter@hemenginc.com
 City/State/Zip Broomall PA 19008

SECTION C: PROJECT DESCRIPTION

This project is located on: Federal property State property Municipal property Private property
 (check all that apply)

List all federal and state agencies and programs providing funds, permits, licenses.	Agency Type	Agency/Program/Permit Name	Project/Permit/Tracking Number (if applicable)
	State	PADEP Bureau of Clean Water	

Proposed Work – Attach project description, scope of work, site plans, and/or drawings

Project includes (check all that apply): Construction Demolition Rehabilitation Disposition

Total acres of project area: 9990 +/- Total acres of earth disturbance: N.A.

Are there any buildings or structures within the project area? Yes No Approximate age of buildings: See Attached

Does this project involve properties listed in or eligible for the National Register of Historic Places, or designated as historic by a local government?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Unsure <input type="radio"/>	Name of historic property or historic districts	See Attached
---	--------------------------------------	--------------------------	------------------------------	---	--------------

Please print and mail completed form and all attachments to:

PHMC
 State Historic Preservation Office
 400 North St.
 Commonwealth Keystone Building, 2nd Floor
 Harrisburg, PA 17120-0093

Attachments – Please include the following information with this form

- Map** – 7.5' USGS quad showing project boundary and Area of Potential Effect
- Description/Scope** – Describe the project, including any ground disturbance and previous land use
- Site Plans/Drawings** – Indicate past and present land use, location and dates of buildings, and proposed improvements
- Photographs** – Attach prints or digital photographs showing the project site, including images of all buildings and structures keyed to a site plan

SHPO DETERMINATION (SHPO USE ONLY)

- | | |
|--|---|
| <input type="checkbox"/> There are NO HISTORIC PROPERTIES in the Area of Potential Effect | <input type="checkbox"/> The project will have NO ADVERSE EFFECTS WITH CONDITIONS (see attached) |
| <input type="checkbox"/> The project will have NO EFFECT on historic properties | <input type="checkbox"/> SHPO REQUESTS ADDITIONAL INFORMATION (see attached) |
| <input type="checkbox"/> The project will have NO ADVERSE EFFECTS on historic properties: | |

SHPO REVIEWER: _____ DATE: _____

**SUPPLEMENTAL PROJECT NARRATIVE
FOR
HISTORICAL AND ARCHAEOLOGICAL IMPACT COORDINATION**

DESCRIPTION OF OVERALL PROJECT

An Act 537 Plan Update is being prepared at the request of East Fallowfield Township (Township) in order to address current and future planning needs. The intent of the Act 537 Plan Update is to be in substantial compliance with Act 537 entitled *The Pennsylvania Sewage Facilities Act, PA Code Title 25, Chapter 71*, in order to appropriately plan for the future needs of the Township and its residents. In addition, the tributary municipalities of the Pennsylvania American Water Company (PAWC) City of Coatesville, Chester County Wastewater Treatment Plant (WWTP) are required to complete Act 537 Planning to be consistent with the PAWC Regional Act 537 Plan and to provide for use of Post-Plant Expansion Capacity.

The Act 537 Plan Update will contain the requisite Historical Checklist addressing the planning requirements necessary in order to provide public sanitary sewer service, as applicable, generally in the portion of the Township north of Strasburg Road, as well as continued use of On-lot Sewage Disposal Systems with a Sewage Management Program for the remainder of the Township, while evaluating other alternatives for adequate sewage disposal to meet the immediate and future needs of the Township and its residents.

WORK TO BE PERFORMED

The Act 537 Plan Update will identify and evaluate various aspects of alternatives in a prudent manner in order to solve the problems and adequately satisfy the sewage disposal needs identified in this plan. The alternatives considered and evaluated include the background and means by which public sewer service currently exists as well as the merits of providing future service to both residential and commercial development within the overall planning area considered, as well as considering continued use of individual on-lot sewage disposal systems (OLDS) or community on-lot disposal systems (COLDS) in areas where public sewage disposal is not viable. Implementation of a Sewage Management Program will be evaluated as a method of assuring proper long term operation and maintenance of individual OLDS and COLDS. As part of the Alternatives Analysis, the practicality, environmental impact, and cost effectiveness of the various methods of sewage disposal will be considered in determining the Selected Alternatives for different areas of the Township within this Plan. In addition to this Environmental Impact Coordination, other outside agencies and municipalities will be coordinated with, including the Chester County Planning Commission, the Chester County Health Department, the Pennsylvania Historic and Museum Commission (PHMC), Pennsylvania American Water Company (PAWC) and various adjacent municipalities.

PHYSICAL CHARACTERISTICS

East Fallowfield Township is located in Chester County, south of the City of Coatesville. The Township is bounded to the north by Sadsbury Township, Valley Township, the Borough of South Coatesville, the Borough of Modena, and Caln Township, bounded to the east by West Bradford Township and Newlin Township, bounded to the south by West Marlborough Township, and bounded to the west by Highland Township.

The Study Area lies within two major watersheds: the West Branch Brandywine Creek and the East Branch Brandywine Creek. The West Branch Brandywine Creek encompasses the large majority of the township and is comprised of several subwatersheds: Buck Run, Sucker Run, Dennis Run, Doe Run and the main stem of the West Branch Brandywine Creek. There is only one subwatershed of the East Branch Brandywine Creek within the township and that is the Valley Run watershed, which is tributary to Beaver Creek.

The Buck Run watershed is generally situated in the western, southwestern, and southern portions of the township generally south of Strasburg Road and is the largest watershed within the township. According to PA Code, Chapter 93, the Water Quality Standard Classification is TSF, MF (Trout Stocking, Migratory Fishes) for the Buck Run. The Sucker Run watershed is generally situated within the northeasterly portion of the township north of Strasburg Road and along Doe Run Road (Route 82). According to PA Code, Chapter 93, the Water Quality Standard Classification is WWF, MF (Warm Water Fishes, Migratory Fishes). The Dennis Run watershed is situated generally in the central and northcentral portions of the township extending from its westerly limit at Park Avenue to approximately Ramsey Road in the east and including areas from Ercildoun in the south to the boundary of the township with the boroughs of South Coatesville and Modena in the north. According to PA Code, Chapter 93, the Water Quality Standard Classification is WWF, MF (Warm Water Fishes, Migratory Fishes). The main stem of West Branch Brandywine Creek watershed encompasses almost the entire eastern portion of the township extending in the north from about West Chester Road to the south just beyond Fairview Road where it meets the Buck Run watershed drainage divide. The western limit of the watershed is the drainage divide between the Dennis Run and Buck Run watersheds and the watershed extends to the municipal boundaries with the Borough of South Coatesville, Borough of Modena, West Bradford Township, and Newlin Township. According to PA Code, Chapter 93, the Water Quality Standard Classification for the West Branch Brandywine Creek in this portion of the township is WWF, MF (Warm Water Fishes, Migratory Fishes) with the exception of two unnamed tributaries. One of the tributaries generally flows from north to south along Misty Patch Road and the other flows from north/northeast to south from east of South Caln Road both joining prior to connecting with the West Branch Brandywine Creek in the vicinity of Mortonville Road and Sawmill Road. The unnamed tributary along Misty Patch Road, according to PA Code, Chapter 93, has a Water Quality Standard Classification of CWF, MF (Cold Water Fishes, Migratory Fishes). The unnamed tributary along South Caln Road, according to PA Code, Chapter 93, has a Water Quality Standard Classification of EV, MF (Exceptional Value, Migratory Fishes). Only a small portion of the township consists of the Doe Run watershed, which is situated in the southeasterly portion of the

township adjacent to the Buck Run. According to PA Code, Chapter 93, the Water Quality Standard Classification is TSF, MF (Trout Stocking, Migratory Fishes).

The Valley Run watershed, which is part of the Beaver Creek watershed comprises the northeastern most portion of the township north of West Chester Road and is the only watershed that is not tributary to the West Branch Brandywine Creek in the Township. Valley Run is tributary to Beaver Creek, which is tributary to the East Branch Brandywine Creek, and according to PA Code, Chapter 93, the Water Quality Standard Classification is CWF, MF (Cold Water Fishes, Migratory Fishes).

According to National Wetlands Inventory mapping, the majority of the wetlands found within the township are located along the border of the township with Highland and West Marlborough Townships. These wetlands can be found on the banks of current waterways. Additional wetlands can be found on the banks of the West Branch Brandywine Creek located in the northeastern portion of the township and on the banks of the Dennis Run west of Youngsburg Road.

The study area contains a low elevation of approximately 240 located along the Buck Run on the border of East Fallowfield Township and Newlin Township. The highest elevation of approximately 635 can be found just north of Strasburg Road approximately half way between its intersections with Old Wilmington Road and Mount Carmel Road. The township consists of rolling hills, dense forest areas, and farmland.

All soils in the Study Area are either very or moderately limited with regards to In-ground Bed Sewage Disposal. The exception to this is a small area located southwest of South Forty Lane and north of Chelsey Drive and Wagner Lane, which is slightly limited.

Pertaining to the soil suitability for In-ground Trench Sewage Disposal, the Study Area ranges from slightly to moderately to very limited. The northeastern portion of the Study Area contains mostly moderately and very limited soil, with small pockets of slightly limited soil seen. The southern and northwestern portions of the Study Area contain mostly slightly limited soil suitability for in-ground trench sewage disposal; however, pockets of moderately and very limited soil suitability can be found. Finally, in the central portion of the Study Area south of Modena Borough there is a small pocket of slightly limited soil located north of Dennis Run. The remainder of this central portion of the Study Area contains mostly very limited soil suitability.

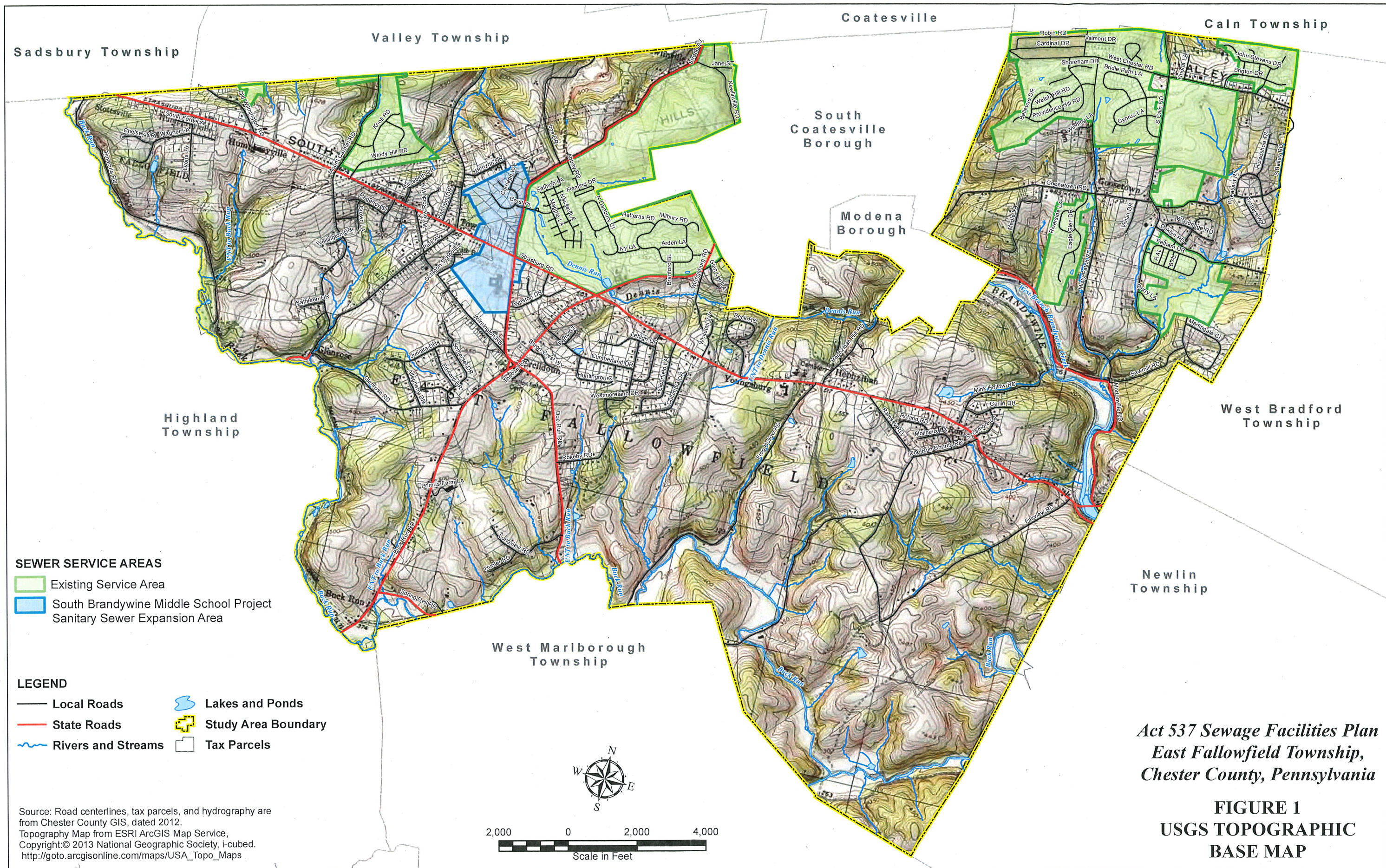
In the matter of the soil suitability for Sand Mound Sewage Disposal the Study Area as a whole ranges from slightly limited, to moderately limited, to very limited soil suitability. The vast majority of the Study Area is slightly limited; however, areas of moderately and very limited soil suitability can be found dispersed throughout the Study Area.

Finally, with regard to the soil suitability for Drip Irrigation Sewage Disposal, the Study Areas contains areas of very limited, moderately limited and slightly limited soil suitability. The vast majority of the area is slightly limited in this regard. Three notable areas of very limited soil suitability can be found bordering the West Branch of Brandywine

Creek; bordering Buck Run in the southern portion of the Study Area; and located in the portion of the Study Area just south of the Valley Township line close to the border of South Coatesville Borough.

AREA TO BE IMPACTED

The areas to be impacted will be evaluated on a case-by-case basis as specific projects commence. Each specific project will need to address potential historical and archaeological impacts specifically related to that particular project. In general, extension of public sewer service within the township will likely be limited to areas along the Strasburg Road corridor. In addition, other general areas where there is potential for historical and archaeological impact are areas along Buck Run Road, Park Avenue, Frog Hollow Road, Doe Run Church Road, Fairview Road, Strode Avenue, and Doe Run Road. Those areas may be subject to extension of public sewer service if the needs arise. Otherwise these areas will be subject to continued use of On-lot Disposal Systems under a Sewage Management Program administered by the Township. Each specific project will need to address potential impacts specifically related to that particular project, such as PHMC coordination for historic and archaeological resources, PNDI searches, wetlands delineation, general permits, and/or erosion and sediment pollution control and NPDES permitting, etc., as applicable.

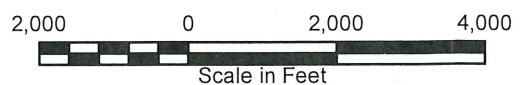


SEWER SERVICE AREAS

- Existing Service Area
- South Brandywine Middle School Project Sanitary Sewer Expansion Area

LEGEND

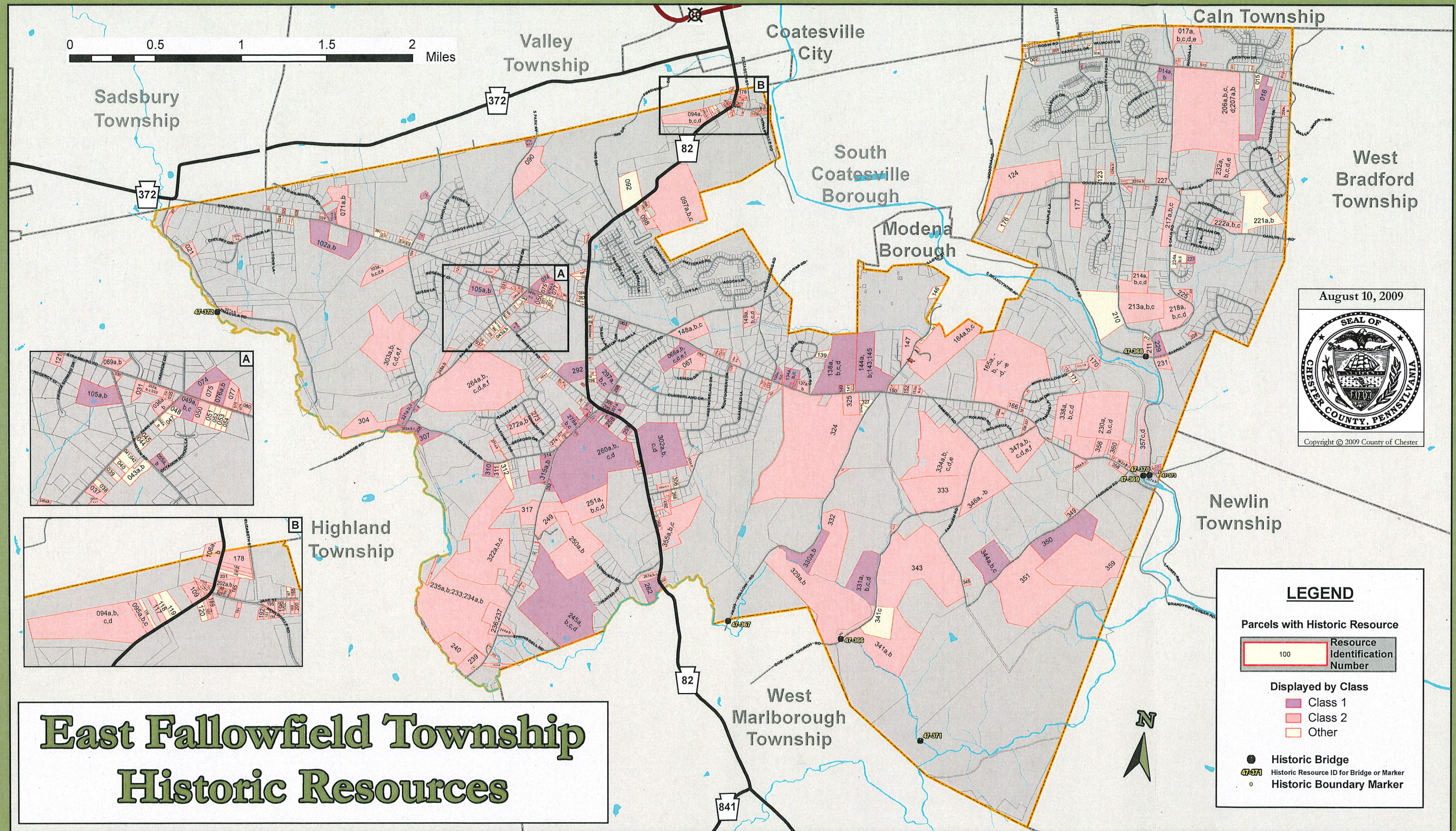
- Local Roads
- State Roads
- Rivers and Streams
- Lakes and Ponds
- Study Area Boundary
- Tax Parcels



Source: Road centerlines, tax parcels, and hydrography are from Chester County GIS, dated 2012.
 Topography Map from ESRI ArcGIS Map Service,
 Copyright © 2013 National Geographic Society, i-cubed.
http://goto.arcgisonline.com/maps/USA_Topo_Maps

*Act 537 Sewage Facilities Plan
 East Fallowfield Township,
 Chester County, Pennsylvania*

**FIGURE 1
 USGS TOPOGRAPHIC
 BASE MAP**



East Fallowfield Township Historic Resources

Presented by: Chester County Department of Computing and Information Services--Geographic Information Systems Division (DCIS-GIS);
 Chester County Historic Preservation Network;
 Chester County Department of Parks & Recreation; Municipal Historic Commissions; East Fallowfield Township Historical Commission

FIGURE 13a

HR#	Tax Parcel#	Location	Owners name	Hse#	Street Name	Type	Hgt	By	Material	Style	Date	Use	Historical significance	NR	Other	Class	Y	N	Comments	
001	47-1Q-1			1301	Cardinal	Dr	2.5	3	brickface	Neo-Col Reviv	c. 1950	single							3 1	
002	47-1Q-11.3			1404	West Chester	Rd	3.0	3	stucco	International	c. 1955	single							3 1	
003	47-1Q-3			1341	Robin	Rd	2.0	3	stucco	Neo-Col Reviv	c. 1940	single							3 1	
004	47-1Q-5			1407	Robin	Rd	1.0	4	stucco	Mod Ranch	c. 1955	single							3 1	
005	47-1R-21			1415	Cardinal	Dr	1.0	3	alum/stone	Wrightian	c. 1955	single							2 1	
006	47-1R-29			1510	Robin	Rd	1.5	3	brickface	Cape Cod	c. 1940	single							3 1	
007	47-1R-31			296	Cardinal	Dr	1.5	3	stucco	Cape Cod	c. 1950	single							3 1	
008	47-1R-58			299	West Chester	Rd	2.0	2	brickface	Neo-Col Reviv	c. 1955	single							3 1	
009	47-1R-8			1601	Robin	Rd	2.5	3	stucco	Col Revive	c. 1930	single							3 1	
010	47-2-11			2085	West Chester	Rd	1.5	3	stoneface	Wrightian	c. 1940	single							2 1	
011	47-2-15			2201	West Chester	Rd	1.5	3	brickface	Cape Cod	c. 1940	single							3 1	
012	47-2-19			2235	West Chester	Rd	1.5	3	brickface	SplitLevel	c. 1955	single							3 1	
013	47-2-24.1			2365	West Chester	Rd	2.0	4	stucco	International	c. 1955	single							2 1	
014a, -b	47-2-26			715	South Caln	Rd	2.5	3	stone	Col Revival	c. 1930	single	R. Brognard Okie, architect		garage				1 1	
015	47-2-28			2310	West Chester	Rd	1.5	3	brickface	Cape Cod	c. 1940	single							3 1	
016	47-2-29			2320	West Chester	Rd	1.5	4	stone/alum	Col Revival	c. 1930	single	R. Brognard Okie, architect						1 1	
017a, -b, -c, -d, -e	47-2-3		Jeremiah Eldridge	512	South Caln	Rd	2.5	3	stucco	vernacular	1798	single	Robert Kennedy House		shd, sprghse, grg, pond				2 1	I-23/NR?
018	47-2-5		Barry Lepori	2007	West Chester	Rd	2.5	2	stone	4 Square	c. 1910	twin							2 1	
019	47-2-5.1		Mammarella	2015	West Chester	Rd	2.5	2	stone	4 Square	c. 1910	twin							2 1	
020	47-3-22		McGrail	14	Timucula	Rd			wood	trestle	1868	ruin	Pa RR Trestle Bridge						2 1	I-1/NR?
021	47-3-27		Stella Hammond	40	Timucula	Rd	2.5	3	asphalt/stucco	vernacular	c. 1830	single							2 1	
022	47-3-3			3305	Strasburg	Rd	1.5	2	stucco	Cape Cod	c. 1940	single							2 1	Towerville?
023a, -b, -c	47-3-30		Ronald Parrott	25	Wagners	Ln	2.5	4	aluminum	vernacular	c. 1830	single			garage, shed				2 1	
024	47-3-37			3280	Strasburg	Rd	1.5	4	stucco	ranch	c. 1950	single							3 1	
025	47-3-4			3275	Strasburg	Rd	1.5	2	brick	ranch	c. 1940	single							2 1	Towerville?
026a, -b	47-3-40			3257	Strasburg	Rd	1.5	3	brick	Cape Cod	c. 1940	single			garage				3 1	
027a, -b	47-3-46.2B		Greg Cunningham	78	Timucula	Rd	2.5	3	weatherboard	vernacular	1832	single	Jacob Taylor Farm		barn				2 1	I-2/NR?
028	47-3-7			3245	Strasburg	Rd	1.5	4	brick	Cape Cod	c. 1940	single							2 1	Towerville?
029	47-4-1		Morey Young	3205	Strasburg	Rd	2.5	2	aluminum	4 Square	1915	single							2 1	SRTH-1/NR?
030	47-4-100			2860	Strasburg	Rd	2.5	4	permastone	Gothic Revival	c. 1850	single							2 1	NR?
031	47-4-102		Crook, Siti M	2842	Strasburg	Rd	1.5	3	aluminum	Tudor Revival	c. 1930	single							2 1	Towerville?
032a, -b, -c	47-4-103		Robert Beggs	2834	Strasburg	Rd	2.5	4	aluminum	Gothic Revival	c. 1870	twin			barn, crgshd				2 1	Towerville?
033	47-4-103		Robert Beggs	2828	Strasburg	Rd	2.5	4	aluminum	Gothic Revival	c. 1870	twin							2 1	Towerville?
034	47-4-104			2820	Strasburg	Rd	1.5	3	aluminum	Bungalow	c. 1930	single							2 1	Towerville?
035	47-4-105			2806	Strasburg	Rd	2.5	3	aluminum	Gothic Revival	c. 1870	single							2 1	Towerville?
036a, -b	47-4-107.1		Raymond Fryberger	98	Park	Ave	2.5	3	aluminum	Gothic Revival	c. 1870	single			garage				2 1	
037	47-4-108			47	Park	Ave	2.0	3	aluminum	Col Revive	c. 1930	single	Sears Roebuck?						2 1	
038	47-4-109			51	Park	Ave	1.5	3	aluminum	Cape Cod	c. 1940	single							3 1	
039	47-4-112			63	Park	Ave	1.5	3	stoneface	Cape Cod	c. 1930	single							3 1	
040	47-4-114			71	Park	Ave	1.5	3	brickface	Tudor Revival	c. 1930	single							3 1	
041	47-4-115			75	Park	Ave	2.5	3	aluminum	Late 19th C	c. 1900	single							3 1	
042	47-4-115.1			41	Park	Ave	1.0	1	cementblk	vernacular	c. 1930	outbldg							3 1	post-1960 house
043a, -b	47-4-118		Mary LaMar	120	Wilmington	Rd	3.0	3	frame	vernacular	post1960	barn	Octagonal House Barn Ruin		barn ruins				3 1	
044	47-4-119			81	Park	Ave	1.0	2	permabrick	ranch	c. 1955	single							3 1	
045	47-4-120			80	Park	Ave	1.5	3	stucco	Neo-Cape Cod	c. 1955	single							3 1	
046a, -b	47-4-122		Larrine Holbrooke	95	Park	Ave	2.5	2	aluminum	Col Revival	c. 1930	single			garage				3 1	
047	47-4-123			97	Park	Ave	1.5	3	aluminum	Cape Cod	c. 1950	single							3 1	
048	47-4-124			99	Park	Ave	2.5	3	aluminum	Neo-Col Rev	c. 1950	single							3 1	
049a, -b, -c	47-4-125		Ronald Taggart	2722	Strasburg	Rd	3.5	5	stucco	Queen Anne	1890	single?	Harry deHaven House	yes	crghse, outbldg				1 1	SRTH-9
050	47-4-126			2700	Strasburg	Rd	2.0	3	stone	Col Revive	c. 1935	single							2 1	
051	47-4-128			2690	Strasburg	Rd	1.5	3	stoneface	Cape Cod	c. 1940	single							3 1	
052	47-4-129		Allen & Dolores Cook	2680	Strasburg	Rd	1.5	3	aluminum	Cape Cod	c. 1950	single							3 1	
053	47-4-130			2670	Strasburg	Rd	2.5	3	aluminum	Neo-Col Rev	c. 1940	single							3 1	
054	47-4-131			2660	Strasburg	Rd	1.5	3	stucco	Cape Cod	c. 1940	single							3 1	
055a, -b	47-4-138.1		David Padlock	115	Wilmington	Rd	2.0	8	stucco	Octagonal	1850	single	Lukens Pierce Octagonal House	yes	garage				1 1	I-7
056	47-4-14			3035	Strasburg	Rd	1.5	3	stnfac/stucco	ranch	c. 1940	single							3 1	
057	47-4-141			615	Doe Run	Rd	1.0	3	brickface	ranch	c. 1950	single							3 1	
058	47-4-142			625	Doe Run	Rd	1.0	3	stoneface	ranch	c. 1950	single							3 1	
059	47-4-143			635	Doe Run	Rd	1.0	3	stnfac/stco	ranch	c. 1950	single							2 1	
060	47-4-144			645	Doe Run	Rd	1.0	3	stucco	ranch	c. 1950	single							3 1	
061	47-4-15			3025	Strasburg	Rd	1.5	3	stone face	ranch	c. 1950	single							3 1	
062	47-4-151			695	Doe Run	Rd	2.5	3	aluminum	Gothic Revival	c. 1870	single							2 1	
063	47-4-153.1		David Zanis	2550	Strasburg	Rd	2.5	6	stucco	vernacular	1820	single	Drover's Inn	yes					1 1	SRTH-11; blt by/for Jesse Bentley
064	47-4-16			3015	Strasburg	Rd	1.5	4	stucco	Cape Cod	c. 1940	single							3 1	

HR#	Tax Parcel#	Location	Owners name	Hse#	Street Name	Type	Hgt	By	Material	Style	Date	Use	Historical significance	NR	Other	Class	Y	N	Comments
065	47-4-17			215	Mt. Carmel	Rd	1.5	3	stnfac/stucco	Cape Cod	c. 1940	single				3	1		
066a, -b, -c, -d, -e, -f	47-4-171		Chester Ramsey	2464	Strasburg	Rd	2.5	5	stucco	vernacular	1823	single	Robert Wilson House	yes	barn remains, blkcmth ruin, tannry ruin, sprnghse,shed	1	1		Was 2460 Strasburg Rd?/SRTH-12
067	47-4-172		Merle Gerhart	2450	Strasburg	Rd	2.5	5?	stucco	vernacular	1810	single	David Wilson House			2	1		SRTH-13/NR?
068	47-4-172.1		Roy Zander	2440	Strasburg	Rd	1.0	2	log	vernacular	1810	single	David Wilson Cobbler Shop			2	1		SRTH-14/NR?
069a, -b	47-4-21.2A		David Brotman	2885	Strasburg	Rd	2.5	4	stucco/alum	vernacular	1826	single	McCorkle House		crghs, barn	2	1		SRTH-6/NR?
070a, -b, -c, -d, -e, -f	47-4-28.2		Donald Ficca	190	Mt. Carmel	Rd	2.5	2	stone	vernacular	1805	single	David Scott House	yes	privy, milkshed, sprghse, barn ruin, ruin	1	1		log addition, moved c. 1980 from Cochranville; was 180 Mt Carmel Rd/I-4
071a, -b	47-4-3			3155	Strasburg	Rd			weatherboard			barn		new house	2	1		NR?	
072a, -b, -c, -d, -e, -f	47-4-3.4		Arnold Hertzog	3195	Strasburg	Rd	2.5	6	stucco	vernacular	1778	single	Philip Dougherty Tavern	yes	privy, ruin, barn ruin, milk house, spring house	1	1		was 3165 Strasburg Rd/SRTH-3
073a, -b, -c, -d	47-4-30		Genterra Corp	158	Park	Ave	2.5	3	stucco/stone	vernacular	1740	single	Thomas Scott House	yes	privy, 2sheds (springhouse across road)	1	1		I-5
074	47-4-38		Archie Shearer	2715	Strasburg	Rd	2.5	4	shgle/alum	Queen Anne	1890	single	Isaac Pawling House	yes		1	1		SRTH-8
075	47-4-39		Herman David	2705	Strasburg	Rd	1.5	3	weatherboard	Gothic Revival	c. 1900	crghse	Isaac Pawling House CrgHse			2	1		NR?
076a, -b	47-4-40		Jack Levengood	2685	Strasburg	Rd	2.5	3	aluminum	vernacular	c.1840	single	Jesse Bentley House		garage	1	1		SRTH-10/NR?
077	47-4-41		James Hook	2675	Strasburg	Rd	2.0	3	aluminum	Col Revive	c. 1930	single				2	1		Towerville?
078	47-4-42			2665	Strasburg	Rd	2.5	3	aluminum	Col Revive	c. 1930	single				2	1		Towerville?
079	47-4-43			2655	Strasburg	Rd	1.5	3	aluminum	A&C Shotgun	c. 1920	single	Sears Roebuck?			2	1		Towerville?
080	47-4-44			2645	Strasburg	Rd	2.0	3	alum/stnfcce	Neo-Col Revive	c. 1945	single				2	1		Towerville?
081a, -b	47-4-48			590	Doe Run	Rd	1.5	2	brick/alum	A&C Bungalow	c. 1930	single			garage	3	1		
082	47-4-49			580	Doe Run	Rd	2.0	3	stucco	Early 20th C	c. 1920	store				2	1		Towerville?
083	47-4-50			570	Doe Run	Rd	1.5	3	stucco	Cape Cod	c. 1955	single				3	1		
084	47-4-52			560	Doe Run	Rd	2.5	3	stucco	Neo-Col Revive	c. 1950	single				3	1		
085	47-4-56			490	Doe Run	Rd	2.5	2	stucco	Late 19th C	c. 1890	single				3	1		
086	47-4-57			500	Doe Run	Rd	1.5	4	stucco/alum	Cape Cod	c. 1950	single				3	1		
087	47-4-58			480	Doe Run	Rd	2.5	3	stucco	vernacular	c. 1870	apmtnts				3	1		was a twin
088a, -b, -c, -d	47-4-6		Ruth Doutrich Corp	2	Mt. Carmel	Rd	2.5	5	stone	PA Farmhouse	1796	single	Edward Dougherty House	yes	barn w/conical pillars, wagon shed, springhouse	1	1		was 155 Mt Carmel Rd/I-3
089a, -b	47-4-62.5			204	Doe Run	Rd				Neo-Col Reviv	c. 1970	single			old silo, new house	2	1		
090	47-4-64			155	Park	Rd	1.0	1	stone			sprghse	Thomas Scott Spring House			2	1		goes w/47-4-30/NR?
091	47-4-7			3105	Strasburg	Rd	2.0	3	permstn/alum	Col Revive	c. 1930	single				3	1		
092	47-4-70			380	Doe Run	Rd	1.5	3	clapboard	bungalow	c. 1930	single				3	1		
093	47-4-8			3095	Strasburg	Rd	1.5	3	permstn/alum	Cape Cod	c. 1930	single				3	1		
094a, -b, -c, -d	47-4-80		Annette Pratte	170	Doe Run	Rd	2.5	5	stone	PA farmhouse	1770	single	Young Farm		springhouse, 2 tenant houses	2	1		Newlin?/was 220 Doe Run Rd/I-11
095a, -b, -c	47-4-81		Peter Salitrynski	162	Doe Run	Rd	2.0	3	stucco	mid-19th C	1850	single			2 sheds	2	1		Newlin?/modern add to front
096	47-4-85		James Sisk/Piorsol	385	Doe Run	Rd	2.5	3	brick	Gothic Revival	c. 1860	single				2	1		
097a, -b, -c	47-4-85.2		James Sisk	325	Doe Run	Rd	2.5	3	stucco	vernacular	c. 1820	single			silos, barn	2	1		
098	47-4-86			387	Doe Run	Rd	1.5	4	brick	bungalow	c. 1940	single				2	1		
099a, -b	47-4-86.1		James Sisk	375	Doe Run	Rd	1.5	3	brick	bungalow	c. 1940	single			garage	3	1		Slated for Demolition, 2008
100	47-4-87			395	Doe Run	Rd	1.2	3	brick	Cape Cod	c. 1940	single				2	1		
101	47-4-9			3085	Strasburg	Rd	1.5	3	stnfac/stucco	ranch	c. 1940	single				3	1		
102a, -b	47-4-93		Weavers	3186	Strasburg	Rd	2.5	4	stucco	vernacular	1774	single	Philip Dougherty House	yes	barn	1	1		was 3100 Strasburg Rd/SRTH-2
103a, -b, -c, -d, -e	47-4-94		Dolores Daller	355	Mt. Carmel	Rd	2.0	3	fieldstone	vernacular	1740	single	Daniel McPeak House	yes	barn, corn crib, wagon shed, garage	2	1		SRTH-4
104	47-4-96-E		Faith Miss Bapt.Church	2960	Strasburg	Rd	1.0	3	vinyl	vernacular	c. 1860	religious	Mt. Carmel School			2	1		SRTH-5/NR?
105a, -b	47-4-99.11		Richard Johnson	20	Wilmington	Rd	3.0	5	stucco	Queen Anne	c. 1910	single	Asa Walton House	yes	barn	1	1		SRTH-7
106a, -b	47-4D-1			320	Doe Run	Rd	2.5	2	brick/wood	Queen Anne	c. 1900	single			carriage house	2	1		Newlin?
107	47-4D-13		Terry McDougal	135	Doe Run	Rd	2.0	2	brick	Queen Anne	c. 1900	twin				2	1		Newlin?
108	47-4D-14			125	Doe Run	Rd	2.0	2	brick	Queen Anne	c. 1900	twin				2	1		Newlin?
109	47-4D-3			140	Doe Run	Rd	2.0	3	stucco	mid 19th C	c. 1870	row				2	1		also listed as 47-5A-7/Newlin?
110	47-4D-4			130	Doe Run	Rd	2.0	3	stucco	mid 19th C	c. 1870	row				2	1		Newlin?
111	47-4D-5			120	Doe Run	Rd	2.0	3	stucco	mid 19th C	c. 1870	row				2	1		Newlin?
112	47-4D-6			110	Doe Run	Rd	2.0	3	stucco	mid 19th C	c. 1870	row				2	1		Newlin?
113a, -b	47-4D-7		Gordon Egolf	100	Doe Run	Rd	2.0	3	stucco	mid 19th C	c. 1870	row			crgh hse	2	1		Newlin?
114	47-4D-8			360	Doe Run	Rd	2.5	2	asphalt shngl	Late 19th C	c. 1890	single				2	1		Newlin?
115a, -b	47-4D-9			350	Doe Run	Rd	1.5	3	stucco	Early 20th C	c. 1930	single			crgh hse	2	1		Newlin?
116	47-4H-1			160	Doe Run	Rd	1.5	2	wood	vernacular	c. 1840	single				3	1		Newlin?/Modern add to front

HR#	Tax Parcel#	Location	Owners name	Hse#	Street Name	Type	Hgt	By	Material	Style	Date	Use	Historical significance	NR	Other	Class	Y	N	Comments
117	47-4H-3			156	Doe Run	Rd	1.0	3	brick	Early 20th C	c. 1920	com garage				2	1		Newlinville Potential Hist Dist?
118	47-4H-4			154	Doe Run	Rd	1.0	2	stucco	ranch	c. 1940	single				3	1		Newlin?
119	47-4H-5			152	Doe Run	Rd	1.5	3	stuc/wood	ranch	c. 1940	single				3	1		Newlin?
120	47-4H-6-E		Mennonites	145	Doe Run	Rd	1.5	3	aluminum			religious	Mennonite Church			3	1		Newlin?
121	47-4P-4		Thomas Phipps	2900	Strasburg	Rd	2.5	3	aluminum	Mid 19th C	c. 1860	single				2	1		was 2910 Strasburg/NR?
122	47-5-10			2415	Strasburg	Rd	1.5	3	brick/frame	Bungalow	c. 1920	single				2	1		
123	47-5-103		Michael Hillworth	1765	Goosetown	Rd	3.0	3	vinyl	vernacular	c. 1830	single				3	1		
124	47-5-109			1645	Goosetown	Rd	3.5	3	frame	vernacular	c. 1820	single				2	1		bankhouse
125a, -b, -c	47-5-112		Martin Farm	1500	West Chester	Rd	2.0	2	stone		c. 1800	ruin	Joseph Gladden House Ruin	yes	barn, silo ruins	1	1		I-24
126a, -b	47-5-117.1A			260	Misty Patch	Rd	2.5	3	stucco	vernacular	c. 1850	single				2	1		outbldg
127a, -b	47-5-118			285	Misty Patch	Rd	2.5	4	weatherboard	vernacular	c. 1870	single				2	1		shed
128a, -b, -c	47-5-12		Judy Johnston	2395	Strasburg	Rd	2.5	5	alum/stucco	Pa farmhouse	1796	single	Anthony Burton House		barn, privy	2	1		SRTH-15/NR?
129	47-5-125			100	Montgomery	Dr	2.5	4	frame	vernacular	c. 1880	single	Was barn to 47-5-12			2	1		Strasburg?
130a, -b, -c	47-5-13.2		Susan Thorington	2345	Strasburg	Rd	2.5	3	brick	Federal	1855	single	Robert Young House	yes	crghse, stable	1	1		SRTH-16
131	47-5-16			2370	Strasburg	Rd	2.5	5	stucco	Col Revival	c. 1930	single				2	1		
132	47-5-17			2360	Strasburg	Rd	2.0	3	stc/alum	Dtch Col Revive	c. 1925	single	Sears Roebuck?			2	1		
133	47-5-18			2350	Strasburg	Rd	1.5	3	aluminum	Cape Cod	c. 1930	single				2	1		
134a, -b, -c	47-5-23		Jack Alvarez	2335	Strasburg	Rd	2.5	5	stucco/stone	Pa farmhouse	1816	single	White Horse Tavern	yes	crghse, garage	1	1		SRTH-17
135a, -b	47-5-24		Chris Rechenberg	2325	Strasburg	Rd	2.0	2	stucco/frame	vernacular	c. 1820	single	White Horse Tavern outbldg		garage	1	1		SRTH-18
136a, -b, -c	47-5-25		Edward Daniels	2315	Strasburg	Rd	2.5	4	stone/alum	vernacular	c. 1820	store	Robert Young Store	yes	2 outbldgs	1	1		SRTH-19
137a, -b	47-5-27		Albert Holbrook	2305	Strasburg	Rd	2.5	3	stucco	vernacular	c. 1820	single			stable	2	1		NR?
138a, -b, -c, -d	47-5-28		James Cochran	2275	Strasburg	Rd	2.5	3	stone	vernacular	1796	single	Rev. Joshua Vaughan House	yes	barn ruin, garage? Sprghse?	1	1		SRTH-22
139	47-5-28.19			32	Beck	Rd	2.0	3	alum	Gearyesque	c. 1960	single				3	1		
140	47-5-29			2265	Strasburg	Rd			stone			marker	Strasburg Rd Mile Stone			1	1		Strasburg?
141	47-5-30			2255	Strasburg	Rd	1.0	4	brickface	Calif Ranch	c. 1955	single				3	1		
142a, -b	47-5-31			2245	Strasburg	Rd	1.5	3	aluminum	Bungalow	c. 1930	single			garage	2	1		
143		Same parcel as #144a - b	Hepzibah Baptist Church	2237	Strasburg	Rd	2.5	5	aluminum	Greek Revive	c.1870	single	Hepzibah Church Parish Hse			1	1		SRTH-23/NR?
144a -b	47-5-32-E		Hepzibah Baptist Church	2237	Strasburg	Rd	2.5	3	stone	Gothic Revival	1900	religious	Hepzibah Baptist Church		cemetery	1	1		SRTH-23/NR?
145		Same parcel as #144a - b	Hepzibah Baptist Church	2237	Strasburg	Rd	1.0	8	stone	Octagonal	c.1860	vacant	Hepzibah Church School			1	1		SRTH-23/NR?
146	47-5-43			40	Hepzibah Hill	Rd			stone	ruin		vacant				3	1		
147	47-5-44		Arnold Young	360	Hepzibah Hill	Rd	3.0	2	stucco	vernacular	c. 1830	single				2	1		NR?
148a, -b, -c	47-5-5.1		Durand O'Meara	915	Buck Run	Rd	2.5	4	stucco/stone	vernacular	c. 1830	single	tavern		barn, silo	2	1		
149a, -b, -c, -d	47-5-5.5		Garth Monaghan	945	Buck Run	Rd	2.5	3	stone/stucco	PA farmhouse	1820	single	tannery		barn, tile silo, horse shed	2	1		NR? PHOTOS
150	47-5-54			2225	Strasburg	Rd	2.5	4	aluminum	Pa farmhouse	c. 1820	single				2	1		
151	47-5-54.1			305	Hepzibah Hill	Rd	2.0	3	aluminum	vernacular		garage	crghse/stable to 47-5-54			2	1		
152	47-5-56			2213	Strasburg	Rd	2.0	2	stucco	vernacular	c. 1850	single				2	1		
153a, -b, -c	47-5-58		David Vaughan	2209	Strasburg	Rd	2.5	3?	stucco	4 Square	1929	single	Beulah School		outbldg, shed	2	1		SRTH-24/NR?
154	47-5-62		Darlene Markel	355	Hepzibah Hill	Rd	2.0	2	brick	Italianate	1895	row	Brandywine B&L Rowhouses	yes		1	1		I-15
155	47-5-63		John Matelyan	365	Hepzibah Hill	Rd	2.0	2	brick	Italianate	1895	row	Brandywine B&L Rowhouses	yes		1	1		I-15
156	47-5-64		John Matelyan	375	Hepzibah Hill	Rd	2.0	2	brick	Italianate	1895	row	Brandywine B&L Rowhouses	yes		1	1		I-15
157	47-5-65		Glenmil Alicea	385	Hepzibah Hill	Rd	2.0	2	brick	Italianate	1895	row	Brandywine B&L Rowhouses	yes		1	1		I-15
158	47-5-66		John Matelyan	405	Hepzibah Hill	Rd	2.0	2	brick	Italianate	1895	row	Brandywine B&L Rowhouses	yes		1	1		I-15
159	47-5-66.1			395	Hepzibah Hill	Rd	2.0	2	brick	Italianate	1895	row	Brandywine B&L Rowhouses	yes		1	1		I-15
160a, -b	47-5-67		Lawrence Hilton	425	Hepzibah Hill	Rd	2.5	2	stucco	4 Square	c. 1910	twin			garage	2	1		
161	47-5-67.1		Lawrence Hilton	435	Hepzibah Hill	Rd	2.5	2	stucco	4 Square	c. 1910	twin				2	1		
162	47-5-68		Donald Botkin	445	Hepzibah Hill	Rd	3.0	4	aluminum	Italianate	c. 1870	single				3	1		
163	47-5-69			455	Hepzibah Hill	Rd	2.0	2	aluminum	vernacular	c. 1900	single				3	1		
164a, -b, -c	47-5-70		Scott & Laurel Wybranski	101	Morning Star	Ln	2.5	3	stucco/stone	vernacular	1820	single			shop, new hse	2	1		2nd Empire 4 yrs old
165a, -b, -c, -d, -e	47-5-71		Dandear Farm	2177	Strasburg	Rd	2.5	3	stucco/stone	Gothic Revival	1820	single	John Mills Farm		barn, privy, wgnshd, sprnghse	2	1		was 2181 Strasburg Rd/SRTH-25/NR?
166	47-5-71.5			10	Mink Hollow	Rd	2.5	3	aluminum	Gothic Revival	c. 1860	single				2	1		
167	47-5-77			2167	Strasburg	Rd	2.5	2	alum/block	vernacular	c. 1900	garage				2	1		no hse
168	47-5-79		Alan Sinton	105	Mink Hollow	Rd	3.5	3	stucco	Greek Revival	c. 1840	single				2	1		
169a, -b	47-5-8		John Downing	2435	Strasburg	Rd	2.5	2	brick	4 Square	1915	single			garage	2	1		
170	47-5-80.1			205	Mink Hollow	Rd	2.5	3	stone/alum	vernacular	c. 1960	single				2	1		house
171	47-5-81		Lila Blatt	175	Mink Hollow	Rd			stone	ruin		single				3	1		
172	47-5-83			170	Mink Hollow	Rd	2.0	3	stucco	Col Revival	c. 1920	single				2	1		
173	47-5-84		Curt Stork	190	Mink Hollow	Rd	3.0	4	stucco/alum	vernacular	c. 1830	single				2	1		
174	47-5-84		Curt Stork	190	Mink Hollow	Rd	2.0	1	stucco/stone	vernacular	c. 1830	sprhse				2	1		
175a, -b	47-5-9		Kimberly Kiszely	2425	Strasburg	Rd	2.5	2	brick	4 Square	1915	single			garage	2	1		
176	47-5-94			1644	Goosetown	Rd	2.5	3	aluminum	vernacular	c. 1850	single				3	1		

HR#	Tax Parcel#	Location	Owners name	Hse#	Street Name	Type	Hgt	By	Material	Style	Date	Use	Historical significance	NR	Other	Class	Y	N	Comments
177	47-5-98			1700	Goosetown	Rd	2.5	2	aluminum	vernacular	c. 1840	single				2	1		
178	47-5A-1			317	Doe Run	Ave	1.5	3	stucco	vernacular	c. 1860	single	Schoolhouse			2	1		aka 215 Strode Ave/Newlin?
179	47-5A-10			9	Newlinville	Rd	2.0	2	brick	Late 19th C	1900	row				2	1		1 of row of 6/Newlin?
180	47-5A-11			11	Newlinville	Rd	2.0	2	brick	Late 19th C	1900	row				2	1		1 of row of 6/Newlin?
181	47-5A-12			13	Newlinville	Rd	2.0	2	permastone	Late 19th C	1900	row				2	1		1 of row of 6/Newlin?
182	47-5A-13			15	Newlinville	Rd	2.0	2	aluminum	Late 19th C	1900	single	was part of Newlinvl Rd Row			2	1		Newlin?
183	47-5A-17			23	Newlinville	Rd	2.0	2	brick	Late 19th C	1900	twin	was part of Newlinvl Rd Row			2	1		1 of row of 6/3 gone/Newlin?
184	47-5A-18			25	Newlinville	Rd	2.0	2	aluminum	Late 19th C	1900	twin	was part of Newlinvl Rd Row			2	1		1 of row of 6/3 gone/Newlin?
185	47-5A-19			27	Newlinville	Rd	1.5	3	asbestos shng	Bungalow	c. 1920	single				2	1		Newlin?
186	47-5A-2			325	Doe Run	Rd	2.0	2	alum	Dutch Col Rev	c. 1930	single				2	1		Newlin?
187	47-5A-25			5	Jane	St	1.5	3	asphalt brick	Bungalow	c. 1920	single				3	1		Newlin?
188	47-5A-26			3	Jane	St	2.5	3	synthetic	Late 19th C	1900	single				2	1		Newlin?
189	47-5A-28			115	Doe Run	Rd	2.5	2	brick	Gothic Revival	c. 1860	single				2	1		Newlin?
190	47-5A-3			335	Doe Run	Rd	2.0	3	alum	Col Revive	c. 1930	single				2	1		Newlin?
191	47-5A-31			34	Newlinville	Rd	2.5	3	brick	Gothic Revival	c. 1860	single				2	1		Newlin?
192	47-5A-32			36	Newlinville	Rd	2.5	3	aluminum	Gothic Revival	c. 1880	single				2	1		Newlin?
193	47-5A-33			38	Newlinville	Rd	1.5	2	aluminum	vernacular	c. 1900	single				3	1		Newlin?
194	47-5A-34			40	Newlinville	Rd	2.0	2	aluminum	Dtch Col Reviv	c. 1930	single				2	1		Newlin?
195	47-5A-35			35	Newlinville	Rd	2.0	3	stc/aluminum	vernacular	c. 1860	single				2	1		Newlin?
196	47-5A-37			8	Jane	St	1.5	2	aluminum	bungalow	c. 1910	single				2	1		Newlin?
197a, -b	47-5A-38			6	Jane	St	1.5	2	alum/wood	bungalow	c. 1910	single			outbldg	3	1		Newlin?
198	47-5A-4			345	Doe Run	Rd	1.5	2	stucco	Cape Cod	c. 1950	single				3	1		Newlin?
199	47-5A-40			4	Jane	St	1.5	3	asbestos shng	vernacular	c. 1860	single				2	1		Newlin?
200	47-5A-41			2	Jane	St	2.5	2	aluminum	Late 19th C	c. 1890	single				2	1		Newlin?
201	47-5A-5		Ann Ruczhak	355	Strode	Ave	2.5	3	brick	4 Square	c. 1910	single				2	1		Newlin?
202a, -b	47-5A-6			365	Doe Run	Rd	2.5	3	stucco	Late 19th C	c. 1880	single			stable	2	1		Newlin?
203	47-5A-8			3	Newlinville	Rd	2.0	2	brick	Late 19th C	1900	row				2	1		1 of row of 6/Newlin?
204	47-5A-9			5	Newlinville	Rd	2.0	2	brick	Late 19th C	1900	row				2	1		1 of row of 6/Newlin?
205	47-5A-10			7	Newlinville	Rd	2.0	2	stucco	Late 19th C	1900	row				2	1		1 of row of 6/Newlin?
206a, -b, -c, -d	47-6-10		Ted Moser Developer	2140	West Chester	Rd	2.5	3	brickface	Gothic Revival	c. 1870	single			corncrib, sprghse, brn ruin	2	1		
207a, -b		Same parcel as #206a - d	Martin House	720	South Caln	Rd	2.0	6	stone/frame	Colonial Reviv	c. 1930	single	R. Brognard Okie, architect		guest hse	1	1		
208a, -b	47-6-11		Michael Thompson	1505	South Bailey	Rd	3.5	3	stucco	vernacular	c. 1840	single			outbldg	2	1		
209a, -b	47-6-12.34A		Robert West	1435	South Bailey	Rd	2.0	3	brick/stucco	Late 19th C	1911	single			cottage	3	1		remuddled, c. 1950
210	47-6-14			470	Mortonville	Rd			stone			vacant	ruins			3	1		
211	47-6-16		Dennis Falon	105	Mortonville	Rd	2.5	3	aluminum	vernacular	1863	single				2	1		I-25/NR?
212	47-6-17			540	Misty Patch	Rd	2.0	3	stucco	Mod Ranch	c. 1955	single				3	1		
213a, -b, -c	47-6-19			465	Misty Patch	Rd	2.5	5	stucco/alum	vernacular	c. 1820	single			barn, root cellar	2	1		
214a, -b, -c, -d	47-6-20		Wm. Malaney	435	Misty Patch	Rd	2.5	3	weatherboard	vernacular	c. 1840	single			barn, sprnghse, shed	2	1		was 345 Misty Patch Rd
215	47-6-21.1			1820	Goosetown	Rd	2.5	2	aluminum	vernacular	c. 1820	single				2	1		
216a, -b	47-6-24		Dona Sensenig	1850	Goosetown	Rd	1.5	3	stucco	vernacular	c. 1836	single	Little Washington School		outbldg	2	1		
217a, -b, -c	47-6-25.1			945	South Caln	Rd	2.5	3	brick	Late 19th C	c. 1880	single			barn, garage	2	1		
218a, -b, -c, -d	47-6-34		Charles Gilgore	1215	South Caln	Rd	1.5	3	stucco	Cape Cod	c. 1940	single			barn, silo, corn crib	2	1		
219a, -b	47-6-35			910	South Caln	Rd	2.5	3	stucco	vernacular	c. 1840	single			garage	2	1		
220a, -b	47-6-4		Frank Miller	1825	Goosetown	Rd	2.5	3	stucco	vernacular	c. 1850	single			garage	2	1		
221a, -b	47-6-48			250	Oaklyn	Rd	1.5	3	stucco	vernacular	c. 1910	shop			sprghse	3	1		post 1956 house
222a, -b, -c	47-6-49			200	Oaklyn	Rd	2.5	5	aluminum	PA farmhouse	c. 1800	single	Oaklyn Hollow Farm		barn, pond	2	1		
223	47-6-50		Jonathan Nutt	1065	South Caln	Rd			stone			cemetery	Black Civ Wr Vets Cem			1	1		NR?
224a, -b, -c	47-6-51		Thomas Maris	1060	South Caln	Rd	2.5	3	aluminum	Neo-Col Revive	c. 2000	single			ruins, garage	3	1		New Hse/old Foundation
225	47-6-52			1080	South Caln	Rd	2.5	2	stone/alum	vernacular	c. 1820	single				2	1		
226	47-6-53			1100	South Caln	Rd	2.5	3	aluminum	vernacular	c. 1900	single				2	1		
227	47-6-6		Donald Taylor	1875	Goosetown	Rd			stone		1842	ruin				2	1		Washngtn Meth Chrch ruin/was 1855 Goosetown Rd/I-26/NR?
228	47-6-61.3			97	Saw Mill	Rd	1.0	1	stone	vernacular	c. 1820	sprghse				2	1		NR?
229	47-6-62		Sandra Stowell	85	Saw Mill	Rd	2.5	4	stc/stn/log	vernacular	1800	single	Joshua Pusey House	yes		1	1		I-22
230a, -b, -c, -d	47-6-65		T. S. Wilson	109	Strasburg	Rd	3.5	2	stone	vernacular	1800	single	Joseph Filson House		barn, sprghse, rootcllr	2	1		log wing oldest sect.?/was 2119 Strasburg Rd/SRTH-31/NR?
231	47-6-67			80	Mortonville	Rd	2.5	1	stucco	vernacular	c. 1800	single				2	1		NR?

HR#	Tax Parcel#	Location	Owners name	Hse#	Street Name	Type	Hgt	By	Material	Style	Date	Use	Historical significance	NR	Other	Class	Y	N	Comments
232a, -b, -c, -d, -e	47-6-9		Harkins Farm	1375	South Bailey	Rd	3.5	2	stucco	vernacular	c. 1800	single			barn, sprghse, privy, sheds	2	1		was 1365 South Bailey Rd
233		Same parcel as #235a - b	Balmer Management	140	Buck Run	Rd			stone		c. 1810	sprghse?	Benjamin Fredd Farm						Was 220 Buck Run Rd/BR-8/NR?
234a, -b		Same parcel as #235a - b	Balmer Management	140	Buck Run	Rd	2.5	4	stone	vernacular	1811	single	Benjamin Fredd Farm		barn				Was 220 Buck Run Rd/BR-9/NR?
235a, -b	47-7-102			150	Buck Run	Rd	2.5	5	stucco	PA farmhouse	c. 1820	single							Was 220 Buck Run Rd/NR?
236	47-7-102.1		Richard Quillman	206	Buck Run	Rd	1.5	3	aluminum	Bungalow	c. 1935	single	Benjamin Fredd Farm		garage				BR-10/NR?
237		Same parcel as #236	Richard Quillman	200	Buck Run	Rd	1.5	3	aluminum	Bungalow	c. 1935	single	Benjamin Fredd Farm						Was Tx P #47-7-103/BR-10/NR?
238	47-7-104		Balmer Management	128	Buck Run	Rd	2.0	6	stucco	Italianate	1890	twin							tw n hse under 1 ownr/BR-7/NR?
239	47-7-106			104	Buck Run	Rd	2.0	2	stucco	Italianate	1884	twin							
240	47-7-106.1		Peter Blauner	120	Buck Run	Rd	2.0	2	stucco	Italianate	1884	twin	David S. Young House						BR-4/NR?
241	47-7-107		Leon Wolfe	100	Buck Run	Rd	1.5	3	stucco	Cape Cod	c. 1950	single							BR-1/NR?
242a, -b	47-7-114		George Bentley	115	Buck Run	Rd			steel/iron		1868	vacant	RR bridge		dam				BR-15/NR?
243	47-7-116		Ercildoun Farm corp	135	Buck Run	Rd	2.5	3	stucco/stone	vernacular	c. 1798	vacant	Caleb Phipps House?						BR-13/NR?
244a, -b	47-7-119		Dana Horner	205	Buck Run	Rd	2.5	3	stone/frame	vernacular	1852	single	Sunnyside Seminary		barn				BR-11/NR?
245a, -b, -c, -d	47-7-121		Greg & Caroline Bentley	50	Spring Dell	Rd	2.5	4	stone	vernacular	1810	single	John Bailey Farm	yes	barn, carriage house, springhouse				I-10
246a, -b	47-7-122		Brenda Nixon	265	Buck Run	Rd	2.5	2	aluminum	4 Square	c. 1910	single			garage				
247	47-7-126		Anderson	335	Buck Run	Rd	2.0	6	stucco		1890								1 BR-2/NR? Where is it?
248a, -b	47-7-13		Robert Beck	26	Park	Ave	2.5	3	aluminum	Gothic Revival	c. 1850	single			barn				listed as 47-4-113
249	47-7-131		Ercildoun Farm Corp	415	Buck Run	Rd	2.5	2	aluminum	vernacular	c. 1880	single							
250a	47-7-132			425	Buck Run	Rd	2.5	2	stone	vernacular	c. 1800?	ruin							
250b		Same parcel as #250a		425	Buck Run	Rd	2.0	5	stone/log	PA farmhouse	1833		Levi Walton House						I-9/NR? Damaged or destroyed by fire Nov, 2007
251a, -b, -c, -d	47-7-133		Robert Primus	475	Buck Run	Rd	2.5	3	alum/stone	vernacular	c.1850	single			sprghs, outbldg, barn fndatn				bankhouse
252	47-7-135		Anna Nixon	485	Buck Run	Rd	2.0	2	log/stucco		1835	single	Eli Hampton House	yes					E-1
253	47-7-136		Joshua Thompson	645	Buck Run	Rd	2.5	3	aluminum	Late 19th C	c. 1880	single	Jos. S. Walton Tenant House	yes					E-10
254a, -b, -c	47-7-137-E		Fallowfield Meeting	800	Doe Run	Rd	1.5	4	stucco	vernacular	1801	religious	Fallowfield Friends Meeting	yes	grge, crgshds				E-24
255a, -b		Same parcel as #254a - c	Fallowfield Meeting	800	Doe Run	Rd					1801	cemetery	Fallowfield Meeting Cemetery	yes	stuc/stn wall				E-24
256	47-7-138-E		Fallowfield Hist. Soc.	810	Doe Run	Rd	1.0	2	stucco	vernacular	1845	social	People's Hall	yes					E-25
257	47-7-140		Alvin Horning	814	Doe Run	Rd	2.5	9	stucco	Greek Revival	c. 1855	row	Joshua & George Lee Houses	yes					row w/1 owner; was a twin/E-26 & E-27
258	47-7-141		John Russell	840	Doe Run	Rd	2.5	2	stucco	vernacular	1830	single	John Butler House	yes					E-28
259	47-7-143		Daniel Washington	880	Doe Run	Rd	2.0	3	stucco	vernacular	1880		Jacob Carter House	yes					E-31
260a, -b, -c, -d	47-7-147		Jacelyn Colyer	942	Buck Run	Rd	2.5	7	stone	vernacular	1803	single	Thomas Welch House	yes	barn, wagn shed, sprghse				was 605 Buck Run Rd/E-9
261	47-7-147.1			940	Doe Run	Rd	2.5	2	weatherboard	DtchCol Reviv	c. 1925	twin	Labiack's Tavern						
262	47-7-149.1		Sean Coldren	1110	Doe Run	Rd	2.5	5	stone	Pa Farmhouse	1825	single	Martha Pennock House	yes					I-14
263a, -b, -c	47-7-149.1A			1100	Doe Run	Rd	3.0	4	stucco/stone	Federal	c. 1830	single			shed, barn ruin				
264a, -b, -c, -d, -e, -f	47-7-15		Dan/Erma Colyer	29	Park	Ave	3.5	4	stucco	vernacular	c. 1810	vacant			barn, wagonhouse, chicken house, small shed, springhouse				
265	47-7-157			1035	Doe Run	Rd	1.0	3	stucco	ranch	c. 1940	single							
266	47-7-158			1045	Doe Run	Rd	2.5	2	aluminum	4 Square	c. 1900	single							
267	47-7-161		Clarence Smith	26	Rokeby	Rd	2.5	2	aluminum	vernacular	c. 1810	single							
268	47-7-166			38	Rokeby	Rd	2.0	3	aluminum	Late 19th C	c. 1890	single							was a twin?
269	47-7-17.2			11	Park	Ave	1.0	3	weatherboard	cottage	c. 1920	single	Chapel	yes					GR-8
270	47-7-17.3		Ralph Showalter	7	Park	Ave	2.5	5	stucco/stone	vernacular	1825	single	George Passmore Cider Mill	yes					GR-7
271a, -b	47-7-19.1			209	Glenrose	Rd	3.5	3	stucco	Neo-Victorian	c. 1950	single			garage				Or remodel'd GthcRvive
272a, -b	47-7-20		William Lamond?	8	Edward	Dr	2.5	5	stucco	PA farmhouse	c. 1820	single			cemetery				
273	47-7-208		William Lamond	7	Edward	Dr	3.0	4	wood shingle	vernacular	c. 1920	single	Barn for 47-7-20						
274	47-7-22		Renate DiMarco	600	Buck Run	Rd	1.0	3	alum	ranch	1950	single		yes					E-5 [N/C]
275	47-7-22.1		St Joseph's House	630	Buck Run	Rd	1.5	3	stucco	ranch	1950	single		yes					E-8 [N/C]
276	47-7-22.2		St Joseph's House	620	Buck Run	Rd	1.5	3	stucco	ranch	1950	single		yes					E-7 [N/C]
277	47-7-22.3		James Cocca	610	Buck Run	Rd	1.0	3	alum	ranch	1950	single		yes					E-6 [N/C]; large post-1960 addition to front
278a, -b, -c	47-7-23		St Joseph's House	640	Buck Run	Rd	2.5	7	stucco	vernacular	1851	school	Ercildoun Academy	yes	2 outbldgs				E-11
279a, -b	47-7-24		V. Russell Young	660	Buck Run	Rd	2.0	3	aluminum	Mid 19th C	1855	single	Caleb Pierce House	yes	garage				E-12
280	47-7-25		Keith Newitt	670	Buck Run	Rd	2.5	5	aluminum	vernacular	1854	row	Lee, Pierce, Thompson Foundary	yes					E-13

HR#	Tax Parcel#	Location	Owners name	Hse#	Street Name	Type	Hgt	By	Material	Style	Date	Use	Historical significance	NR	Other	Class	Y	N	Comments
281	47-7-26		Kevin Busza	680	Buck Run	Rd	2.5	3	aluminum	vernacular	1854	row	Lee, Pierce, Thompson Foundary	yes		1	1	E-14	
282	47-7-27		Patricia Scott	690	Buck Run	Rd	2.5	3	stucco	vernacular	1835	single	James Fulton Tenant House	yes		1	1	E-15	
283a, -b	47-7-29		George Gossert	30	Loop	Rd	2.5	3	stucco	vernacular	1840	single	James Fulton Tenant House	yes	crghse	1	1	E-18	
284	47-7-32			360	Wilmington	Rd	1.5	3	aluminum	Prairie	c. 1920	single				3	1		
285	47-7-34			310	Wilmington	Rd	2.0	2	stucco	Col Revive	c. 1940	single				2	1		
286	47-7-35			300	Wilmington	Rd	2.0	2	stucco	Col Revive	c. 1940	single				2	1		
287	47-7-36			290	Wilmington	Rd	2.0	2	aluminum	Col Revive	c. 1940	single				2	1		
288	47-7-37			280	Wilmington	Rd	2.0	2	aluminum	Col Revive	c. 1940	single				2	1		
289	47-7-38.2		David McClimans	40	Loop	Rd	2.5	7	stucco	vernacular	c. 1806	single	James Fulton House	yes		1	1	E-16; aka Thomas Heslip House?	
290a, -b	47-7-41			236	Wilmington	Rd	2.0	2	aluminum	Col Revive	c. 1930	single			garage	3	1		
291a, -b	47-7-46		Bruce Wrigley	215	Wilmington	Rd	2.5	5	brick	Gothic Revival	c. 1860	single			new crghse	2	1		
292	47-7-47		Church of Christ	700	Doe Run	Rd					1894	religious	cemetery	yes		1	1	E-19-B	
293	47-7-48-E		Christ Disciple Church	750	Doe Run	Rd	2.0	4	aluminum	vernacular	1894	religious	Christ Disciple Church	yes		1	1	E-19-A	
294	47-7-51			727	Doe Run	Rd	1.5	3	brickface	CpCd/Tdr Rev	c. 1930	single				3	1		
295	47-7-51.1			725	Doe Run	Rd	1.5	2	stucco	Cape Cod	c. 1950	single				3	1		
296	47-7-52		Walter Pluck	735	Doe Run	Rd			stucco	Cape Cod	c. 1930	single				3	1		
297a, -b, -c	47-7-53.4-E		House of His Creation	720	Buck Run	Rd	2.5	5	vinyl	Italianate	1865	religious	James Cooper House	yes	barn, garage	1	1	E-20	
298	47-7-55.2		John Callahan	715	Buck Run	Rd	2.5	4	stucco	vernacular	1798	single	George Welsh House	yes		1	1	E-21	
299	47-7-56		James Petro	805	Doe Run	Rd	2.5	7	stucco/alum	vernacular	1818	store	Gideon Pierce House & Store	yes		1	1	was 803 Doe Run Rd/E-23	
300	47-7-56.1		Ann O'Donnell	705	Buck Run	Rd	?	?	??	ranch	1956	single		yes		1	1	E-22 [N/C] NEED PHOTO!!!	
301a, -b	47-7-57		Edward Tracey	849	Doe Run	Rd	2.5	3	aluminum	Greek Revival	1855	single	Gideon Pierce House	yes	barn	1	1	E-29	
302a, -b, -c, -d	47-7-58		Thomas Quinn	855	Doe Run	Rd	2.5	4	stone	vernacular	1793	single	John Wentz House	yes	barn, sprhse, wgnshd	1	1	La Mancha/I-12	
303a, -b, -c, -d, -e, -f	47-7-6.3D			447	Mt. Carmel	Rd	2.5	5	aluminum	Pa farmhouse	c. 1810	single			tenant hse, ruin w/2 silos, barn, corncrib, garage	2	1	NR?	
304	47-7-6.9		Pam Bastings	2	Park Ave	Ave			stone			retain wall	wall associated w/dam?			2		Glen Rose?	
305a, -b, -c	47-7-62		Floyd Thompson	19	Rokeby	Rd	2.5	2	weatherboard	vernacular	c. 1830	single	Ida Jones House		privy, sprnghs	2	1	NR?	
306	47-7-66			39	Rokeby	Rd	1.5	3	stucco	Cape Cod	c. 1950	single				3	1		
307	47-7-67		Joseph Stonelake	300	Glenrose	Rd	2.5	3	aluminum	vernacular	1840	single	James Newlin tenant house	yes		1	1	GR-1	
308	47-7-67.1		George Anthony	306	Glenrose	Rd	2.0	4	stucco	vernacular	1883	single	Joseph Brinton	yes		1	1	GR-2	
309a, -b, -c	47-7-67.2		Arthur Johnson	310	Glenrose	Rd	2.5	4	stucco/stone	vernacular	1810	single	George Passmore House	yes	barn, corncrib	1	1	GR-3	
310	47-7-73.1		Edmund Thayer	222	Glenrose	Rd	2.5	4	stucco/stone	vernacular	1830	single	Mansel Passmore House	yes		1	1	I-8	
311	47-7-74			220	Glenrose	Rd	2.5	3	brick	Tudor Revival	c. 1920	single				2	1		
312	47-7-75			212	Glenrose	Rd	2.5	2	asphalt brick	early 20th C	c. 1900	vacant				3	1		
313	47-7-6.9		Pam Bastings	2	Park Ave	Ave			stone			ruin	Thomas Truman Grist Mill Dam			2	1	Glen Rose?	
314	47-7-81		David Hindman	40	Glenrose	Rd	2.5	5	stucco	vernacular	1841	single	Joseph Walton House	yes		1	1	E-4	
315a, -b	47-7-82		Martha Pennington	520	Buck Run	Rd	1.5	4	brick/shingle	vernacular	1899	single	Ercildoun School	yes	outbldg	1	1	E-3	
316a, -b	47-7-83		Joseph Kovalovich	510	Buck Run	Rd	2.5	3	aluminum	Gothic Revival	1852	single	Rachel Walton House	yes	barn	1	1	E-2	
317	47-7-84.1		Arthur Polk	470	Buck Run	Rd	2.5	6	aluminum	Greek Revival	c. 1840	single				2	1		
318	47-7-9		Kristen Voigtsberger	16	Park Ave	Ave	3.5	3	log/stone	vernacular	1805	single	George Passmore Cobbler Shop	yes		1	1	GR-6	
319		Same parcel as #318	Kristen Voigtsberger	16	Park Ave	Ave	1.0	1	log	vernacular	1805	single	Smoke house			1	1	Glen Rose?	
320	47-7-9.1		Jill Beech	6	Park Ave	Ave	2.5	3	alum/stucco	vernacular	1775	single	Thomas Truman Grist Mill	yes		1	1	GR-4	
321a, -b, -c	47-7-9.2		Jill Beech	8	Park Ave	Ave	2.5	5	stucco/stone	PA farmhouse	1836	single	James Newlin House	yes	crghse, sprnghse	1	1	GR-5	
322a, -b, -c	47-7-96		Balmer Management	710	Buck Run	Rd	2.5	5	stone/alum	Pa farmhouse	c. 1840	single			sprnghs & barn ruins	2	1		
323	47-7-98		Balmer Management		Buck Run	Rd			stone/earth		1868		Embankment			2	1	BR-3/NR?	
324	47-8-10.2		Richard & Char-Ann Ireland	110	Frog Hollow	Rd			stone			wall	retaining wall along Strasburg Rd.			2	1		
325	47-8-11-E		Coatesville Area SD	2254	Strasburg	Rd	1.5	24	stone	Col Revival	c. 1935	school	E. Fallowfield Elem Sch/WPA			2	1	NR?	
326a, -b	47-8-12			20	Frog Hollow	Rd	1.5	3	alum	vernacular	c. 1950	single			garage	3	1		
327	47-8-13			14	Frog Hollow	Rd	1.0	2	alum	vernacular	c. 1950	single				3	1		
328	47-8-14		Albert Sardella	135	Frog Hollow	Rd	2.5	4	stucco	vernacular	1857	single				2	1	deed search done	
329a, -b	47-8-15.1			3600	Doe Run Church	Rd	2.5	4	stone/stucco	vernacular	c. 1800	single	maybe associated w/Powell Family		crghse	2	1		
330a, -b	47-8-15.3		Daniel Snyder	175	Frog Hollow	Rd	2.5	5	stucco/stone	PA farmhouse	1796	single	John Powell House	yes	new barn	1	1	was Hephzibah Hill Rd/1-16	
331a, -b, -c, -d	47-8-15.4		Arthur DeLeo	3480	Doe Run Church	Rd	2.5	5	stone	vernacular	1794	single	I. Powell Farm	yes	sprghse, shed, chckn hse	1	1	was Dupont Rd/1-17	
332	47-8-15.4A			165	Frog Hollow	Rd	2.5	3	aluminum	vernacular	c. 1850	single				2	1		

HR#	Tax Parcel#	Location	Owners name	Hse#	Street Name	Type	Hgt	By	Material	Style	Date	Use	Historical significance	NR	Other	Class	Y	N	Comments
333	47-8-17			3440	Doe Run Church	Rd	2.5	3	stucco	vernacular	c. 1830	single				2	1		
334a, -b, -c, -d, -e	47-8-18		Anne Thornington	3350	Doe Run Church	Rd	2.5	4	stone	vernacular	1820	single	John Jordan Jr. House		barn, hrsbrn, ofc, sprnghse	2	1		
335a, -b	47-8-19.33		Clarence Rhoades	2176	Strasburg	Rd	2.0	3	stucco/stone	Bungalow	c. 1920	single			barn	2	1		
336		Same parcel as #337	Doe Run Pres. Church	3104	Doe Run Church	Rd	2.5	3	aluminum	Gothic Revival	c. 1850	single	Doe Run Prsby Parsonage			2	1		was 3100 Doe Run Church Rd/Strasburg?
337	47-8-20-E		Doe Run Pres. Church	3104	Doe Run Church	Rd	1.5	3	stone	vernacular	1821	religious	Doe Run Presbyterian Church			2	1		SRTH-26/NR?
338a, -b, -c, -d	47-8-21		Real Estate Finders LLC	2133	Strasburg	Rd	2.5	3	stc/aluminum	Greek Revival	1840	single	James Wilson House		barn, garage, sprnghse	2	1		was 2135 Strasburg Rd/SRTH-29/NR?
339a, -b	47-8-21.1		Warren Steinacker	2145	Strasburg	Rd	2.5	2	stucco/alum	vernacular	1840	single	James Wilson Tenant House		garage	2	1		SRTH-27/NR?
340a, -b	47-8-22			3470	Doe Run Church	Rd	2.5	6	stc/alum	vernacular	c. 1850	single			sprghse	2	1		"Murder House"/Gothic Revivalized
341a, -b	47-8-23.3		Elkins/BR Land&CattleCo	3575	Doe Run Church	Rd	2.5	5	frame/stone	vernacular	c. 1980	single	associated with 47-8-15.1		barn, sheds	2	1		New garage/residence w/old stone
342	47-8-23.4			3580	Doe Run Church	Rd	2.5	3	stucco	vernacular	c. 1800	single				2	1		
343	47-8-23.7			775	Doe Run Church	Rd			stone			ruin				2	1		
344a, -b, -c	47-8-29		Debra Rush	400	Fairview	Rd	2.5	5	stone	PA farmhouse	1819	single	John Hanna Farm	yes	barn, sheds	1	1		I-21
345	47-8-29.1		Debra Rush	600	Fairview	Rd	1.5	2	stucco	vernacular	1840	single	Fairview Schoolhouse			2	1		was 400 Fairview Rd
346a, -b	47-8-30		Anthony Jenks	3355	Doe Run Church	Rd	2.5	4	stucco	vernacular	c. 1820	single			barn	2	1		
347a, -b, -c, -d, -e, -f	47-8-31.3		Charles Coyne	3111	Doe Run Church	Rd	2.5	4	stucco	vernacular	1750	single	John Filson House		sprghse, barn, silo, wagonshed, chickenhse	2	1		SRTH-28/NR?
348a, -b, -c	47-8-32		Harry Rowe	2132	Strasburg	Rd	2.5	3	aluminum	Gothic Revival	c. 1860	single			barn, shed	2	1		Mortonville?
349	47-8-33.1		Bissinger	230	Fairview	Rd	3.0	3	stucco	vernacular	1800	single	Thomas Worth House		attached mill	2	1		I-19/NR?
350	47-8-34		Roger Mustalish	255	Fairview	Rd	1.5	2	stone	vernacular	1845	single	Robert Steen House	yes		1	1		was 2255 Fairview Rd/I-20
351	47-8-35		Edward Fitts	355	Fairview	Rd			stone			ruin	Pyle Farm Barn Ruins			2	1		
352	47-8-36.1		Thomas Rehill	1115	Doe Run	Rd	3.5	2	stone	vernacular	1798		Isaac Pennock House			2	1		I-28/NR?
353a, -b	47-8-4		Chemby LLC	59	Rokeby	Rd	2.5	3	aluminum	vernacular	c. 1890	single			crghse	2	1		
354	47-8-6		David Jones	2340	Strasburg	Rd	2.5	4	aluminum	Gothic Revival	1840	single	Ephraim Lilly House			2	1		SRTH-21/NR?
355a, -b, -c	47-8-8		Jeffrey Seder	1055	Doe Run	Rd	2.5	4	stucco/stone	vernacular	1820	single	Daniel Lukens House		sprghse, barn	2	1		I-13/NR?
356	47-9-1		Russell Schaible	2131	Strasburg	Rd	2.5	6	log/stucco	vernacular	1810	single	Henry Marsh House			2	1		SRTH-30/NR?
357a, -b	47-9-13		Brandywine Outfitters	2100	Strasburg	Rd	2.0	5	stone	vernacular	1767	vacant	Thomas Hayes Mill Ruin		ftbrdge	2	1		SRTH-34/NR?
358	47-9-14		George Shaver	110	Fairview	Rd	2.5	2	brick	Queen Anne	1920	single	Hugh Moore House			2	1		SRTH-32/NR?
359	47-9-17		Edward Fitts	118	Brandywine Creek	Rd	2.5	3	aluminum	4Square	c. 1920	single	Elvin House			2	1		
360	47-9-2.1			2125	Strasburg	Rd	2.0	3	stucco	International	c. 1920	commercial				2	1		Mortonville?
361	47-9-3		James Rodgers	2121	Strasburg	Rd	1.5	4	asbestos	vernacular	c. 1900	single				2	1		Mortonville?
362a, -b	47-9-4		Theodore Wilson	2117	Strasburg	Rd	2.5	4	aluminum	mid 19th C	c. 1870	twin			garage	2	1		twin hse w/1 owner/was 2119 Strasburg Rd/Mortonville?
363	47-9-5		James McBride	2115	Strasburg	Rd	2.5	2	vinyl	mid 19th C	c. 1860	single				2	1		Mortonville?
364	47-9-8			505	Mortonville	Rd	2.0	4	stucco	vernacular	c. 1800	commercial				2	1		Mortonville?
365	47-9-9		John Harper	2097	Strasburg	Rd	3.0	4	stucco	vernacular	1849	residential	Thomas Worth Hse/Mortonville Htl	yes		1	1		Apts/SRTH-35
366					Doe Run Church	Rd			stone	arched		bridge	Doe Run Church Rd Bridge			2	1		No Tax # on Map
367					Frog Hollow	Rd			wood	covered		bridge	Speakman Bridge #1	yes		1	1		No Tax # on Map
368					Mortonville	Rd			stone	arched		bridge	Mortonville Road Bridge at Goosetown			2	1		No Tax # on Map
369			PennDot		Strasburg	Rd		4	stone	arched	1826	bridge	Mortonville Bridge	yes		1	1		No Tax # on Map/SRTH 33
370			PennDot		Strasburg	Rd		1	stone	arched	c.1800	bridge	Mortonville Mill Race Bridge	yes		1	1		No Tax # on Map
371					The Laurels				wood	covered		bridge	Mary Ann Pyle Bridge	yes		1			No Tax # on Map/AKA
372					Timicula	Rd			steel/iron	RR Bridge		bridge				2	1		Speakman Bridge #2
373			Efallowfield&Newlin		Strasburg	Rd			stone			boundary marker	Marker between Nelwin & E. Fallowfield Townships			2			In Township?

APPENDIX G

SENT VIA ELECTRONIC MAIL ONLY

November 19, 2020

Mr. Dave Porter, P.E.
Herbert MacCombie, Jr., P.E.
Consulting Engineers & Surveyors, Inc.
P.O. Box 118
Broomall, PA 19008

Re: Act 537, Sewage Facilities Planning
East Fallowfield Township Park Restroom Facility
DEP Code No. 1-15918-259-X
East Fallowfield Township, Chester County

Dear Mr. Porter:

This letter is in reference to your application for Sewage Facilities Planning Modules for the construction of a prefabricated restroom facility. The project is located at 900 and 908 Buck Run Road in East Fallowfield Township, Chester County.

The project will be connected to the Pennsylvania American Water Company collection system and will generate 225 gallons of sewage per day to be treated at the Pennsylvania American Water Company – Coatesville Wastewater Treatment Facility.

This project does not meet the definition of a subdivision under the Pennsylvania Sewage Facilities Act. Therefore, no planning modules are required to be submitted to the Department of Environmental Protection (DEP).

If you have any questions or concerns, please contact me at 484.250.5182.

Sincerely,



Kelly A. Sweeney
Sewage Planning Specialist 2
Clean Water

cc: Chester County Planning Commission (via email)
Chester County Health Department (via email)
Chester County Conservation District (via email)
East Fallowfield Township (via email)
Mr. DeBalko (via email)
Mr. Kelly (via email)
Planning Section
Re 30



Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

NOV 17 2000

Southeast Regional Office

610-832-6130
Fax 610-832-6133

Martha Frid, Secretary
East Fallowfield Township
2264 Strasburg Road
East Fallowfield, PA 19320

Re: Planning Module for Land Development
Robins Cove Subdivision *4 MISTY PATCH*
Code No. 1-15918-159-3H
APS Id. 330938, Site Id. 538479
East Fallowfield Township, Chester County

Dear Ms. Frid:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the East Fallowfield Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, East Fallowfield Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 53 single-family dwellings on 64.4 acres. This project is located on the southwest corner of Misty Patch and Goosetown Roads, in East Fallowfield Township, Chester County.

This project will be connected to the City of Coatesville Authority collection system and will generate 13,900 gallons of sewage per day to be treated at the City of Coatesville Authority Wastewater Treatment Facility.

Planning approval is also granted through this revision for two municipally owned sewage pumping stations. Pump station no. 1 will be located adjacent to lots 49 & 50 and will have average design flows of 14,437.5 gallons per day. This pump station will convey sewage flows from lots 5 through 22, lots 25 to 53, and 9 existing houses along Misty Patch Road to a sanitary manhole to be located at the intersection of Devonshire Drive and Ridgeway Lane. Pump Station No. 2 will be located near the intersection of Devonshire Drive and Goosetown Road and will have average design flows of 16,275 gallons per day. This pump station will convey sewage flows from pump station no. 1, lots 1 through 4 and lots 23 and 24 to the City of Coatesville via a 4 inch diameter force main to be installed along West Chester Road, parallel to the Brinton Station Subdivision's force main.

The City of Coatesville Authority must secure a Department permit for the construction and operation of the proposed sewage pumping station. The Authority should review the enclosed Sewage Pumping Station Guidance before submitting its Part II Permit Application. The Department



Martha Frid, Secretary

-2-

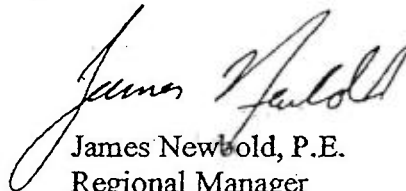
NOV 17 2000

recommends certain minimum peaking factors for pumping stations based on their proposed design flows. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

The Department has determined that there are mapped wetlands within your proposed development. You are hereby notified that an encroachment permit under Title 25, Chapter 105, of the Rules and Regulations of the Department must be obtained from the Department prior to any construction which will encroach on wetlands.

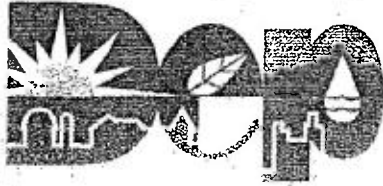
If you have any questions, please feel free to contact Elizabeth Mahoney of our office at 610-832-6079.

Sincerely,



James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Weiss Properties, Inc.
Mr. Duerr
City of Coatesville Authority
Ms. Mahoney
Ms. Moore
Ms. Grant
Planning Section
Re:30



Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

Southeast Regional Office

JAN 25 2005

Phone: 484-250-5970
Fax: 484-250-5971

Ms. Denise Miller, Secretary
East Fallowfield Township
2264 Strasburg Road
Coatesville, PA 19320

Re: Planning Module for Land Development
Harkins Property Subdivision
Code No. 1-15918-194-3J
APS Id. 512445, Site Id. 553983
East Fallowfield Township
Chester County

Dear Ms. Miller:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the East Fallowfield Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, East Fallowfield Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a 21 lot residential subdivision. This project is located on the northeast corner of South Cain Road and Goosetown Road, in East Fallowfield Township, Chester County.

This project will be connected to the East Fallowfield Township collection system and will generate 5,513 gallons of sewage per day to be treated at the Pennsylvania American Water Company Wastewater Treatment Facility.

Capacity for this project is provided consistent with the Pennsylvania American Water Company's Chapter 94 Wasteload Management Plan. Specifically, this project is allocated 3 connections prior to the expansion of the East End Trunk Line. Pennsylvania American Water Company is responsible to notify each municipality when the expansion has been completed. Once the expansion of the East End Trunk Line is completed, the allocations for this project under the current CMP are 2005-3 connections, 2006-8 connections, 2007-8 connections, and 2008-2 connections. East Fallowfield Township must assure that building and occupancy permits are issued consistent with Pennsylvania American Water Company's Connection Management Plan.

Planning approval is also granted through this revision for a sewage pumping station and a force main, which will convey sewage flows from 21 dwellings in the Harkins Property Subdivision (5,513 gpd) and 72 dwellings in the Ridgecrest Subdivision (18,900 gpd) to the existing gravity sewer line in Goosetown Road that is tributary to the Robins Cove Regional Pump Station. The proposed

JAN 25 2005

pumping station will be located along South Caln Road and will have average design flows of 24,413 gallons per day. East Fallowfield Township or the Pennsylvania American Water Company must secure a Department permit for the construction and operation of the proposed sewage pumping station.

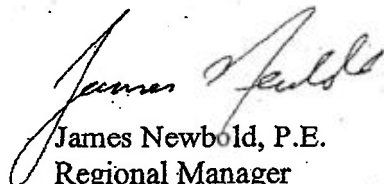
Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 4.1 for pumping stations with this proposed design flow. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

This revision also provides for the expansion of the Robins Cove Pump Station No. 2 from an annual average flow of 139,401 gallons per day to 163,814 gallons per day. East Fallowfield Township or the Pennsylvania American Water Company must secure an amendment to their existing Department permits for the expansion of the Robins Cove Pump Station and the related force main.

The Department has determined that there will be encroachments on mapped wetland areas from non-sewage related construction activities in the proposed development area. You are hereby notified that an encroachment permit under Chapter 105 must be obtained from the Department prior to any construction that will encroach on wetlands.

If you have any questions, please feel free to contact Donna Ulan Smith of our office at 484-250-5179.

Sincerely,


James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Mr. Dennis Satnick, Sequoia Partners
American Water Services, Inc.
Pennsylvania American Water Company
Donna Ulan Smith
Ms. Moore
Planning Section
Re 30



Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401
March 10, 2004

Southeast Regional Office

484-250-5970
Fax 484-250-5971

Ms. Martha Frid, Secretary
East Fallowfield Township
2264 Strasburg Road
Coatesville, PA 19320

Re: Planning Module for Land Development
Thompson Homes Subdivision - North
Code No. 1-15918-207-3I
APS Id. 498237, Site Id. 622837
East Fallowfield Township
Chester County

Dear Ms. Frid,

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the East Fallowfield Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, East Fallowfield Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a 27 lot residential subdivision on 41.62 acres. This project is located north of West Caln Road, between South Caln Road and Jonathan Street, in East Fallowfield Township, Chester County.

This project will be connected to the East Fallowfield Township/Pennsylvania American Water Company collection system and will generate 7,100 gallons of sewage per day to be treated at the Pennsylvania American Water Company's Coatesville Wastewater Treatment Facility.

This revision also provides for the construction of a pump station and force main which will tie into the collection system of the Thompson Home Subdivision-South project, for the upgrade and expansion of a portion of the East End Trunk Line in the City of Coatesville between Manhole Nos. 16 and 18, and for the expansion of the Robins Cove Pump Station No. 2 from an average annual flow of 37,000 gallons per day to 44,100 gallons per day.

East Fallowfield Township must secure a Department permit for the construction and operation of the Thompson Homes-North Pump Station. In order to provide for the expanded flows, East Fallowfield Township must also secure amendments to their existing Department permits for the Thompson Home-South collection system and the Robins Cove Pump Station No. 2 and the related force main.

Martha Frid, Secretary

-2-

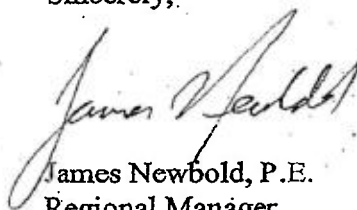
MAR 10 2004

The Pennsylvania American Water Company secure a Department permit or permit amendment for the construction and operation of the upgraded and expanded East End Trunk Line.

Capacity for this project is provided consistent with the Pennsylvania American Water Company Chapter 94 Wasteload Management Plan.

If you have any questions, please feel free to contact John M. Veneziale of our office at 484-250-5175.

Sincerely,



James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
John Thompson
Thompson Homes, Inc.
American Water Services, Inc.
Pennsylvania American Water Company
John M. Veneziale
Ms. Moore
Planning Section
Re 30



Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401

SEP 09 2004

Phone: 484-250-5970

Fax: 484-250-5971

Southeast Regional Office

Ms. Martha Frid, Secretary
East Fallowfield Township
2264 Strasburg Road
Coatesville, PA 19320

Re: Planning Module for Land Development
Providence Hill Subdivision ~~of~~ *CARDINAL DR AREA*
Code No. 1-15918-211-31J
APS Id. 512457, Site Id. 631504
East Fallowfield Township, Chester County

Dear Ms. Frid:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the East Fallowfield Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, East Fallowfield Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of 218 residential lots on 108 acres. The subdivision consists of 136 single family dwellings, 81 townhouses, and an existing dwelling. This project is located on West Chester Road, in East Fallowfield Township, Chester County.

This project will be connected to the East Fallowfield Township collection system and will generate 50,138 gallons of sewage per day to be treated at the Pennsylvania American Water Company Coatesville Wastewater Treatment Facility.

Capacity for this project is provided consistent with the Pennsylvania American Water Company's Chapter 94 Wasteload Management Plan. Specifically, this project is allocated 20 connections until the East End Trunk Line expansion is completed. Pennsylvania American Water Company is responsible to notify each municipality when the expansion has been completed. Once the expansion of the East End Trunk Line is completed, the allocations for this project under the current CMP are 2004 to 2005-20 connections, 2006-30 connections, 2007-50 connections, and 2008-50 connections. East Fallowfield Township must assure that building and occupancy permits are issued consistent with Pennsylvania American Water Company's Connection Management Plan.

Planning approval is also granted through this revision for a sewage pumping station and a force main, which will convey sewage flows from 158 dwellings (77 single family dwelling units and 81 townhouses for a total of 34,388 gpd) in the development to a proposed gravity sewer line in the subdivision that will follow along Misty Patch Road to the Robins Cove Regional Pump Station. In addition, the East Fallowfield Township is requesting capacity in the proposed new pump station for

SEP 09 2004

Ms. Martha Frid, Secretary

-2-

65 existing houses (17,063 gpd) located on West Chester Road and Cardinal Drive. The proposed pumping station will be located along West Chester Road and will have average design flows of 51,450 gallons per day. East Fallowfield Township or the Pennsylvania American Water Company must secure a Department permit for the construction and operation of the proposed sewage pumping station.

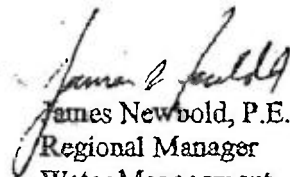
Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 4.0 for pumping stations with this proposed design flow. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

This revision also provides for the expansion of the Robins Cove Pump Station No. 2 from an annual average flow of 72,200 gallons per day to 139,401 gallons per day, which provided for the capacity for all 218 units from the Providence Hill Subdivision and the 65 units of the West Chester Road and Cardinal Drive Area. East Fallowfield Township or the Pennsylvania American Water Company must secure an amendment to their existing Department permits for the Robins Cove Pump Station and the related force main.

The Department has determined that there will be encroachments on mapped wetland areas from non-sewage related construction activities in the proposed development area. You are hereby notified that an encroachment permit under Chapter 105 must be obtained from the Department prior to any construction that will encroach on wetlands.

If you have any questions, please feel free to contact Donna Ulan Smith of our office at 484-250-5179.

Sincerely,


James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Mr. Jonathan Penders - Rouse Chamberlin LTD
E. B. Walsh & Associates, Inc.
Pennsylvania American Water Company
Ms. Ulan Smith
Ms. Moore
Planning Section
Re 30



Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

MAY 04 2004

Southeast Regional Office

484-250-5970
Fax 484-250-5971

Ms. Martha Frid, Secretary
East Fallowfield Township
2264 Strasburg Road
Coatesville, PA 19320

Re: Planning Module for Land Development
Mendenhall Subdivision
Code No. 1-15918-208-3I
APS Id. 501154, Site Id. 625840
East Fallowfield Township
Chester County

Dear Ms. Frid:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the East Fallowfield Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, East Fallowfield Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a 74 lot residential subdivision on 104.48 acres. This project is located on the southeast corner of Oaklyn and Cain Mortonville Roads, in East Fallowfield Township, Chester County.

This project will be connected to the Pennsylvania American Water Company collection system and will generate 19,425 gallons of sewage per day to be treated at the Pennsylvania American Water Company City of Coatesville Wastewater Treatment Facility.

Planning approval is also granted through this revision for a sewage pumping station and force main, which will convey sewage flows from the proposed Mendenhall Subdivision to Manhole G1 in Goosetown Road. The pumping station will be located east of South Cain Road and south of Abdala Lane and will have average design flows of 19,425 gallons per day. Pennsylvania American Water Company must secure a Department permit for the construction and operation of the proposed sewage pumping station.

Please review the enclosed Sewage Pumping Station Guidance before submitting your Part II Permit Application. The Department recommends a minimum peaking factor of 4.2 for pumping stations with this proposed design flow. Individual pumps must be capable of handling peak instantaneous flows without employing the backup pump. Detailed justification must be submitted with permit applications for proposals that use alternate design standards from the enclosed guidance.

This revision also provides for the expansion of the Robins Cove Pump Station No. 2 from an annual average flow of 52,775 gallons per day to 72,200 gallons per day. East Fallowfield Township must secure amendments to their existing Department permits for the Robins Cove Pump Station and the related force main.

Ms. Martha Frid, Secretary

-2-

MAY 04 2004

Capacity for this project is provided consistent with the Pennsylvania American Water Company Chapter 94 Wasteload Management Plan.

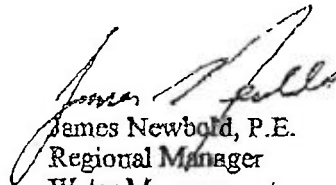
Information submitted with the planning module indicates that East Fallowfield Township intends to transfer ownership of the Township's collection and conveyance system to Pennsylvania American Water Company. Alternatives regarding ownership, operation, and maintenance of the collection and conveyance system will be evaluated by East Fallowfield Township in a pending Act 537 plan update revision. If planning approval is adopted by the Township and approved by the Department for the proposed transfer of sewerage facilities, Pennsylvania American Water Company must submit transfer applications to the Department for all permitted facilities within East Fallowfield Township.

This approval is conditioned as follows:

1. Construction of the proposed subdivision must be coordinated with the upgrade and expansion of the East End Interceptor in the City of Coatesville between Manhole Nos. 16 and 18. Use and occupancy permits for the Mendenhall Subdivision may not be issued by East Fallowfield Township until the upgrade and expansion of this portion of the East End Interceptor is completed.

If you have any questions, please feel free to contact Kelly Sweeney of our office at 484-250-5182.

Sincerely,


James Newbold, P.E.
Regional Manager
Water Management

Enclosure: Pump Station Guidance

cc: Chester County Planning Commission
Chester County Health Department
Mr. Stancato
D.L. Howell & Associates, Inc.
Pennsylvania American Water Company
Ms. Sweeney
Mr. Grella
Ms. Moore
Planning Section
Re 30



Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

SEP 05 2003

Southeast Regional Office

610-832-6130
Fax 610-832-6133

Ms. Martha Frid, Secretary
East Fallowfield Township
2264 Strasburg Road
Coatesville, PA 19320

Re: Planning Module for Land Development
Thompson Homes Subdivision (SOUTH)
Code No. 1-15918-196-3H
APS Id. 495467, Site Id. 622837
East Fallowfield Township, Chester County

Dear Ms. Frid:

Approval is hereby granted by the Department of Environmental Protection for the above referenced revision to the East Fallowfield Township Official Sewage Facilities Plan. In accordance with the Pennsylvania Sewage Facilities Act and Title 25, Chapter 71 of the Department's Rules and Regulations, East Fallowfield Township is responsible for implementing this revision as per the approved planning module.

This revision provides for adequate sewage facilities planning to permit the development of a 112 lot residential subdivision on 98.6 acres. This project is located on the southeast corner of Misty Patch and West Chester Roads, in East Fallowfield Township, Chester County.

This project will be connected to the East Fallowfield Township/Pennsylvania American Water Company collection system and will generate 29,400 gallons of sewage per day to be treated at the Pennsylvania American Water Company Wastewater Treatment Facility.

This revision also provides for the upgrade and expansion of a portion of the East End Trunk Line in the City of Coatesville between manholes designated as Nos. 16 and 18, for the expansion of the Robins Cove Pump Station No. 2 from an average annual flow of 13,900 gallons per day to 37,000 gallons per day, and for the expansion of the Robins Cove force main from 4 inches in diameter to 8 inches in diameter.

SHOULD BE
45,663 gpd

East Fallowfield Township must secure an amendment to their Department permit for the construction and operation of the expanded Robins Cove Pump Station No. 2 and the related force main. The Pennsylvania American Water Company must also secure a Department permit or permit amendment for the construction and operation of the upgraded and expanded East End Trunk Line.

Ms. Martha Frid, Secretary

-2-

SEP 05 2009

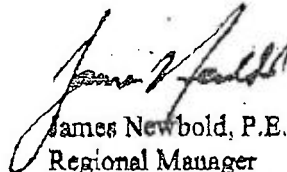
Capacity for this project is provided consistent with the Pennsylvania American Water Company Chapter 94 Wasteload Management Plan.

Information submitted with the approved planning modules indicates that East Fallowfield Township intends to transfer ownership of the Township's collection and conveyance system to Pennsylvania American Water Company. Alternatives regarding ownership, operation, and maintenance of the collection and conveyance system will be evaluated by East Fallowfield Township in a pending Act 537 plan update revision. If planning approval is adopted by the Township and approved by the Department for the proposed transfer of sewerage facilities, Pennsylvania American Water Company must submit transfer applications to the Department for all permitted facilities within the Township.

The Department has determined that there are mapped wetlands within your proposed development. You are hereby notified that an encroachment permit under Title 25, Chapter 105, of the Rules and Regulations of the Department must be obtained from the Department prior to any construction that will encroach on wetlands.

If you have any questions, please feel free to contact John M. Veneziale of our office at 610-832-6078

Sincerely,


James Newbold, P.E.
Regional Manager
Water Management

cc: Chester County Planning Commission
Chester County Health Department
City of Coatesville
Thompson Properties, Inc.
Trilogy Investments, LLC
American Commonwealth Management Services Co., Inc.
Pennsylvania American Water Company
Mr. Veneziale
Ms. Moore
Planning Section
Re 30

APPENDIX H

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

ERCILDOUN AREA

Act 537 Plan Update
East Fallowfield Township, Chester County, PA

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	16,750	\$ 60.00	\$ 1,005,000.00
	SUBTOTAL	L.F.	16,750	\$ 60.00	\$ 1,005,000.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	50	\$ 3,500.00	\$ 175,000.00
	SUBTOTAL	EA.	50	\$ 3,500.00	\$ 175,000.00
3	4" C-900 - Force Main	L.F.	4,425	\$ 50.00	\$ 221,250.00
	SUBTOTAL	L.F.	4,425	\$ 50.00	\$ 221,250.00
4	Forcemain Air Release Valve Manhole	EA.	2	\$ 4,000.00	\$ 8,000.00
	SUBTOTAL	EA.	2	\$ 4,000.00	\$ 8,000.00
5	Low Pressure Sewer	L.F.	850	\$ 30.00	\$ 25,500.00
	SUBTOTAL	L.F.	850	\$ 30.00	\$ 25,500.00
6	Low Pressure Sewer Main Flusing Manhole	EA.	2	\$ 350.00	\$ 700.00
	SUBTOTAL	EA.	2	\$ 350.00	\$ 700.00
7	Tie in to Existing Pump Station Branford PS #1	EA.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	EA.	1	\$ 5,000.00	\$ 5,000.00
8	Testing	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00
9	Sanitary Lateral Wyes - 8"x4"	EA.	140	\$ 150.00	\$ 21,000.00
	SUBTOTAL	EA.	140	\$ 150.00	\$ 21,000.00
10	Sanitary Laterals - 4" SDR-35 PVC	L.F.	3,500	\$ 40.00	\$ 140,000.00
	SUBTOTAL	L.F.	3,500	\$ 40.00	\$ 140,000.00
11	Pump Stations				
	Strasburg Road PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	Cumberland Drive PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	SUBTOTAL	L.S.	2	\$ 350,000.00	\$ 700,000.00

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 20,000.00	\$ 20,000.00
	SUBTOTAL	L.S.	1	\$ 20,000.00	\$ 20,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00

SUBTOTAL	\$ 2,331,450.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 116,572.50
5% FIELD SURVEY	\$ 116,572.50
5% ENGINEERING DESIGN	\$ 116,572.50
5% INSPECTIONS	\$ 116,572.50
10% CONTINGENCY	\$ 233,145.00
TOTAL	\$ 3,030,885.00

EDUs to be Serviced = 140
Cost per EDU = \$ 21,649.18

PAWC (Bonafide) = \$ 1,400,000.00
EFT = \$ 1,630,885.00

Cost per EDU = \$ 11,649.18

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

DOE RUN FARMS AREA

Act 537 Plan Update

East Fallowfield Township, Chester County, PA

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	13,400	\$ 60.00	\$ 804,000.00
	SUBTOTAL	L.F.	13,400	\$ 60.00	\$ 804,000.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	40	\$ 3,500.00	\$ 140,000.00
	SUBTOTAL	EA.	40	\$ 3,500.00	\$ 140,000.00
3	4" C-900 - Force Main	L.F.	1,300	\$ 50.00	\$ 65,000.00
	SUBTOTAL	L.F.	1,300	\$ 50.00	\$ 65,000.00
4	Low Pressure Sewer	L.F.	3,450	\$ 30.00	\$ 103,500.00
	SUBTOTAL	L.F.	3,450	\$ 30.00	\$ 103,500.00
5	Low Pressure Sewer Main Flusing Manhole	EA.	2	\$ 350.00	\$ 700.00
	SUBTOTAL	EA.	2	\$ 350.00	\$ 700.00
6	Testing	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00
7	Sanitary Lateral Wyes - 8"x4"	EA.	143	\$ 150.00	\$ 21,450.00
	SUBTOTAL	EA.	143	\$ 150.00	\$ 21,450.00
8	Sanitary Laterals - 4" SDR-35 PVC	L.F.	3,575	\$ 40.00	\$ 143,000.00
	SUBTOTAL	L.F.	3,575	\$ 40.00	\$ 143,000.00
9	Pump Stations				
	Youngsburg PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	SUBTOTAL	L.S.	1	\$ 350,000.00	\$ 350,000.00

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 20,000.00	\$ 20,000.00
	SUBTOTAL	L.S.	1	\$ 20,000.00	\$ 20,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00

SUBTOTAL	\$ 1,657,650.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 82,882.50
5% FIELD SURVEY	\$ 82,882.50
5% ENGINEERING DESIGN	\$ 82,882.50
5% INSPECTIONS	\$ 82,882.50
10% CONTINGENCY	\$ 165,765.00
TOTAL	\$ 2,154,945.00

EDUs to be Serviced = 143
Cost per EDU = \$ 15,069.55

PAWC (Bonafide) = \$ 1,430,000.00
EFT = \$ 724,945.00

Cost per EDU = \$ 5,069.55

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

ERCILDOUN AREA

(Serving Doe Run Farms Area First)

Act 537 Plan Update

East Fallowfield Township, Chester County, PA

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	16,750	\$ 60.00	\$ 1,005,000.00
	SUBTOTAL	L.F.	16,750	\$ 60.00	\$ 1,005,000.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	50	\$ 3,500.00	\$ 175,000.00
	SUBTOTAL	EA.	50	\$ 3,500.00	\$ 175,000.00
3	4" C-900 - Force Main	L.F.	1,425	\$ 50.00	\$ 71,250.00
	SUBTOTAL	L.F.	1,425	\$ 50.00	\$ 71,250.00
4	Low Pressure Sewer	L.F.	850	\$ 30.00	\$ 25,500.00
	SUBTOTAL	L.F.	850	\$ 30.00	\$ 25,500.00
5	Low Pressure Sewer Main Flusing Manhole	EA.	2	\$ 350.00	\$ 700.00
	SUBTOTAL	EA.	2	\$ 350.00	\$ 700.00
6	Testing	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00
7	Sanitary Lateral Wyes - 8"x4"	EA.	140	\$ 150.00	\$ 21,000.00
	SUBTOTAL	EA.	140	\$ 150.00	\$ 21,000.00
8	Sanitary Laterals - 4" SDR-35 PVC	L.F.	3,500	\$ 40.00	\$ 140,000.00
	SUBTOTAL	L.F.	3,500	\$ 40.00	\$ 140,000.00
9	Pump Stations				
	Cumberland Drive PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	SUBTOTAL	L.S.	1	\$ 350,000.00	\$ 350,000.00

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 20,000.00	\$ 20,000.00
	SUBTOTAL	L.S.	1	\$ 20,000.00	\$ 20,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00

SUBTOTAL	\$ 1,818,450.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 90,922.50
5% FIELD SURVEY	\$ 90,922.50
5% ENGINEERING DESIGN	\$ 90,922.50
5% INSPECTIONS	\$ 90,922.50
10% CONTINGENCY	\$ 181,845.00
TOTAL	\$ 2,363,985.00

EDUs to be Serviced = 140
Cost per EDU = \$ 16,885.61

PAWC (Bonafide) = \$ 1,400,000.00
EFT = \$ 963,985.00

Cost per EDU = \$ 6,885.61

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

DOE RUN FARMS AREA

(Serving this Area First)

Act 537 Plan Update

East Fallowfield Township, Chester County, PA

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	13,400	\$ 60.00	\$ 804,000.00
	SUBTOTAL	L.F.	13,400	\$ 60.00	\$ 804,000.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	40	\$ 3,500.00	\$ 140,000.00
	SUBTOTAL	EA.	40	\$ 3,500.00	\$ 140,000.00
3	4" C-900 - Force Main	L.F.	4,300	\$ 50.00	\$ 215,000.00
	SUBTOTAL	L.F.	4,300	\$ 50.00	\$ 215,000.00
4	Forcemain Air Release Valve Manhole	EA.	2	\$ 4,000.00	\$ 8,000.00
	SUBTOTAL	EA.	2	\$ 4,000.00	\$ 8,000.00
5	Low Pressure Sewer	L.F.	3,450	\$ 30.00	\$ 103,500.00
	SUBTOTAL	L.F.	3,450	\$ 30.00	\$ 103,500.00
6	Low Pressure Sewer Main Flusing Manhole	EA.	2	\$ 350.00	\$ 700.00
	SUBTOTAL	EA.	2	\$ 350.00	\$ 700.00
7	Tie in to Existing Pump Station Branford PS #1	EA.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	EA.	1	\$ 5,000.00	\$ 5,000.00
8	Testing	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00
9	Sanitary Lateral Wyes - 8"x4"	EA.	143	\$ 150.00	\$ 21,450.00
	SUBTOTAL	EA.	143	\$ 150.00	\$ 21,450.00
10	Sanitary Laterals - 4" SDR-35 PVC	L.F.	3,575	\$ 40.00	\$ 143,000.00
	SUBTOTAL	L.F.	3,575	\$ 40.00	\$ 143,000.00
11	Pump Stations				
	Strasburg Road PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	Youngsburg PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	SUBTOTAL	L.S.	2	\$ 350,000.00	\$ 700,000.00

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

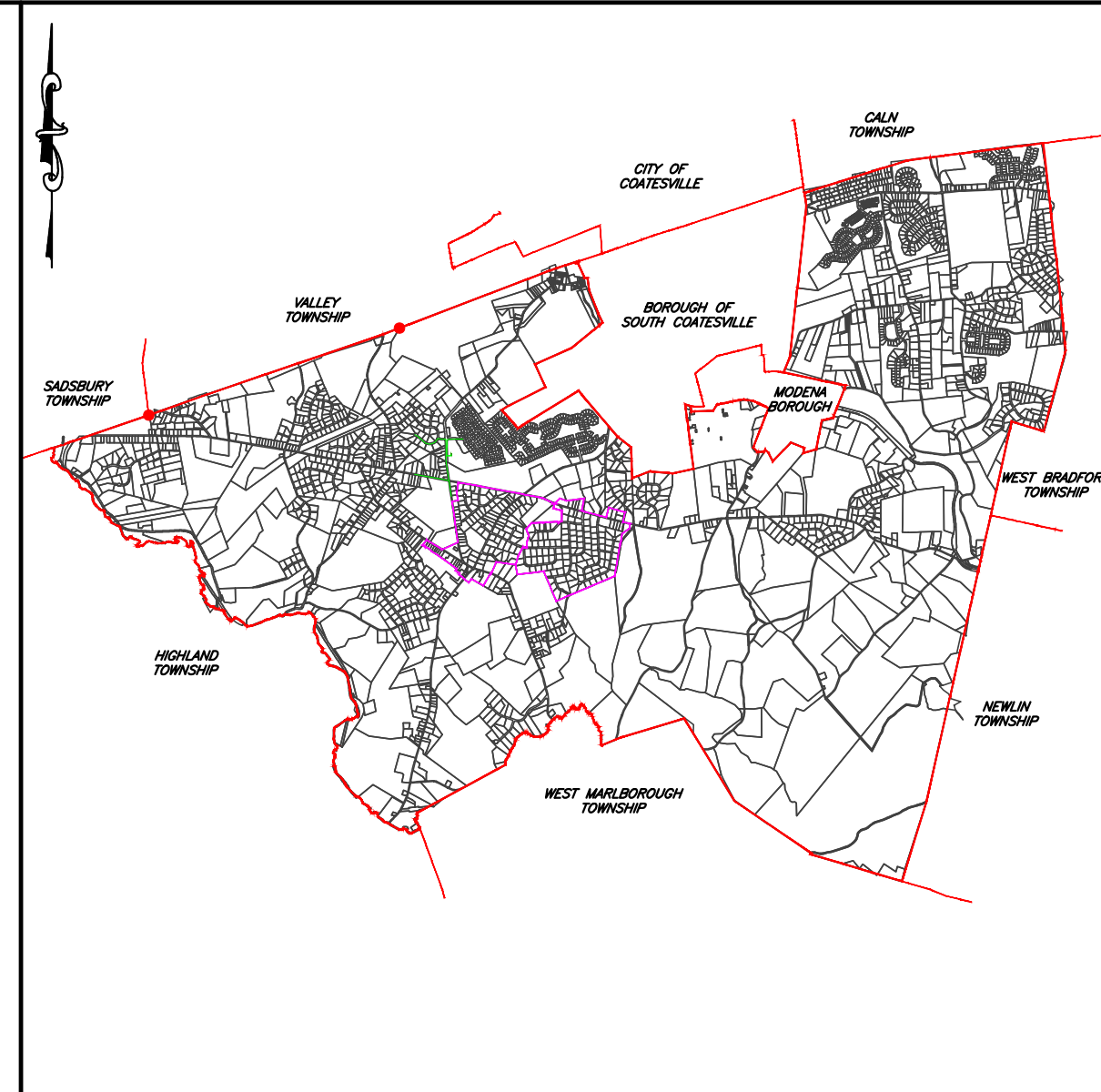
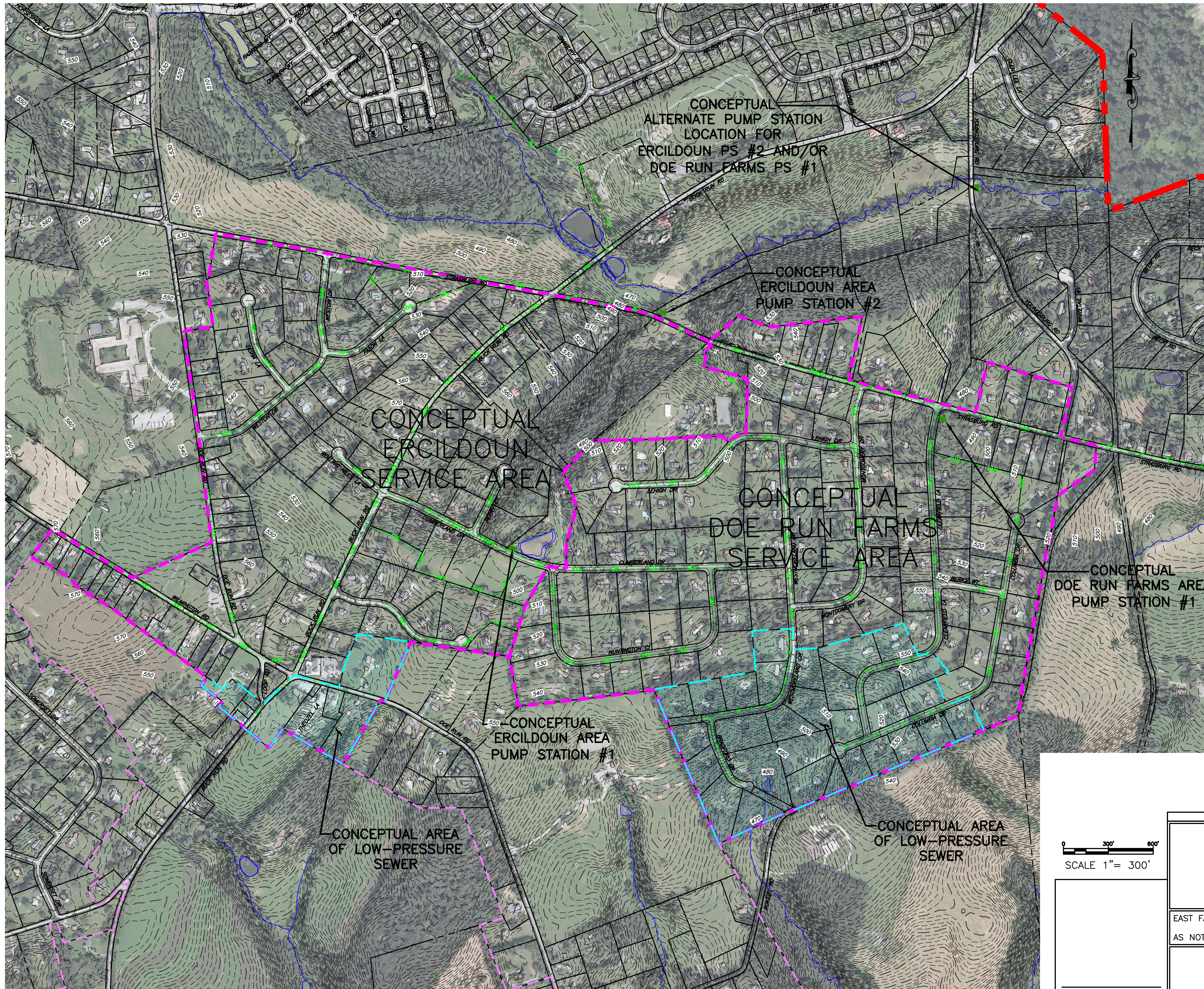
B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 20,000.00	\$ 20,000.00
	SUBTOTAL	L.S.	1	\$ 20,000.00	\$ 20,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00

SUBTOTAL	\$ 2,170,650.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 108,532.50
5% FIELD SURVEY	\$ 108,532.50
5% ENGINEERING DESIGN	\$ 108,532.50
5% INSPECTIONS	\$ 108,532.50
10% CONTINGENCY	\$ 217,065.00
TOTAL	\$ 2,821,845.00

EDUs to be Serviced = 143
Cost per EDU = \$ 19,733.18

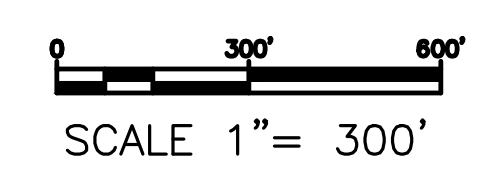
PAWC (Bonafide) = \$ 1,430,000.00
EFT = \$ 1,391,845.00

Cost per EDU = \$ 9,733.18

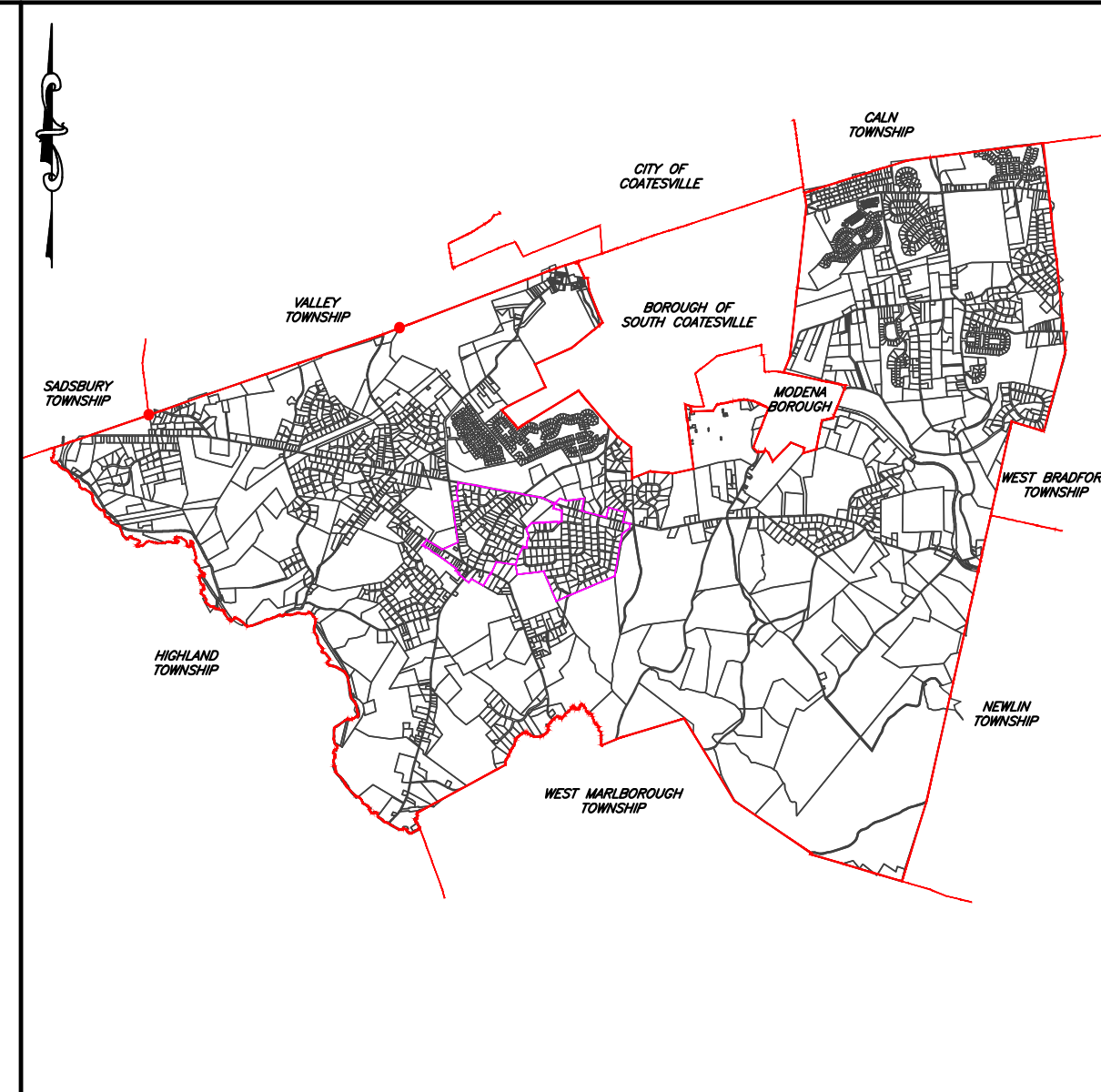
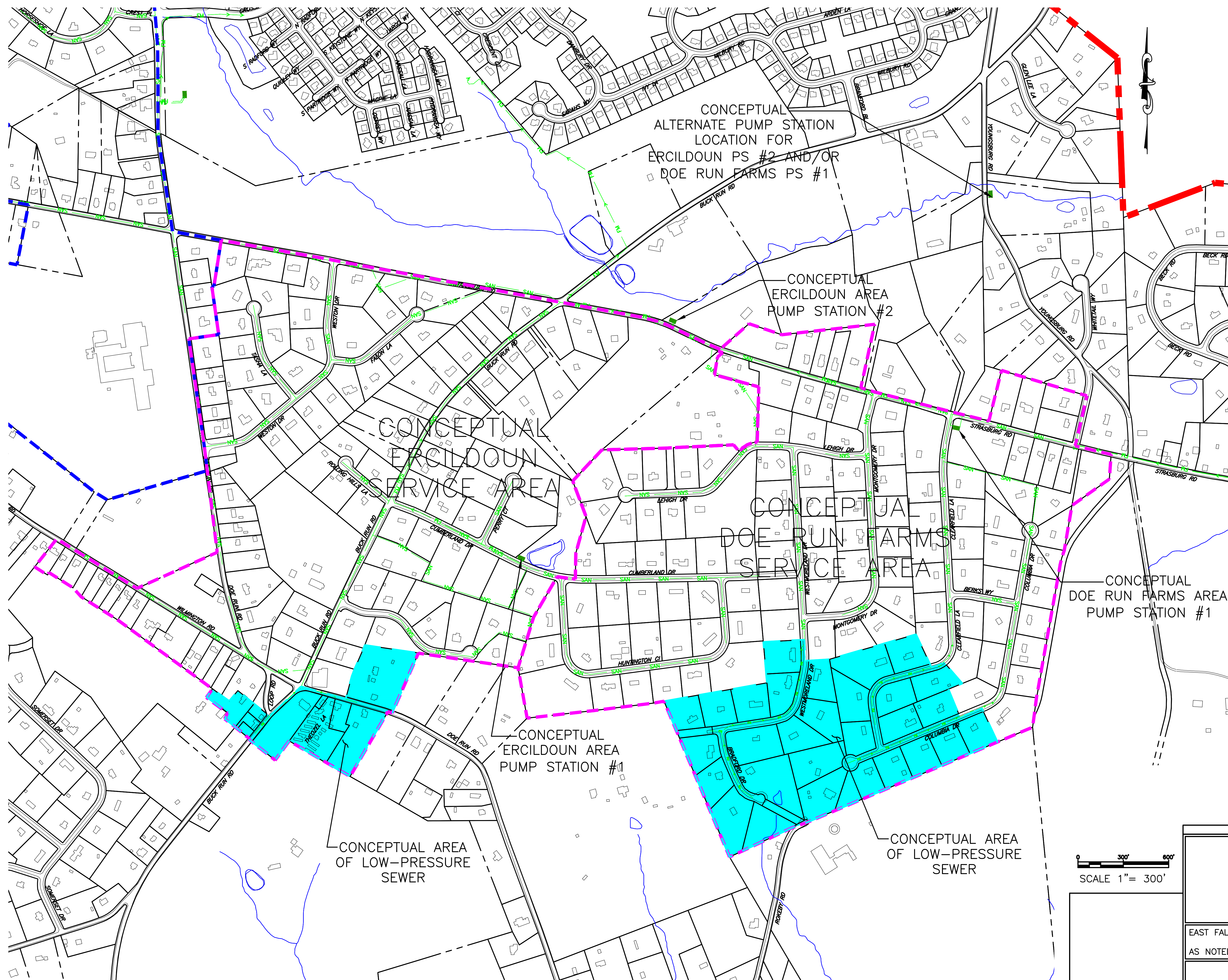


LOCATION MAP
SCALE 1"=6,000'

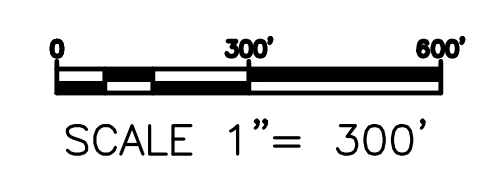
- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.



REVISION	DATE
<u>ERCILDOUN & DOE RUN FARMS AREAS</u> <u>CONCEPTUAL PUBLIC SEWER EXTENSION</u>	
FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	MAY 20, 2022
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1



- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.



REVISION	DATE
ERCILDOUN & DOE RUN FARMS AREAS	
CONCEPTUAL PUBLIC SEWER EXTENSION	
FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	AUGUST 13, 2019
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

MOUNT CARMEL AREA

Act 537 Plan Update
East Fallowfield Township, Chester County, PA

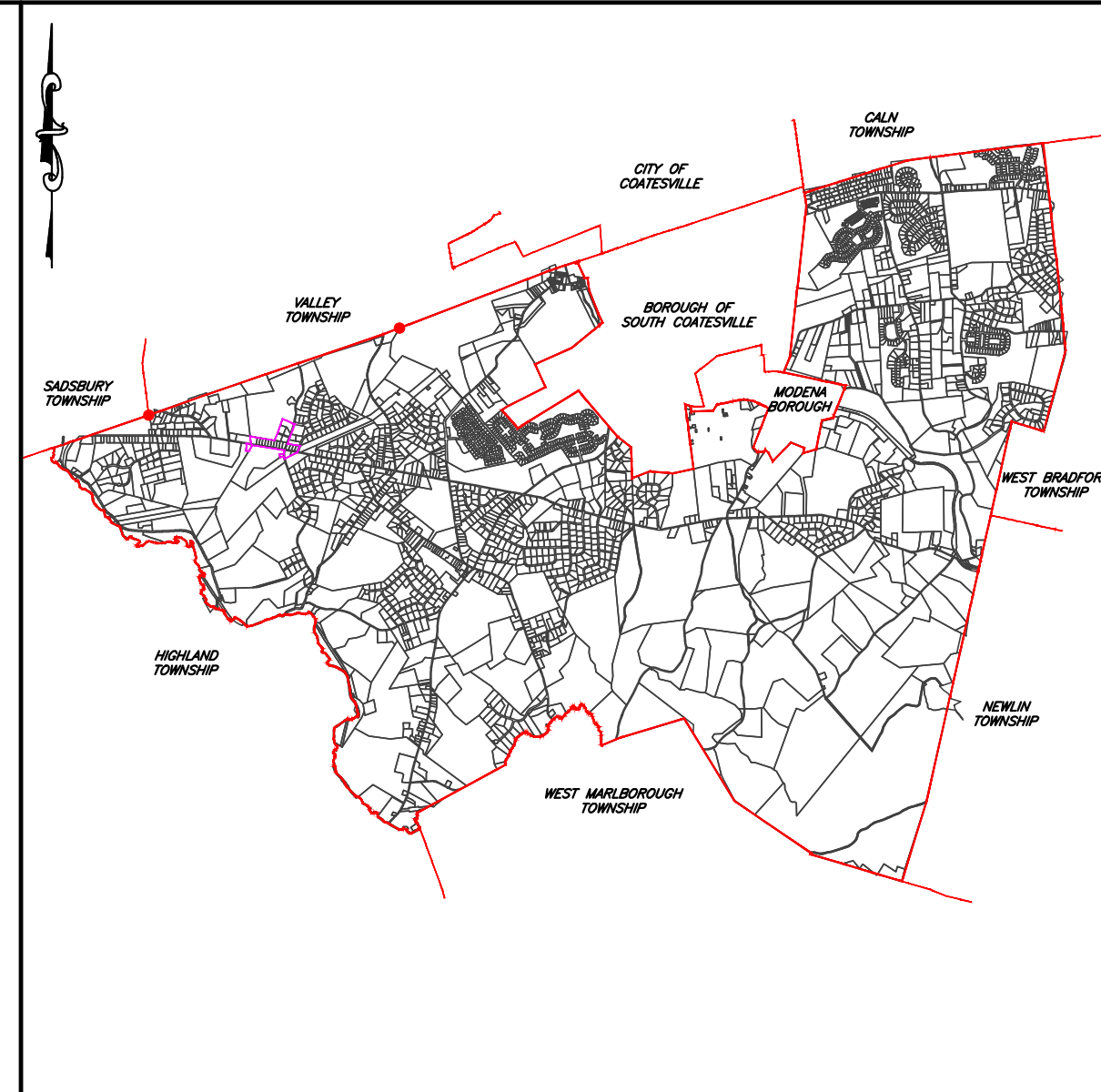
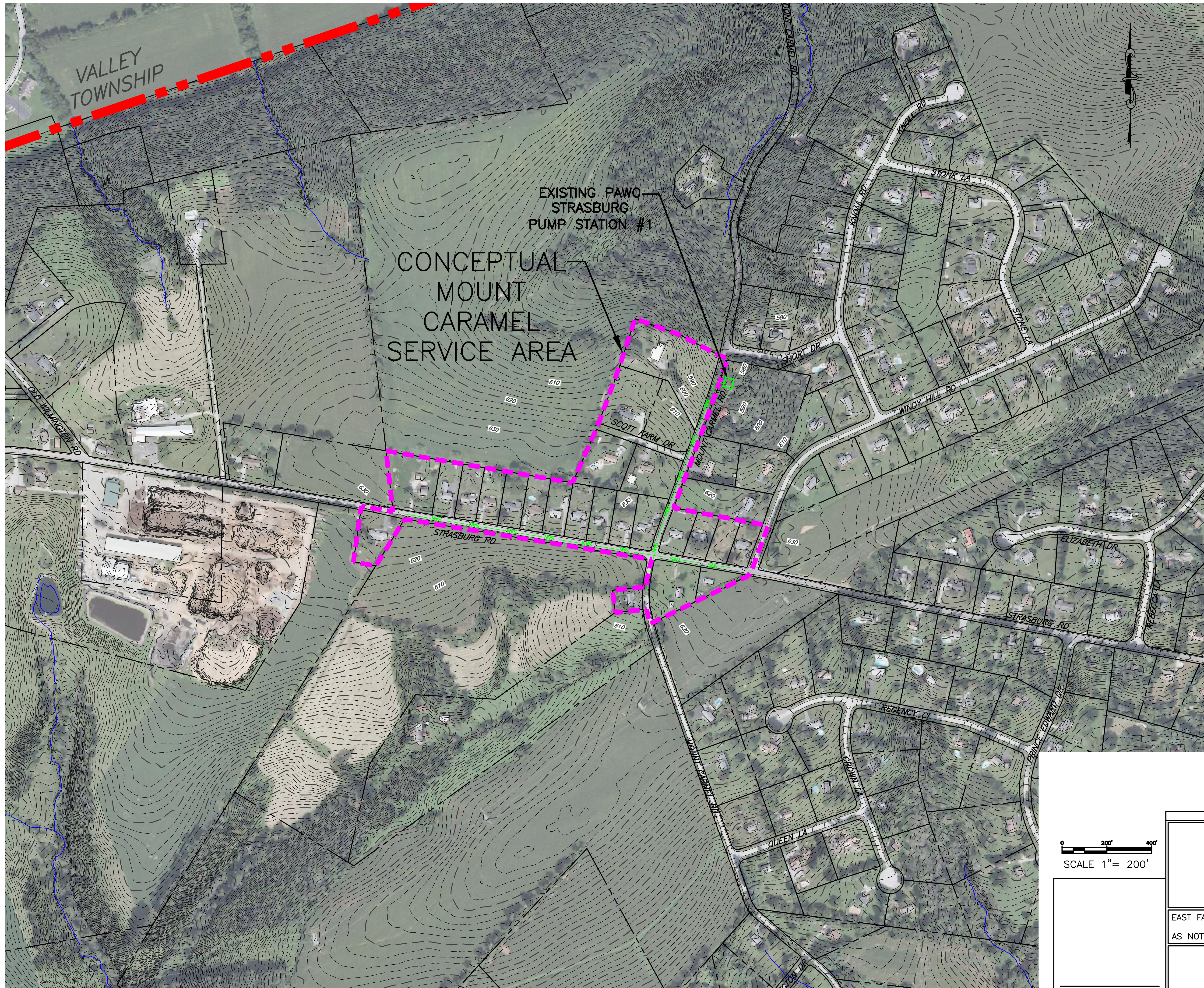
Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	2,550	\$ 60.00	\$ 153,000.00
	SUBTOTAL	L.F.	2,550	\$ 60.00	\$ 153,000.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	8	\$ 3,500.00	\$ 28,000.00
	SUBTOTAL	EA.	8	\$ 3,500.00	\$ 28,000.00
3	Tie in to Existing Pump Station Strasbury Hunt PS #1	EA.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	EA.	1	\$ 5,000.00	\$ 5,000.00
4	Testing	L.S.	1	\$ 1,000.00	\$ 1,000.00
	SUBTOTAL	L.S.	1	\$ 1,000.00	\$ 1,000.00
5	Sanitary Lateral Wyes - 8"x4"	EA.	25	\$ 150.00	\$ 3,750.00
	SUBTOTAL	EA.	25	\$ 150.00	\$ 3,750.00
6	Sanitary Laterals - 4" SDR-35 PVC	L.F.	625	\$ 40.00	\$ 25,000.00
	SUBTOTAL	L.F.	625	\$ 40.00	\$ 25,000.00
B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 10,000.00	\$ 10,000.00
	SUBTOTAL	L.S.	1	\$ 10,000.00	\$ 10,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 2,000.00	\$ 2,000.00
	SUBTOTAL	L.S.	1	\$ 2,000.00	\$ 2,000.00

SUBTOTAL	\$ 227,750.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 11,387.50
5% FIELD SURVEY	\$ 11,387.50
5% ENGINEERING DESIGN	\$ 11,387.50
5% INSPECTIONS	\$ 11,387.50
10% CONTINGENCY	\$ 22,775.00
TOTAL	\$ 296,075.00

EDUs to be Serviced = 24
Cost per EDU = \$ 12,336.46

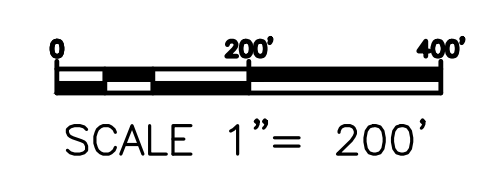
PAWC (Bonafide) = \$ 240,000.00
EFT = \$ 56,075.00

Cost per EDU = \$ 2,336.46



LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.

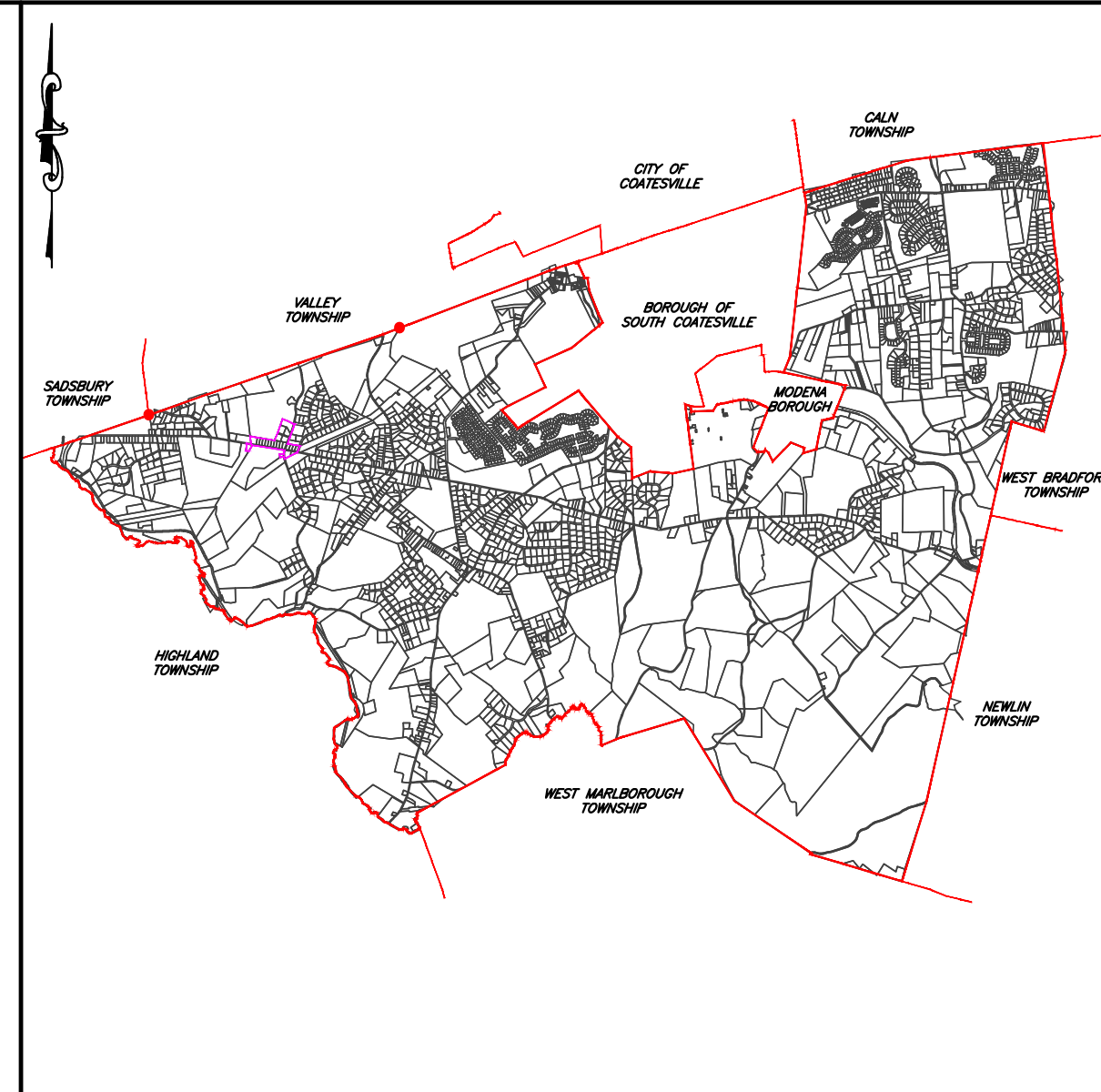


REVISION	DATE
MOUNT CARMEL AREA CONCEPTUAL PUBLIC SEWER EXTENSION FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	MAY 20, 2022
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1

VALLEY
TOWNSHIP

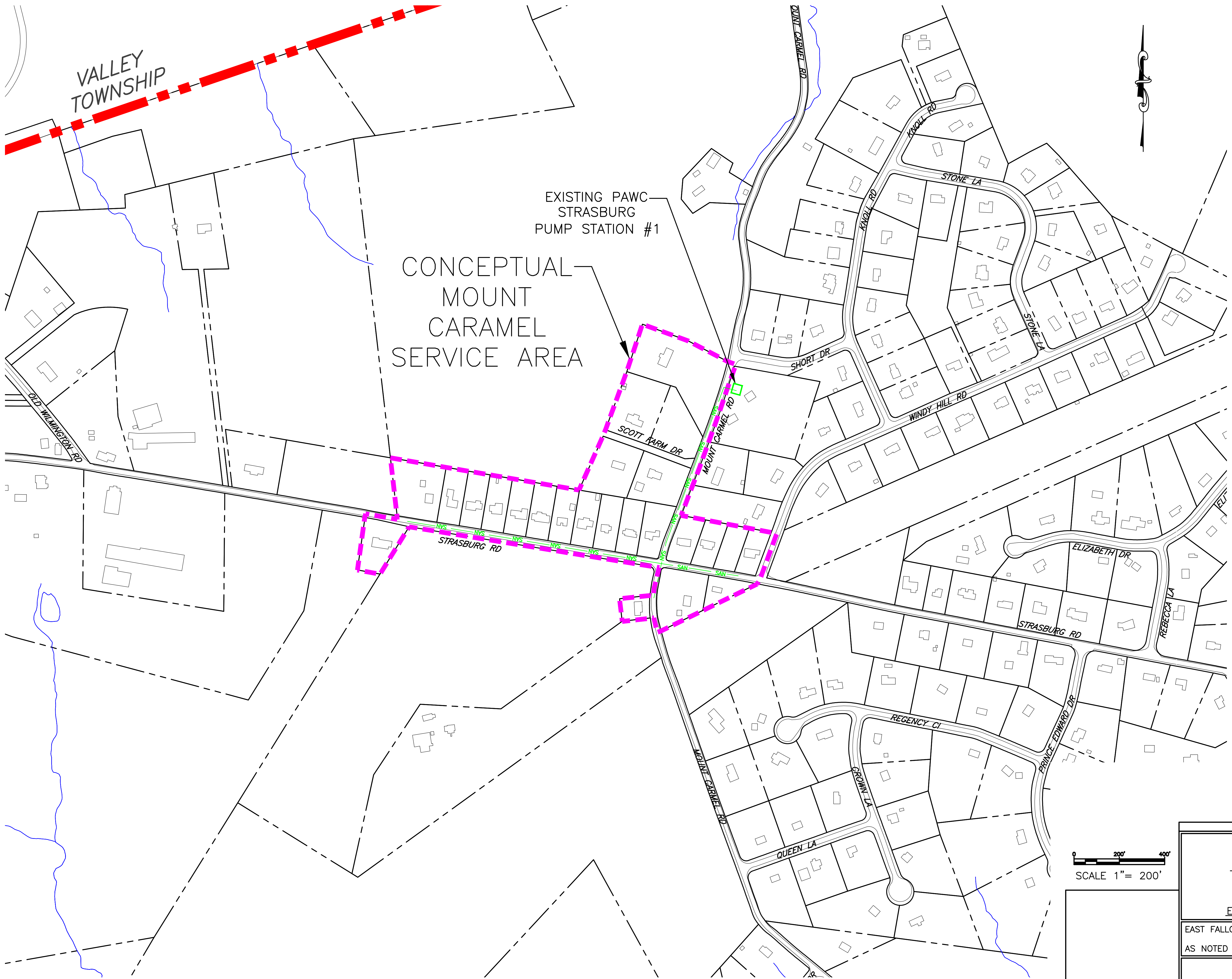
EXISTING PAWC
STRASBURG
PUMP STATION #1

CONCEPTUAL
MOUNT
CARMEL
SERVICE AREA



LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.



0 200' 400'
SCALE 1" = 200'

REVISION	DATE
MOUNT CARMEL AREA CONCEPTUAL PUBLIC SEWER EXTENSION FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	AUGUST 13, 2019
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

STOTTSVILLE AREA

Act 537 Plan Update
East Fallowfield Township, Chester County, PA

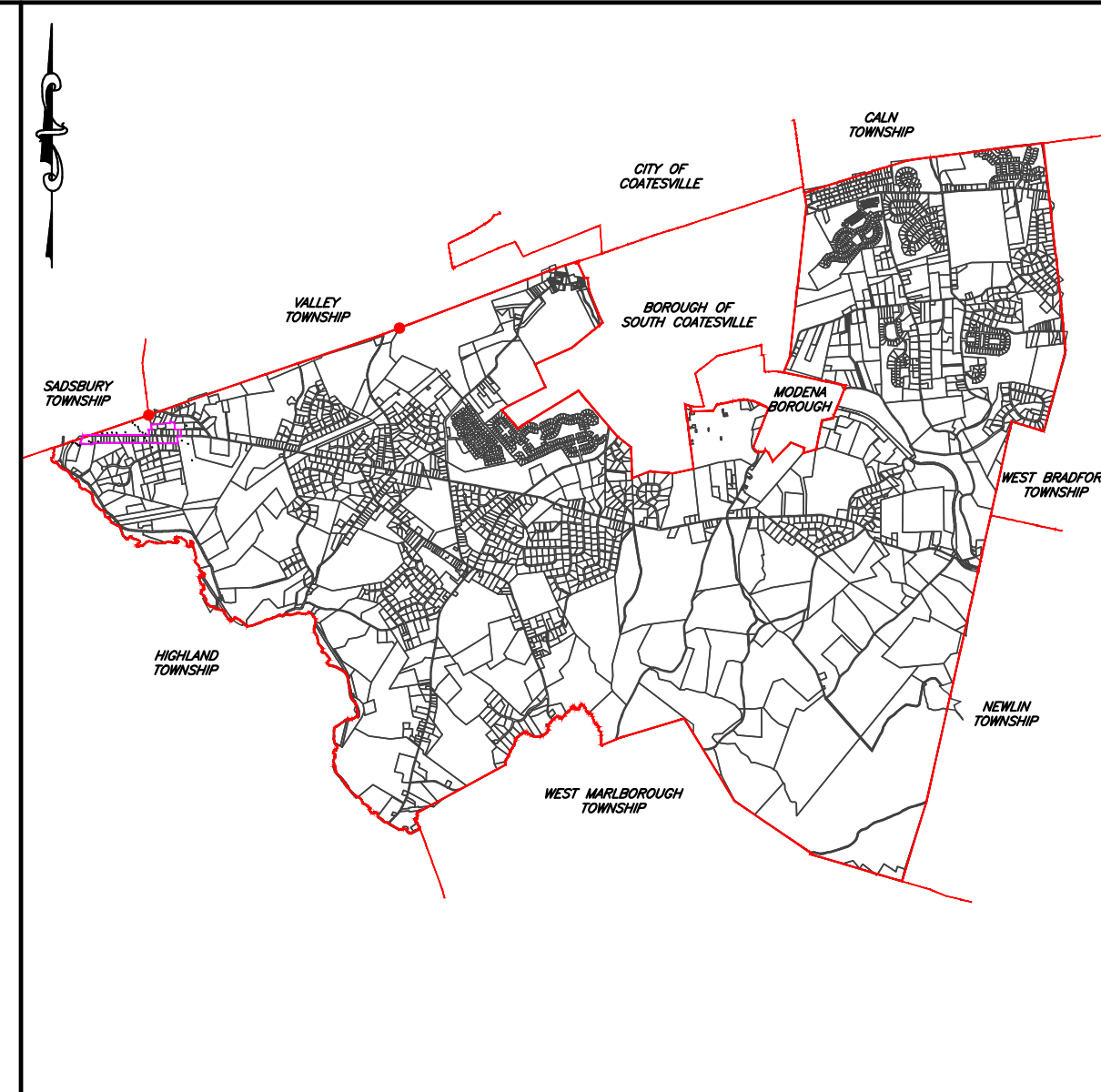
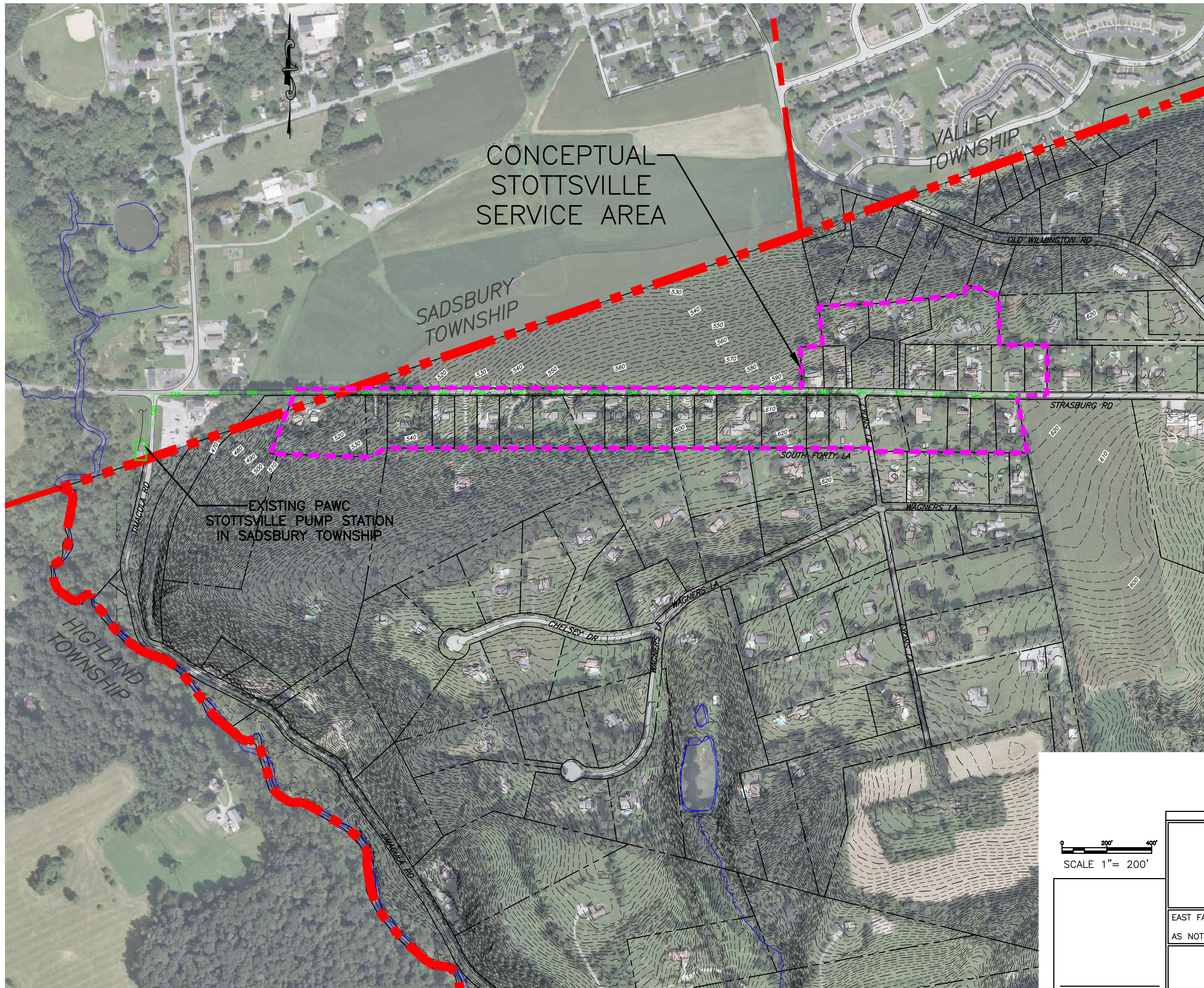
Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	4,110	\$ 60.00	\$ 246,600.00
	SUBTOTAL	L.F.	4,110	\$ 60.00	\$ 246,600.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	15	\$ 3,500.00	\$ 52,500.00
	SUBTOTAL	EA.	15	\$ 3,500.00	\$ 52,500.00
3	Tie in to Existing Manhole	EA.	1	\$ 1,500.00	\$ 1,500.00
	SUBTOTAL	EA.	1	\$ 1,500.00	\$ 1,500.00
4	Testing	L.S.	1	\$ 1,500.00	\$ 1,500.00
	SUBTOTAL	L.S.	1	\$ 1,500.00	\$ 1,500.00
5	Sanitary Lateral Wyes - 8"x4"	EA.	32	\$ 150.00	\$ 4,800.00
	SUBTOTAL	EA.	32	\$ 150.00	\$ 4,800.00
6	Sanitary Laterals - 4" SDR-35 PVC	L.F.	800	\$ 40.00	\$ 32,000.00
	SUBTOTAL	L.F.	800	\$ 40.00	\$ 32,000.00
B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 15,000.00	\$ 15,000.00
	SUBTOTAL	L.S.	1	\$ 15,000.00	\$ 15,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 3,000.00	\$ 3,000.00
	SUBTOTAL	L.S.	1	\$ 3,000.00	\$ 3,000.00

SUBTOTAL	\$ 356,900.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 17,845.00
5% FIELD SURVEY	\$ 17,845.00
5% ENGINEERING DESIGN	\$ 17,845.00
5% INSPECTIONS	\$ 17,845.00
10% CONTINGENCY	\$ 35,690.00
TOTAL	\$ 463,970.00

EDUs to be Serviced = **32**
Cost per EDU = \$ **14,499.06**

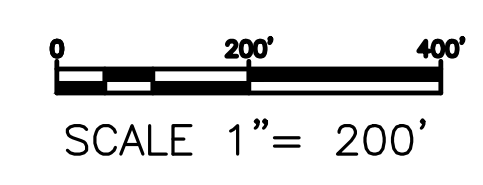
PAWC (Bonafide) = \$ **320,000.00**
EFT = \$ **143,970.00**

Cost per EDU = \$ **4,499.06**

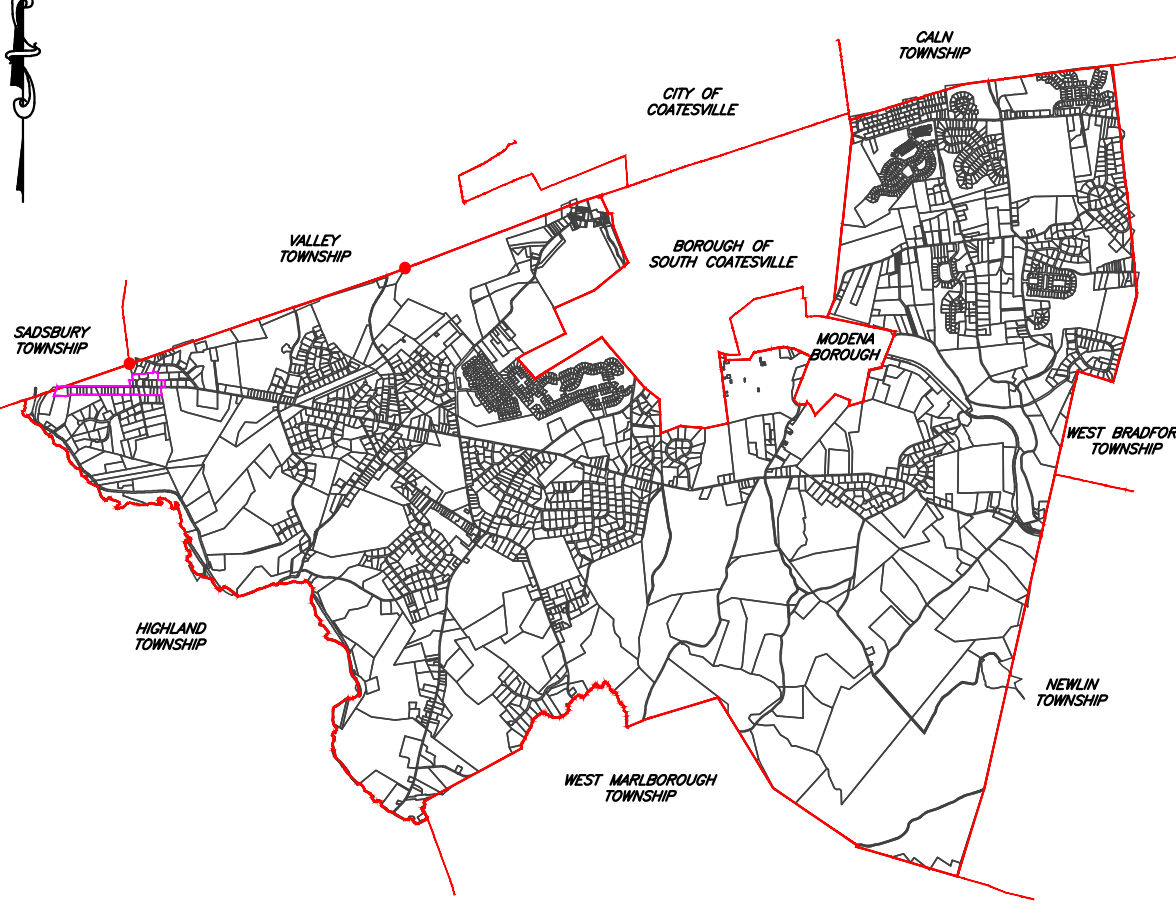
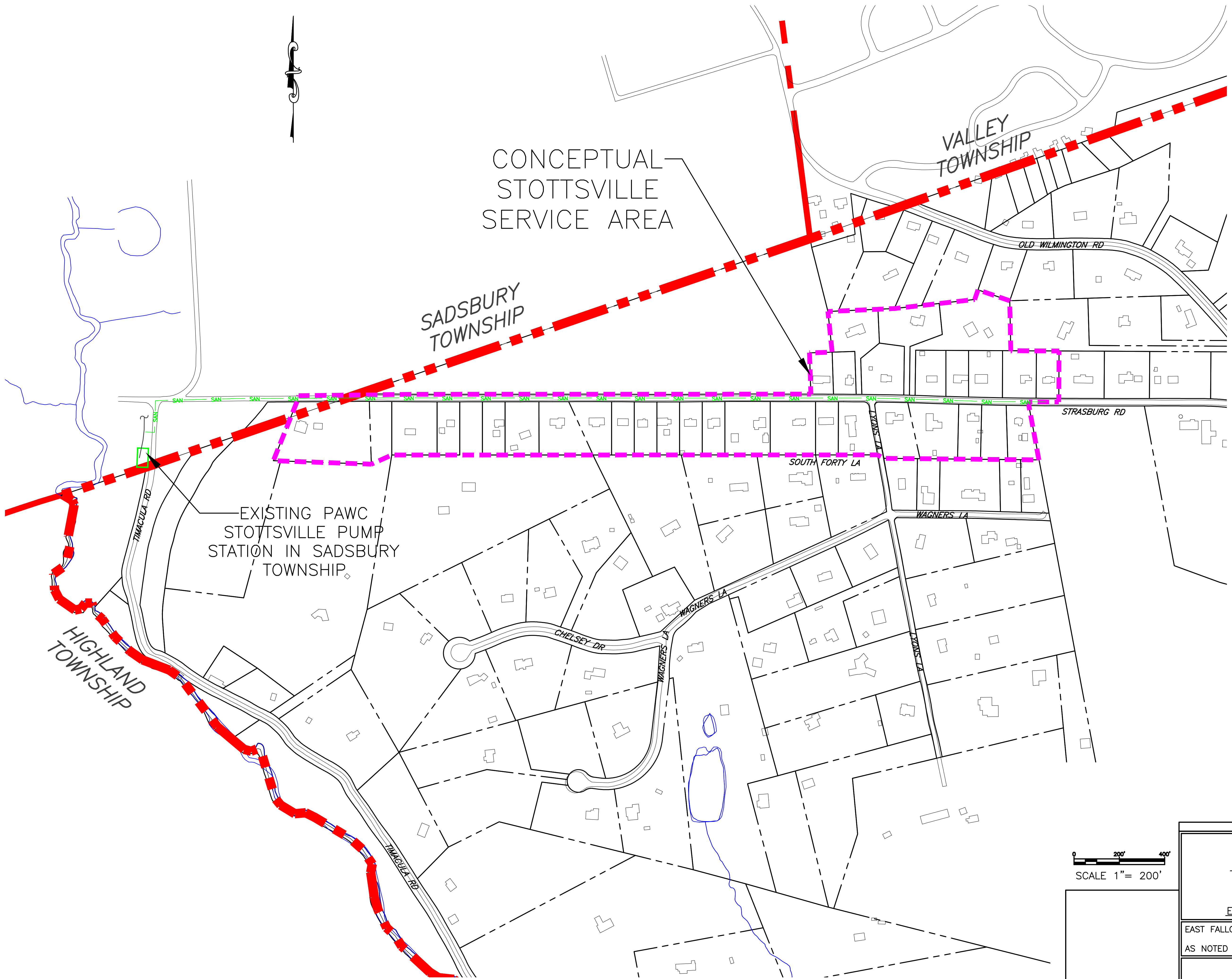


LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.

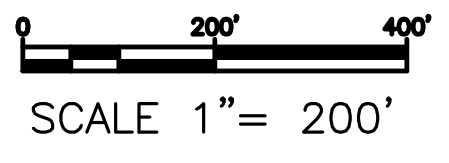


REVISION	DATE
STOTTSVILLE AREA CONCEPTUAL PUBLIC SEWER EXTENSION FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	MAY 20, 2022
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1



LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.



REVISION	DATE
STOTTSVILLE AREA CONCEPTUAL PUBLIC SEWER EXTENSION FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	AUGUST 13, 2019
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

SOUTH BRANDYWINE MIDDLE SCHOOL AREA

Act 537 Plan Update

East Fallowfield Township, Chester County, PA

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	7,050	\$ 60.00	\$ 423,000.00
	SUBTOTAL	L.F.	7,050	\$ 60.00	\$ 423,000.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	30	\$ 3,500.00	\$ 105,000.00
	SUBTOTAL	EA.	30	\$ 3,500.00	\$ 105,000.00
3	Tie in to Existing Manhole	EA.	1	\$ 1,500.00	\$ 1,500.00
	SUBTOTAL	EA.	1	\$ 1,500.00	\$ 1,500.00
4	4" C-900 - Force Main	L.F.	1,250	\$ 50.00	\$ 62,500.00
	SUBTOTAL	L.F.	1,250	\$ 50.00	\$ 62,500.00
5	Testing	L.S.	1	\$ 2,500.00	\$ 2,500.00
	SUBTOTAL	L.S.	1	\$ 2,500.00	\$ 2,500.00
6	Sanitary Lateral Wyes - 8"x4"	EA.	59	\$ 150.00	\$ 8,850.00
	SUBTOTAL	EA.	59	\$ 150.00	\$ 8,850.00
7	Sanitary Laterals - 4" SDR-35 PVC	L.F.	1,475	\$ 40.00	\$ 59,000.00
	SUBTOTAL	L.F.	1,475	\$ 40.00	\$ 59,000.00
8	Pump Stations				
	Doe Run Road PS	L.S.	1	\$ 750,000.00	\$ 750,000.00
	SUBTOTAL	L.S.	1	\$ 750,000.00	\$ 750,000.00

Herbert E. MacCombie, Jr., P.E.

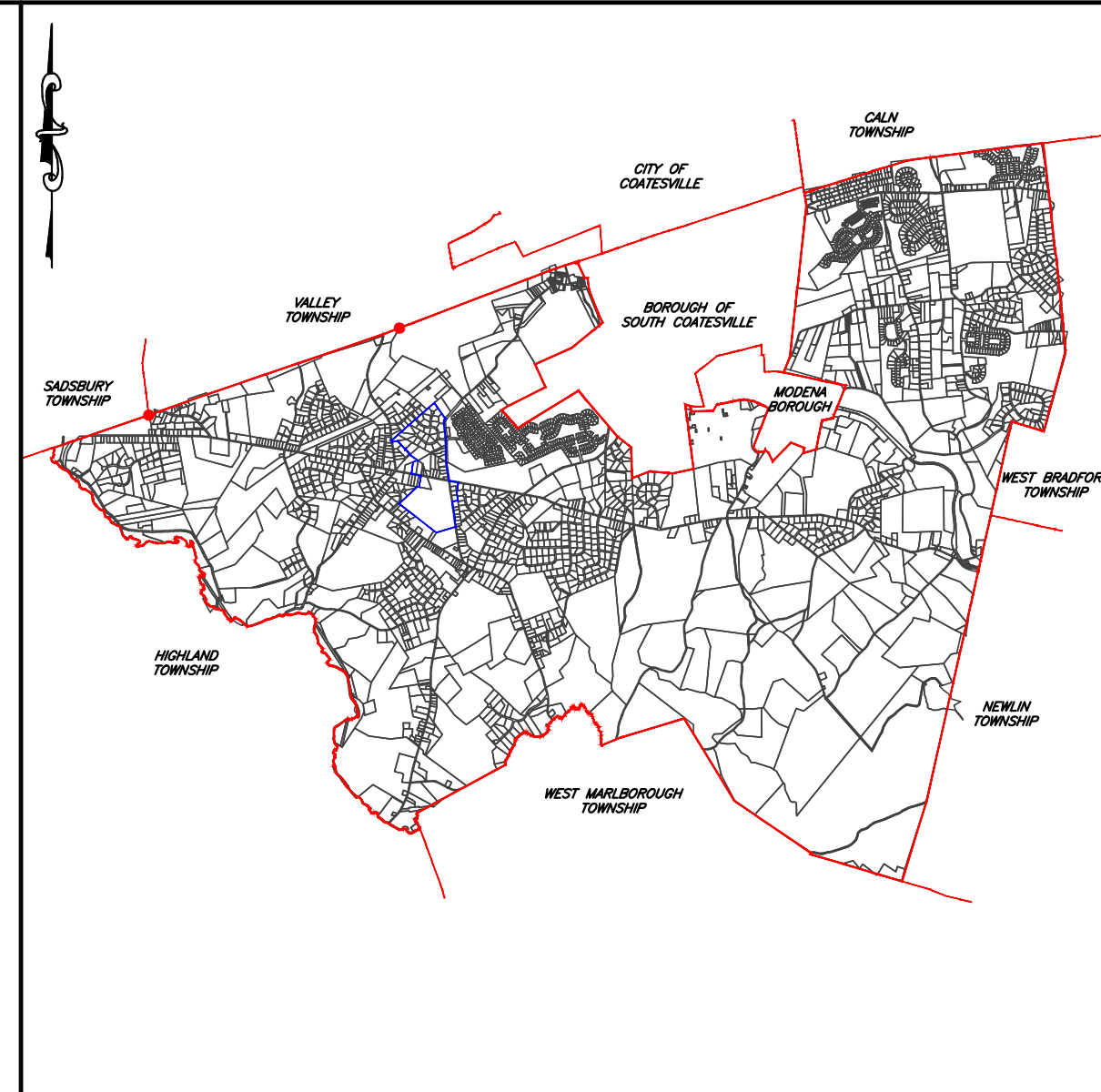
CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 10,000.00	\$ 10,000.00
	SUBTOTAL	L.S.	1	\$ 10,000.00	\$ 10,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 5,000.00	\$ 5,000.00
	SUBTOTAL	L.S.	1	\$ 5,000.00	\$ 5,000.00

SUBTOTAL	\$ 1,427,350.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 71,367.50
5% FIELD SURVEY	\$ 71,367.50
5% ENGINEERING DESIGN	\$ 71,367.50
5% INSPECTIONS	\$ 71,367.50
10% CONTINGENCY	<u>\$ 142,735.00</u>
TOTAL	\$ 1,855,555.00

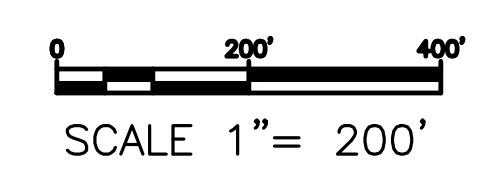
* SBMS accounts for 38 of the 96 EDUs
(8,350 gpd @ 225 gpd/EDU)

*EDUs to be Serviced =	96
Cost per EDU =	\$ 19,328.70
PAWC (Bonafide) =	\$ 960,000.00
EFT =	\$ 895,555.00
Cost per EDU =	\$ 9,328.70

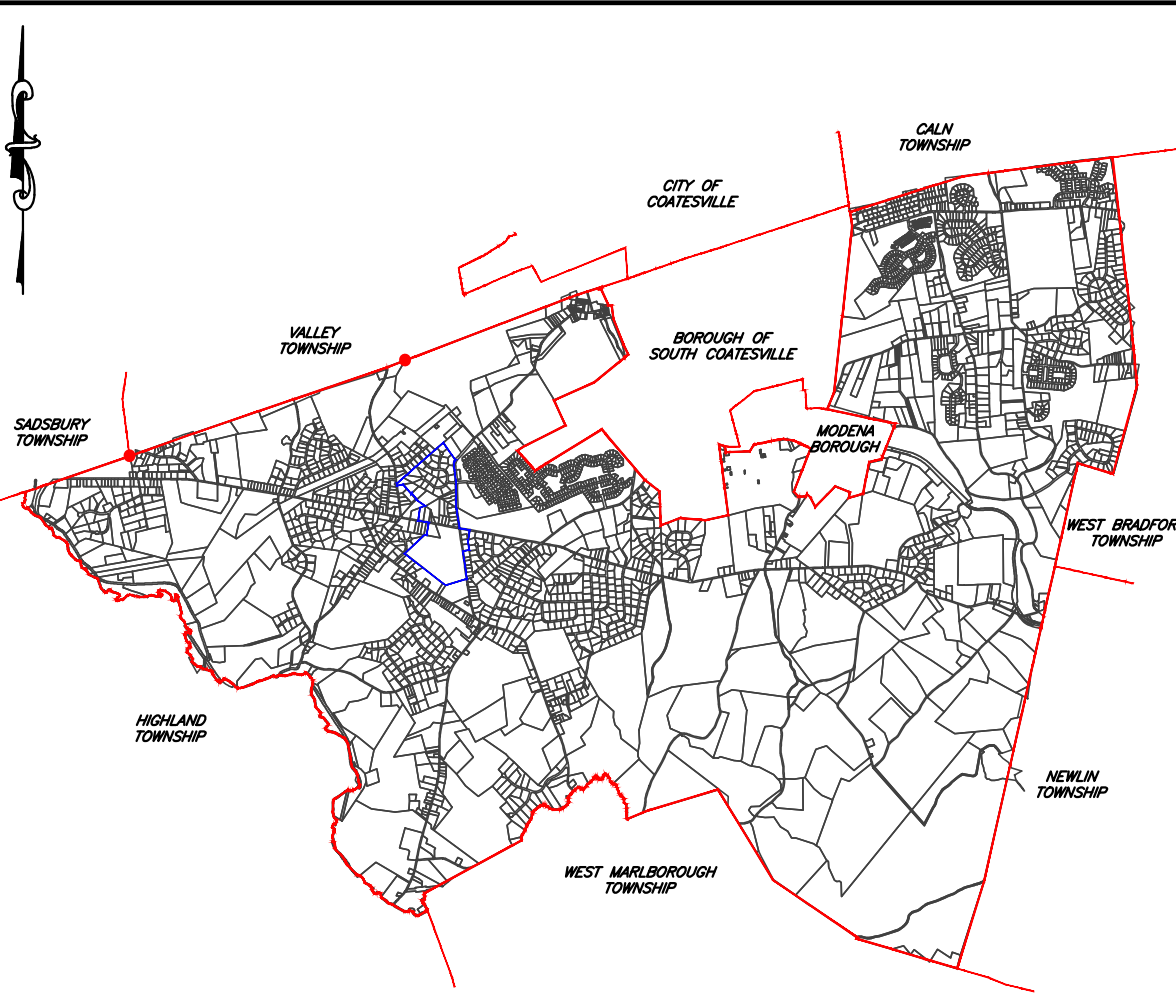
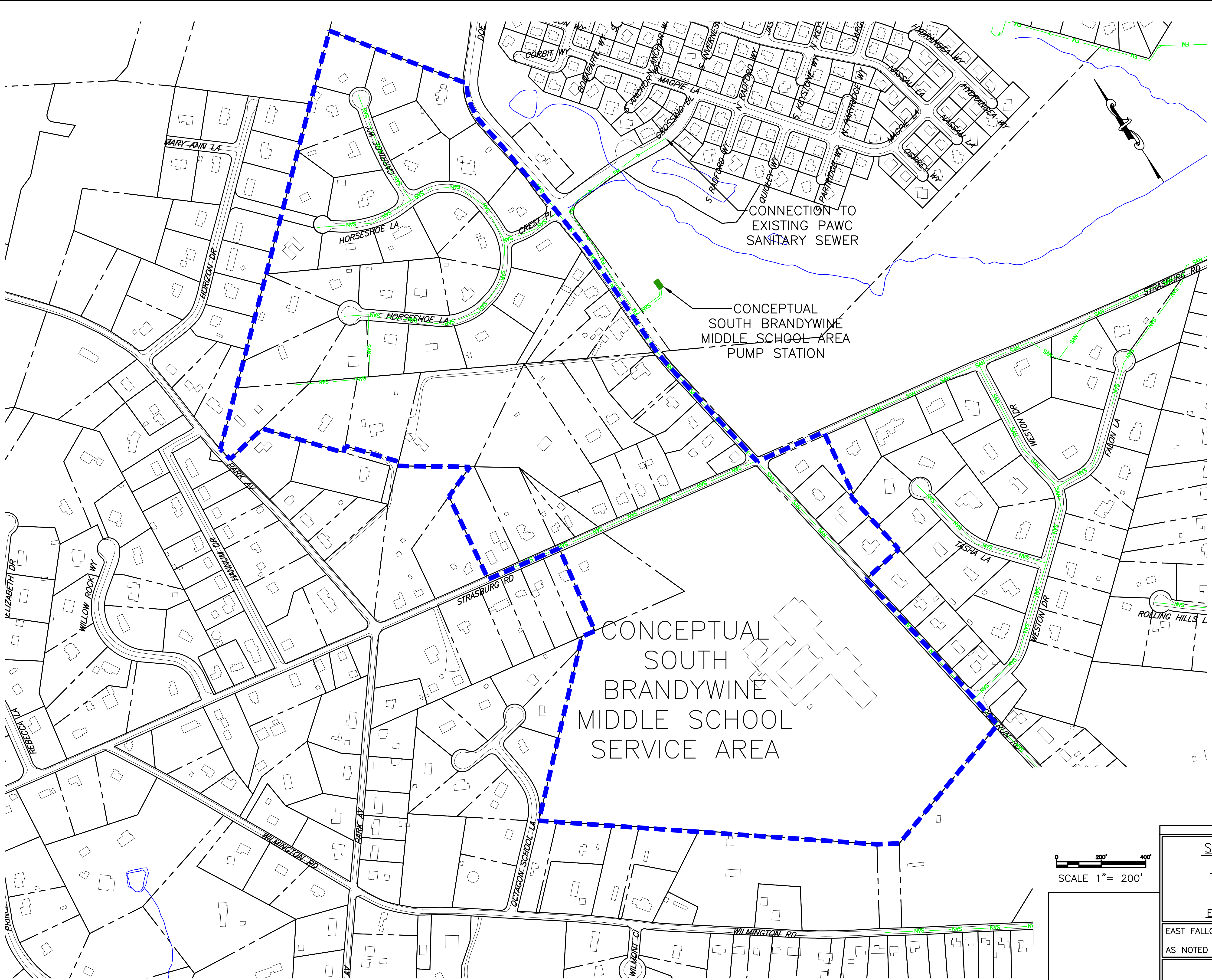


LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.



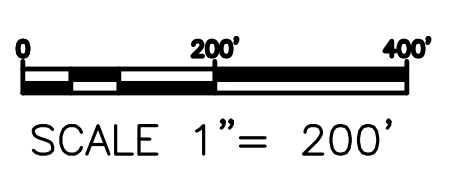
REVISION	DATE
SOUTH BRANDYWINE MIDDLE SCHOOL AREA CONCEPTUAL PUBLIC SEWER EXTENSION FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	MAY 20, 2022
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
SHEET 1 OF 1	



LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.

CONCEPTUAL
SOUTH BRANDYWINE
MIDDLE SCHOOL
SERVICE AREA



REVISION	DATE
SOUTH BRANDYWINE MIDDLE SCHOOL AREA CONCEPTUAL PUBLIC SEWER EXTENSION	
FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	AUGUST 13, 2019
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

CONSTRUCTION COST ESTIMATE

HEPHZIBAH HILL & HIGH MEADOWS AREA

Act 537 Plan Update

East Fallowfield Township, Chester County, PA

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	SANITARY SEWER				
1	8" SDR-35 - PVC	L.F.	14,600	\$ 60.00	\$ 876,000.00
	SUBTOTAL	L.F.	14,600	\$ 60.00	\$ 876,000.00
2	Sanitary Manhole (w/Frame & Cover)	EA.	60	\$ 3,500.00	\$ 210,000.00
	SUBTOTAL	EA.	60	\$ 3,500.00	\$ 210,000.00
3	4" C-900 - Force Main				
	Mink Hollow Road	L.F.	3,650	\$ 50.00	\$ 182,500.00
	Strasburg Road	L.F.	8,625	\$ 50.00	\$ 431,250.00
	SUBTOTAL	L.F.	12,275	\$ 50.00	\$ 182,500.00
4	Forcemain Air Release Valve Manhole	EA.	5	\$ 4,000.00	\$ 20,000.00
	SUBTOTAL	EA.	5	\$ 4,000.00	\$ 20,000.00
5	Low Pressure Sewer				
	Hephzibah Hill Area	L.F.	4,850	\$ 30.00	\$ 145,500.00
	High Meadows Area	L.F.	3,275	\$ 30.00	\$ 98,250.00
	SUBTOTAL	L.F.	8,125	\$ 30.00	\$ 243,750.00
6	Low Pressure Sewer Main Flusing Manhole	EA.	6	\$ 350.00	\$ 2,100.00
	SUBTOTAL	EA.	6	\$ 350.00	\$ 2,100.00
7	Low Pressure Sewer Air Release Valve Manhole	EA.	2	\$ 3,500.00	\$ 7,000.00
	SUBTOTAL	EA.	2	\$ 3,500.00	\$ 7,000.00
8	Testing	L.S.	1	\$ 10,000.00	\$ 10,000.00
	SUBTOTAL	L.S.	1	\$ 10,000.00	\$ 10,000.00
9	Sanitary Lateral Wyes - 8"x4"	EA.	139	\$ 150.00	\$ 20,850.00
	SUBTOTAL	EA.	139	\$ 150.00	\$ 20,850.00
10	Sanitary Laterals - 4" SDR-35 PVC	L.F.	3,475	\$ 40.00	\$ 139,000.00
	SUBTOTAL	L.F.	3,475	\$ 40.00	\$ 139,000.00
11	Pump Stations				
	Mink Hollow Road PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	Doe Run Church Road PS	L.S.	1	\$ 350,000.00	\$ 350,000.00
	SUBTOTAL	L.S.	2	\$ 350,000.00	\$ 700,000.00

Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS SURVEYORS, INC.
1000 PALMERS MILL ROAD
MEDIA, PA 19063

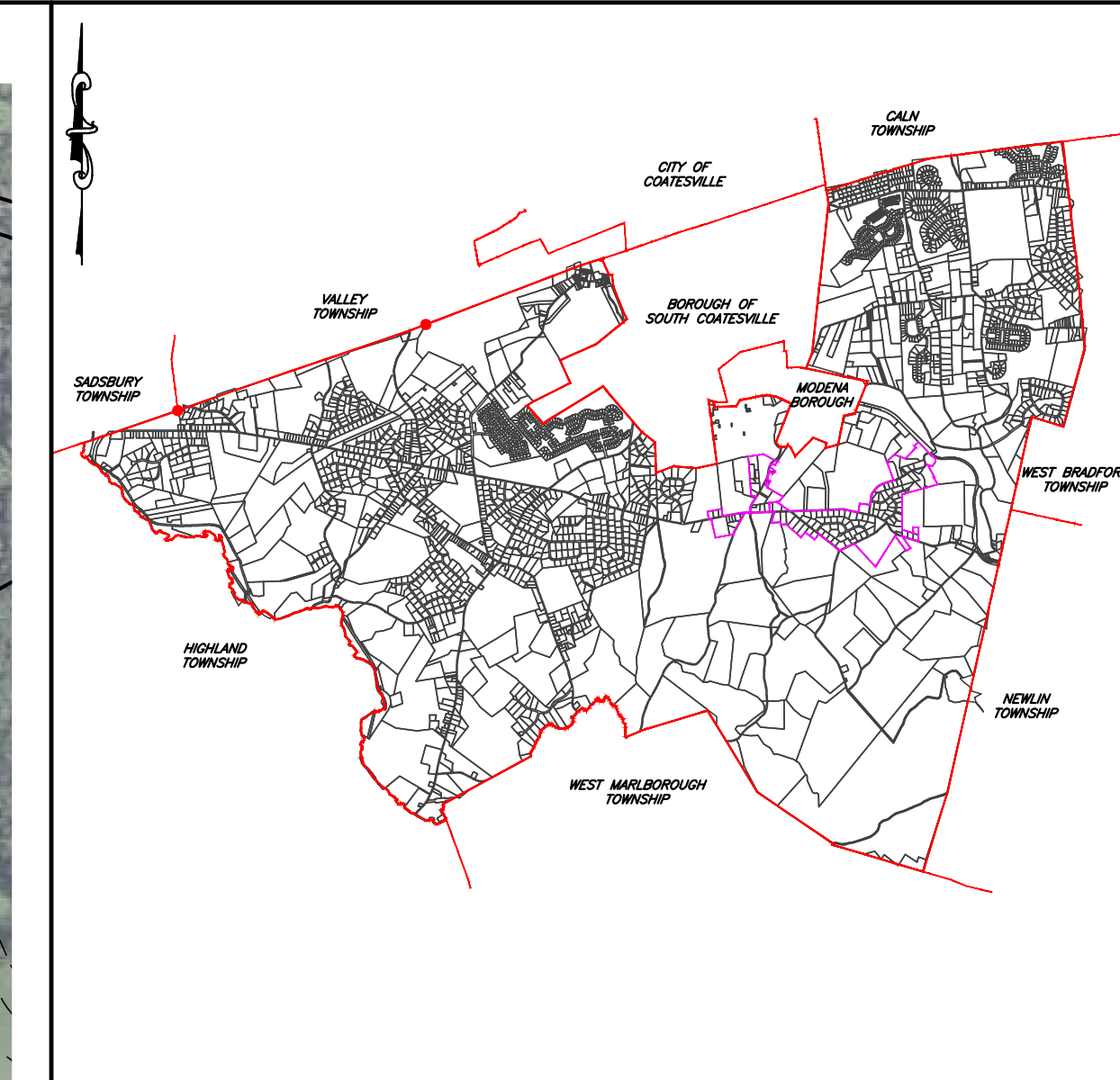
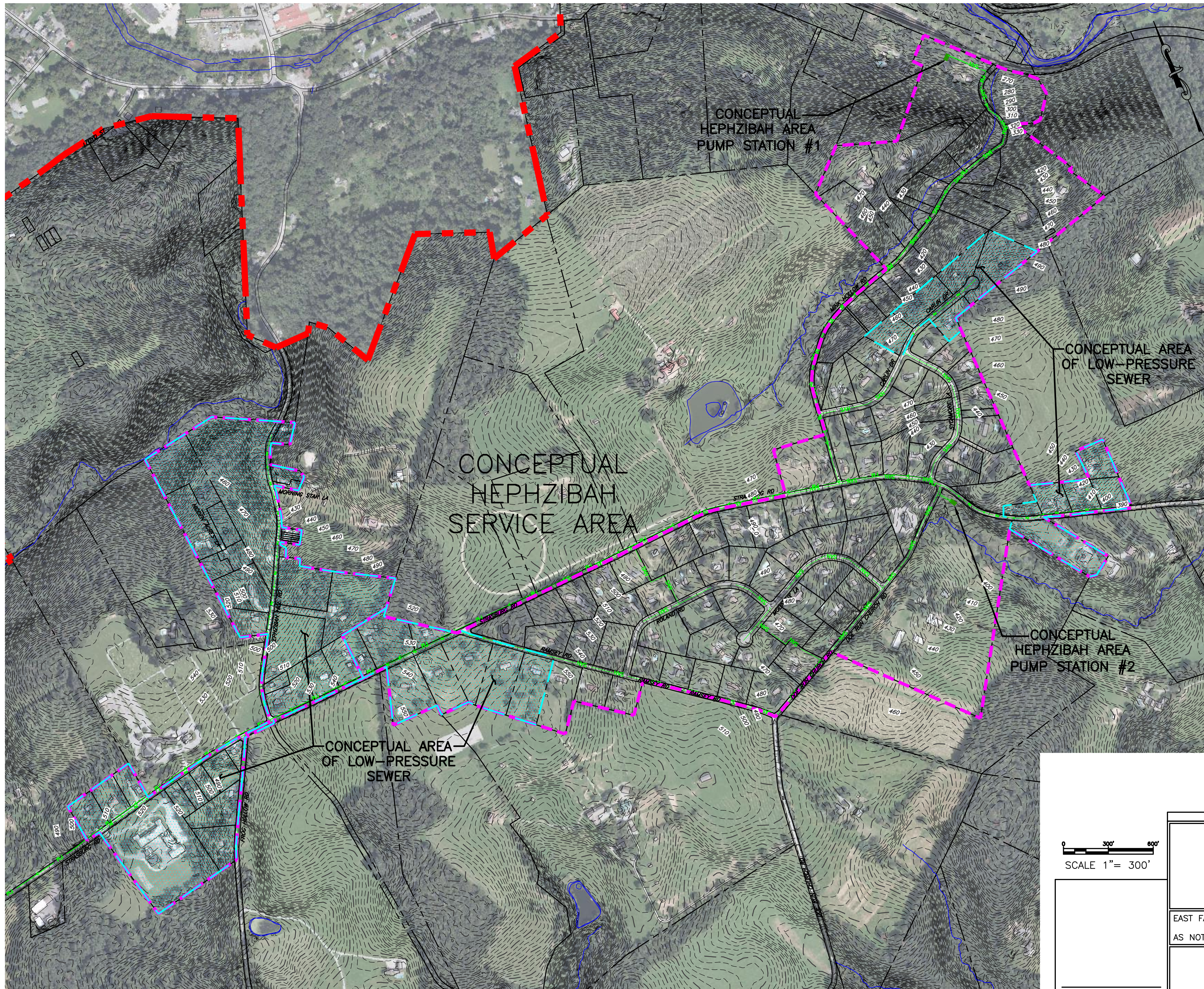
B	SITE				
1	Maintenance & Protection of Traffic	L.S.	1	\$ 25,000.00	\$ 25,000.00
	SUBTOTAL	L.S.	1	\$ 25,000.00	\$ 25,000.00
2	Erosion & Sedimentation Control	L.S.	1	\$ 8,000.00	\$ 8,000.00
	SUBTOTAL	L.S.	1	\$ 8,000.00	\$ 8,000.00

SUBTOTAL	\$ 2,444,200.00
5% FINANCING, LEGAL, EASEMENT ACQUISITION	\$ 122,210.00
5% FIELD SURVEY	\$ 122,210.00
5% ENGINEERING DESIGN	\$ 122,210.00
5% INSPECTIONS	\$ 122,210.00
10% CONTINGENCY	\$ 244,420.00
TOTAL	\$ 3,177,460.00

EDUs to be Serviced = 139
Cost per EDU = \$ 22,859.42

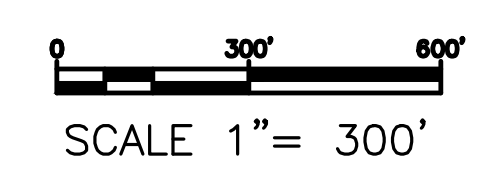
PAWC (Bonafide) = \$ 1,390,000.00
EFT = \$ 1,787,460.00

Cost per EDU = \$ 12,859.42

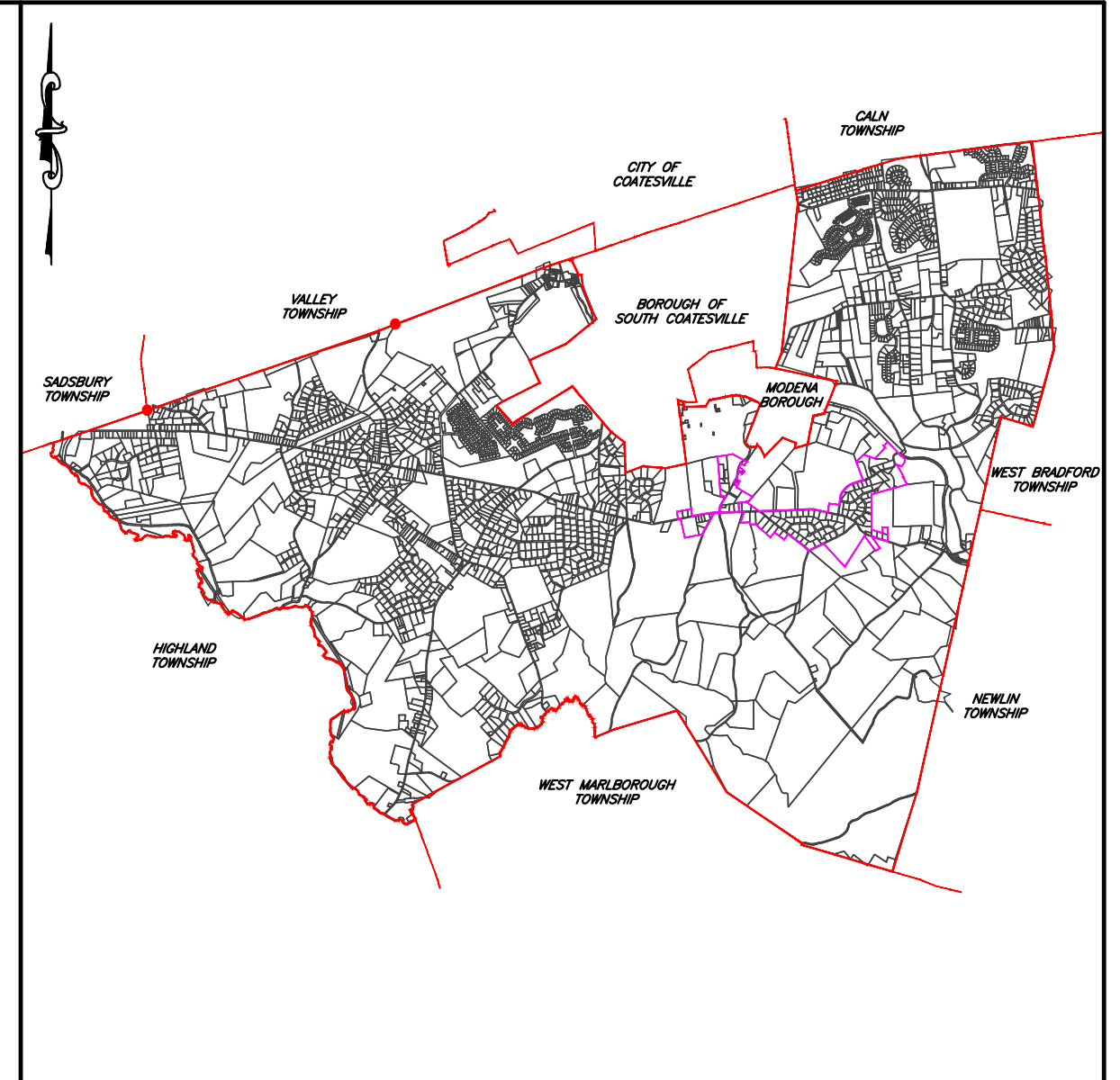
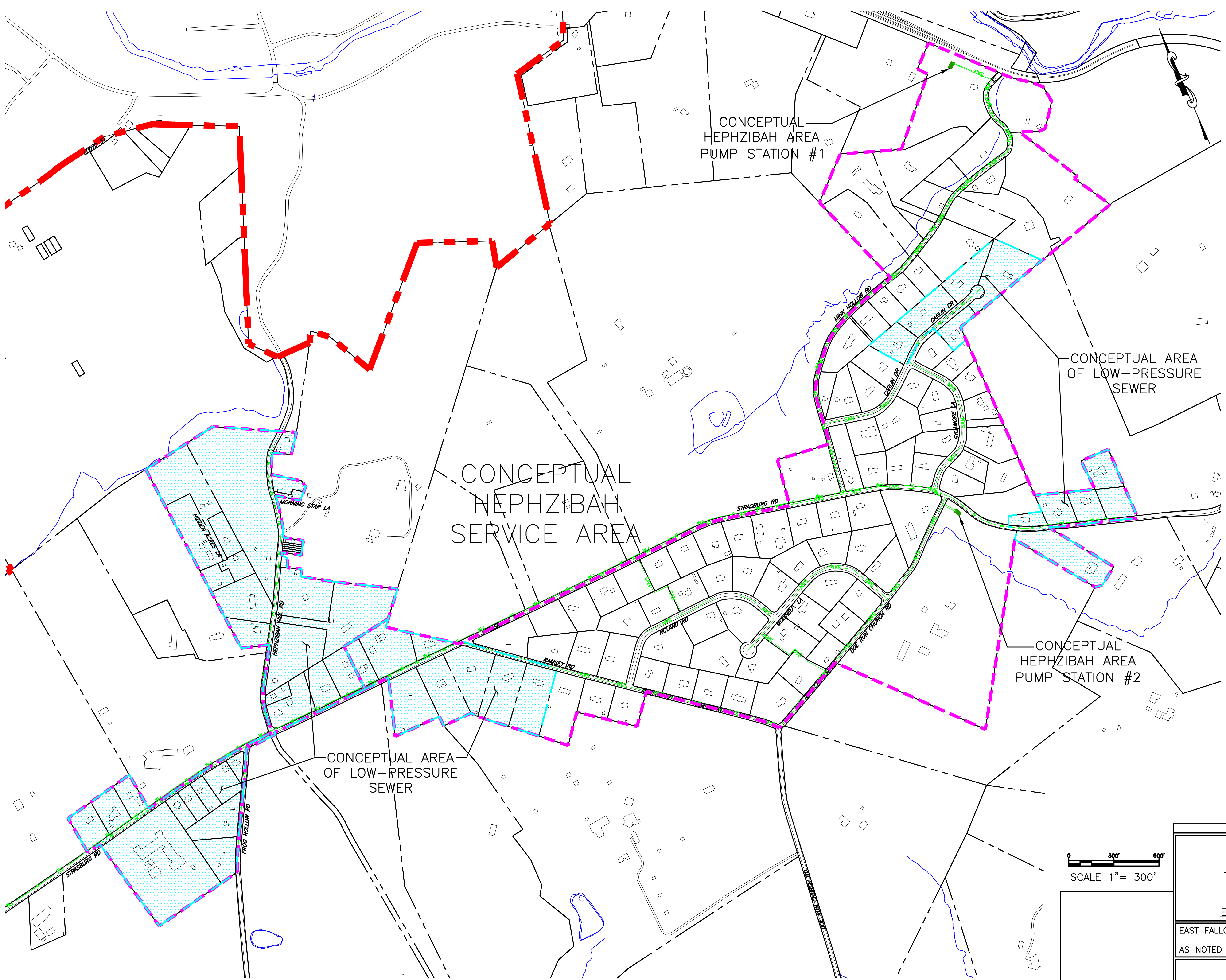


LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.

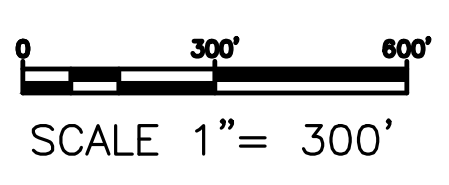


REVISION	DATE
HEPHZIBAH AREA CONCEPTUAL PUBLIC SEWER EXTENSION FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	MAY 20, 2022
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1



LOCATION MAP
SCALE 1"=6,000'

- NOTES:
1. PARCELS, MUNICIPAL BOUNDARIES, BUILDING OUTLINES, AND HYDROGRAPHY TAKEN FROM CHESTER COUNTY GIS.
 2. TOPOGRAPHY AND ROAD BREAKLINES TAKEN FROM PASDA LIDAR FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA.
 3. PASDA LIDAR IS TIED TO NAD83 HORIZONTAL DATUM, NAVD88 VERTICAL DATUM, PENNSYLVANIA STATE PLANE SOUTH (FOOT) COORDINATES.



REVISION	DATE
HEPHZIBAH AREA CONCEPTUAL PUBLIC SEWER EXTENSION FOR ACT 537 PLAN UPDATE FOR EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY	
EAST FALLOWFIELD TOWNSHIP	CHESTER COUNTY, PA
AS NOTED	AUGUST 13, 2019
HERBERT E. MacCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, INC. P.O. BOX 118 BROOMALL, PA. 19008	
	SHEET 1 OF 1

Mount Carmel Community On-Lot Cost Estimate (Drip Dispersion Alternative)

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	Sanitary Sewer (Collection)				
1.	Sanitary Lateral Wyes - 8" x 4"	EA.	25	\$ 154.00	\$ 3,850.00
	Subtotal	EA.	25	\$ 154.00	\$ 3,850.00
2.	Sanitary Laterals - 4" SDR-35 PVC	L.F.	625	\$ 42.00	\$ 26,250.00
	Subtotal	L.F.	625	\$ 42.00	\$ 26,250.00
3.	8" SDR-35-PVC	L.F.	2550	\$ 62.00	\$ 158,100.00
	Subtotal	L.F.	2550	\$ 62.00	\$ 158,100.00
4.	Testing	L.S.	1	\$ 1,000.00	\$ 1,000.00
	Subtotal	L.S.	1	\$ 1,000.00	\$ 1,000.00
5.	Sanitary Manhole (w/ frame & cover)	EA.	9	\$ 3,600.00	\$ 32,400.00
	Subtotal	EA.	9	\$ 3,600.00	\$ 32,400.00
B	Pump Station / Force Main (Conveyance) & WWTP (Treatment)				
1.	1.5" Force Main PVC	L.F.	1100	\$ 20.00	\$ 22,000.00
	Subtotal	L.F.	1100	\$ 20.00	\$ 22,000.00
2.	WWTP	L.S.	1	\$ 250,000.00	\$ 250,000.00
	Subtotal	L.S.	1	\$ 250,000.00	\$ 250,000.00
3.	Land Acquisition for Disposal Area	L.S.	1	\$ 80,000.00	\$ 80,000.00
	Subtotal	L.S.	1	\$ 80,000.00	\$ 80,000.00
4.	Tree Removal	L.S.	1	\$ 3,000.00	\$ 3,000.00
	Subtotal	L.S.	1	\$ 3,000.00	\$ 3,000.00
C	Site				
1.	Maintenance & Protection of Traffic	L.S.	1	\$ 10,300.00	\$ 10,300.00
	Subtotal	L.S.	1	\$ 10,300.00	\$ 10,300.00
2.	Erosion & Sedimentation Control	L.S.	1	\$ 5,000.00	\$ 5,000.00
	Subtotal	L.S.	1	\$ 5,000.00	\$ 5,000.00

Subtotal	\$	591,900.00
5% Financing, Legal, Easment Acquisition	\$	29,595.00
5% Field Survey	\$	29,595.00
5% Engineering Design	\$	29,595.00
5% Inspections	\$	29,595.00
10% Contingency	\$	59,190.00
Total	\$	769,470.00

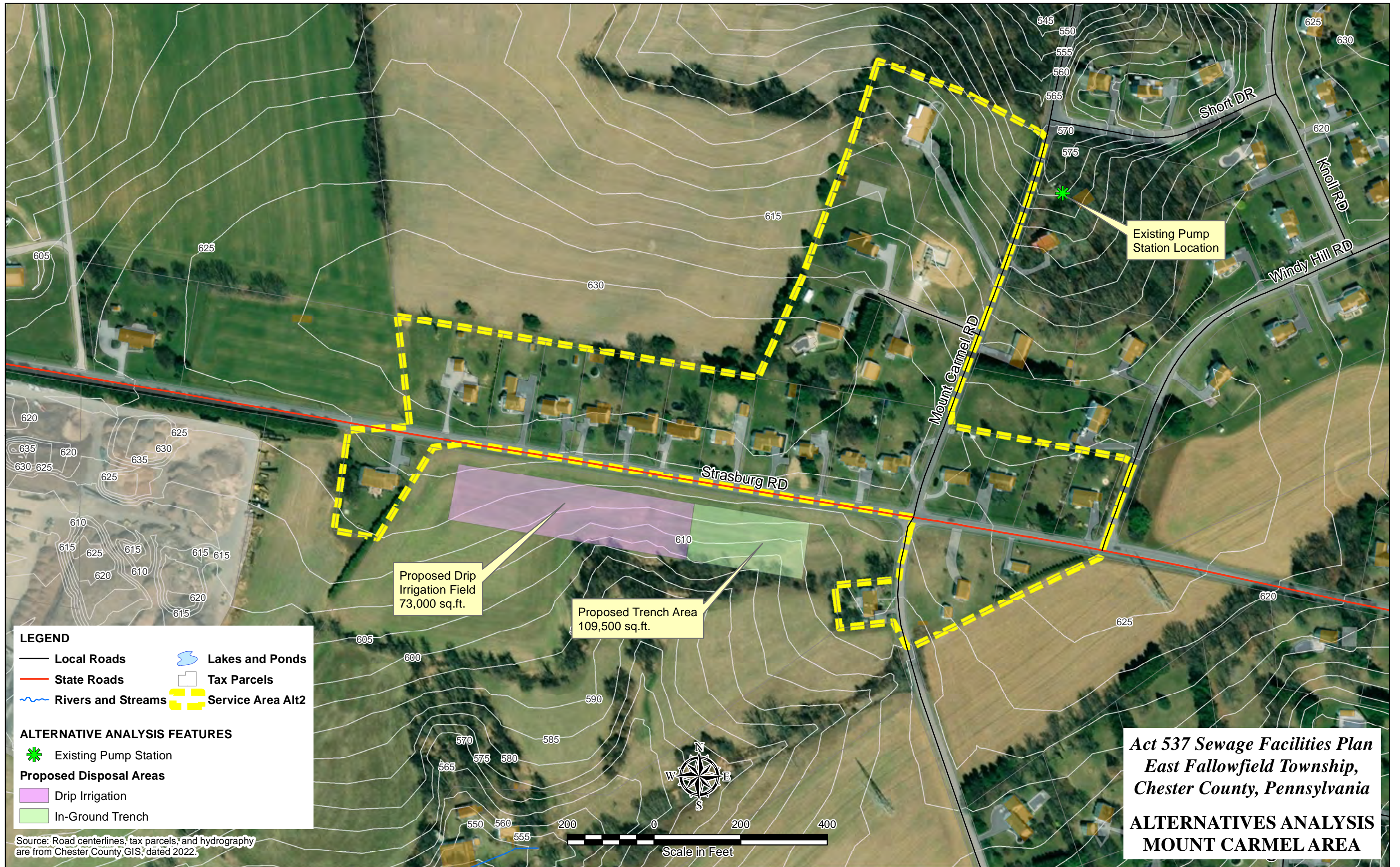
EDU's to be Served = 25
 Cost per EDU = \$ 30,778.80

Mount Carmel Community On-Lot Cost Estimate (In Ground Trench)

Item	Description	Unit	Quantity	Unit Cost	Total cost
A	Sanitary Sewer (Collection)				
1.	Sanitary Lateral Wyes - 8" x 4"	EA.	25	\$ 154.00	\$ 3,850.00
	Subtotal	EA.	25	\$ 154.00	\$ 3,850.00
2.	Sanitary Laterals - 4" SDR-35 PVC	L.F.	625	\$ 42.00	\$ 26,250.00
	Subtotal	L.F.	625	\$ 42.00	\$ 26,250.00
3.	8" SDR-35-PVC	L.F.	2550	\$ 62.00	\$ 158,100.00
	Subtotal	L.F.	2550	\$ 62.00	\$ 158,100.00
4.	Testing	L.S.	1	\$ 1,000.00	\$ 1,000.00
	Subtotal	L.S.	1	\$ 1,000.00	\$ 1,000.00
5.	Sanitary Manhole (w/ frame & cover)	EA.	9	\$ 3,600.00	\$ 32,400.00
	Subtotal	EA.	9	\$ 3,600.00	\$ 32,400.00
B	Pump Station / Force Main (Conveyance) & WWTP (Treatment)				
1.	1.5" Force Main PVC	L.F.	1100	\$ 20.00	\$ 22,000.00
	Subtotal	L.F.	1100	\$ 20.00	\$ 22,000.00
2.	WWTP	L.S.	1	\$ 200,000.00	\$ 200,000.00
	Subtotal	L.S.	1	\$ 200,000.00	\$ 200,000.00
3.	Land Acquisition for Disposal Area	L.S.	1	\$ 25,000.00	\$ 25,000.00
	Subtotal	L.S.	1	\$ 25,000.00	\$ 25,000.00
4.	Tree Removal	L.S.	1	\$ 3,000.00	\$ 3,000.00
	Subtotal	L.S.	1	\$ 3,000.00	\$ 3,000.00
C	Site				
1.	Maintenance & Protection of Traffic	L.S.	1	\$ 10,300.00	\$ 10,300.00
	Subtotal	L.S.	1	\$ 10,300.00	\$ 10,300.00
2.	Erosion & Sedimentation control	L.S.	1	\$ 5,000.00	\$ 5,000.00
	Subtotal	L.S.	1	\$ 5,000.00	\$ 5,000.00

Subtotal	\$	486,900.00
5% Financing, Legal, Easement Acquisition	\$	24,345.00
5% Field Survey	\$	24,345.00
5% Engineering Design	\$	24,345.00
5% Inspections	\$	24,345.00
10% Contingency	\$	48,690.00
Total	\$	632,970.00

EDU's to be Serviced = **25**
 Cost per EDU = **\$ 25,318.80**



- LEGEND**
- Local Roads
 - State Roads
 - ~ Rivers and Streams
 - ☪ Lakes and Ponds
 - ▭ Tax Parcels
 - ☒ Service Area Alt2

ALTERNATIVE ANALYSIS FEATURES

- ☼ Existing Pump Station
- Proposed Disposal Areas**
- ☐ Drip Irrigation
- ☐ In-Ground Trench

Source: Road centerlines, tax parcels, and hydrography are from Chester County GIS, dated 2022.



Act 537 Sewage Facilities Plan
East Fallowfield Township,
Chester County, Pennsylvania

ALTERNATIVES ANALYSIS
MOUNT CARMEL AREA

South Brandywine Middle School Community On-Lot Cost Estimate (Drip Dispersion Alternative)

Item	Description	Unit	Quantity	Unit Price	Total Cost
A Sanitary Sewer (Collection)					
1.	Sanitary Lateral Wyes - 8" x 4"	EA.	59	\$ 154.00	\$ 9,086.00
	Subtotal	EA.	59	\$ 154.00	\$ 9,086.00
2.	Sanitary Laterals - 4" SDR-35-PVC	L.F.	1475	\$ 42.00	\$ 61,950.00
	Subtotal	L.F.	1475	\$ 42.00	\$ 61,950.00
3.	8" SDR-35 PVC	L.F.	7050	\$ 62.00	\$ 437,100.00
	Subtotal	L.F.	7050	\$ 62.00	\$ 437,100.00
4.	Testing	L.S.	1	\$ 3,000.00	\$ 3,000.00
	Subtotal	L.S.	1	\$ 3,000.00	\$ 3,000.00
5.	Sanitary Manhole (w/ frame & cover)	EA.	30	\$ 3,600.00	\$ 108,000.00
	Subtotal	EA.	30	\$ 3,600.00	\$ 108,000.00
6.	Tie Into Existing Manhole	EA.	1	\$ 1,600.00	\$ 1,600.00
	Subtotal	EA.	1	\$ 1,600.00	\$ 1,600.00
B Pump Station / Force Main (Conveyance) & WWTP (Treatment)					
1.	1.5" Force Main PVC	L.F.	1500	\$ 20.00	\$ 30,000.00
	Subtotal	L.F.	1500	\$ 20.00	\$ 30,000.00
2.	WWTP	L.S.	1	\$ 900,000.00	\$ 900,000.00
	Subtotal	L.S.	1	\$ 900,000.00	\$ 900,000.00
3.	Land Acquisition for Disposal Area	L.S.	1	\$ 250,000.00	\$ 250,000.00
	Subtotal	L.S.	1	\$ 250,000.00	\$ 250,000.00
4.	Tree Removal	L.S.	1	\$ 31,000.00	\$ 31,000.00
	Subtotal	L.S.	1	\$ 31,000.00	\$ 31,000.00
C Site					
1.	Maintenance & Protection of Traffic	L.S.	1	\$ 15,000.00	\$ 15,000.00
	Subtotal	L.S.	1	\$ 15,000.00	\$ 15,000.00
2.	Erosion & Sedimentation Control	L.S.	1	\$ 5,400.00	\$ 5,400.00
	Subtotal	L.S.	1	\$ 5,400.00	\$ 5,400.00

Subtotal	\$	1,852,136.00
5% Financing, Legal, Easement Acquisition	\$	92,606.80
5% Field Survey	\$	92,606.80
5% Engineering Design	\$	92,606.80
5% Inspections	\$	92,606.80
10% Contingency	\$	<u>185,213.60</u>
Total	\$	2,407,776.80

*SBMS accounts for 38 of the 96 EDU's
8,350 gpd @ 225 gpd/EDU

EDU's to be Serviced = 96
Cost per EDU = \$ 25,081.01

South Brandywine Middle School Community On-Lot Cost Estimate(In Ground Trench)

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	Sanitary Sewer (Collection)				
1.	Sanitary Lateral Wyes - 8" x 4"	EA.	59	\$ 154.00	\$ 9,086.00
	Subtotal	EA.	59	\$ 154.00	\$ 9,086.00
2.	Sanitary Laterals - 4" SDR-35-PVC	L.F.	1475	\$ 42.00	\$ 61,950.00
	Subtotal	L.F.	1475	\$ 42.00	\$ 61,950.00
3.	8" SDR-35 PVC	L.F.	7050	\$ 62.00	\$ 437,100.00
	Subtotal	L.F.	7050	\$ 62.00	\$ 437,100.00
4.	Testing	L.S.	1	\$ 3,000.00	\$ 3,000.00
	Subtotal	L.S.	1	\$ 3,000.00	\$ 3,000.00
5.	Sanitary Manhole (w/ frame & cover)	EA.	30	\$ 3,600.00	\$ 108,000.00
	Subtotal	EA.	30	\$ 3,600.00	\$ 108,000.00
6.	Tie Into Existing Manhole	EA.	1	\$ 1,600.00	\$ 1,600.00
	Subtotal	EA.	1	\$ 1,600.00	\$ 1,600.00
B	Pump Station / Force Main (Conveyance) & WWTP (Treatment)				
1.	1.5" Force Main PVC	L.F.	1500	\$ 20.00	\$ 30,000.00
	Subtotal	L.F.	1500	\$ 20.00	\$ 30,000.00
2.	WWTP	L.S.	1	\$ 775,000.00	\$ 775,000.00
	Subtotal	L.S.	1	\$ 775,000.00	\$ 775,000.00
3.	Land Acquisition for Disposal Area	L.S.	1	\$ 80,000.00	\$ 80,000.00
	Subtotal	L.S.	1	\$ 80,000.00	\$ 80,000.00
4.	Tree Removal	L.S.	1	\$ 78,000.00	\$ 78,000.00
	Subtotal	L.S.	1	\$ 78,000.00	\$ 78,000.00
C	Site				
1.	Maintenance & Protection of Traffic	L.S.	1	\$ 15,000.00	\$ 15,000.00
	Subtotal	L.S.	1	\$ 15,000.00	\$ 15,000.00
2.	Erosion & Sedimentation Control	L.S.	1	\$ 5,400.00	\$ 5,400.00
	Subtotal	L.S.	1	\$ 5,400.00	\$ 5,400.00

Subtotal	\$	1,604,136.00
5% Financing, Legal, Easement Acquisition	\$	80,206.80
5% Field Survey	\$	80,206.80
5% Engineering Design	\$	80,206.80
5% Inspections	\$	80,206.80
10% Contingency	\$	160,413.60
Total	\$	2,085,376.80

* SBMS accounts for 38 of the 96 EDU's
8,350 gpd @ 225 gpd/EDU

EDU's to be Serviced = 96
Cost per EDU = \$ 21,722.68



Act 537 Sewage Facilities Plan
East Fallowfield Township,
Chester County, Pennsylvania
ALTERNATIVES ANALYSIS
SOUTH BRANDYWINE
MIDDLE SCHOOL AREA

- LEGEND**
- Local Roads
 - State Roads
 - Rivers and Streams
 - Lakes and Ponds
 - Tax Parcels
 - Service Area Alt2
- ALTERNATIVE ANALYSIS FEATURES**
- Proposed Pump Station
 - Proposed Disposal Areas
 - Drip Irrigation
 - In-Ground Trench

Proposed Drip Irrigation Field
232,000 sq.ft.

Proposed Trench Area
348,000 sq.ft.

Proposed Pump Station Location



Source: Road centerlines, tax parcels, and hydrography are from Chester County GIS, dated 2022. 570 Scale in Feet. Esri, Maxar, GeoEye, Earthstar, IGN, and the GIS User Community

Stottsville Community On-Lot Cost Estimate (Drip Dispersion Alternative)

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	Sanitary Sewer (Collection)				
1.	Sanitary Lateral Wyes - 8" x 4"	EA.	32	\$ 154.00	\$ 4,928.00
	Subtotal	EA.	32	\$ 154.00	\$ 4,928.00
2.	Sanitary Laterals - 4" SDR-35 PVC	L.F.	800	\$ 42.00	\$ 33,600.00
	Subtotal	L.F.	800	\$ 42.00	\$ 33,600.00
3.	8" SDR-35-PVC	L.F.	4110	\$ 62.00	\$ 254,820.00
	Subtotal	L.F.	4110	\$ 62.00	\$ 254,820.00
4.	Testing	L.S.	1	\$ 1,540.00	\$ 1,540.00
	Subtotal	L.S.	1	\$ 1,540.00	\$ 1,540.00
5.	Sanitary Manhole (w/ frame and cover)	EA.	18	\$ 3,600.00	\$ 64,800.00
	Subtotal	EA.	18	\$ 3,600.00	\$ 64,800.00
B	Pump Station / Force Main (Conveyance) & WWTP (Treatment)				
1.	1.5" Force Main PVC	L.F.	700	\$ 20.00	\$ 14,000.00
	Subtotal	L.F.	700	\$ 20.00	\$ 14,000.00
2.	WWTP	L.S.	1	\$ 385,000.00	\$ 385,000.00
	Subtotal	L.S.	1	\$ 385,000.00	\$ 385,000.00
3.	Land Acquisition for Disposal Area	L.S.	1	\$ 100,000.00	\$ 100,000.00
	Subtotal	L.S.	1	\$ 100,000.00	\$ 100,000.00
4.	Tree Removal	L.S.	1	\$ 24,000.00	\$ 24,000.00
	Subtotal	L.S.	1	\$ 24,000.00	\$ 24,000.00
C	Site				
1.	Maintenance & Protection of Traffic	L.S.	1	\$ 19,200.00	\$ 19,200.00
	Subtotal	L.S.	1	\$ 19,200.00	\$ 19,200.00
2.	Erosion & Sedimentation Control	L.S.	1	\$ 6,400.00	\$ 6,400.00
	Subtotal	L.S.	1	\$ 6,400.00	\$ 6,400.00

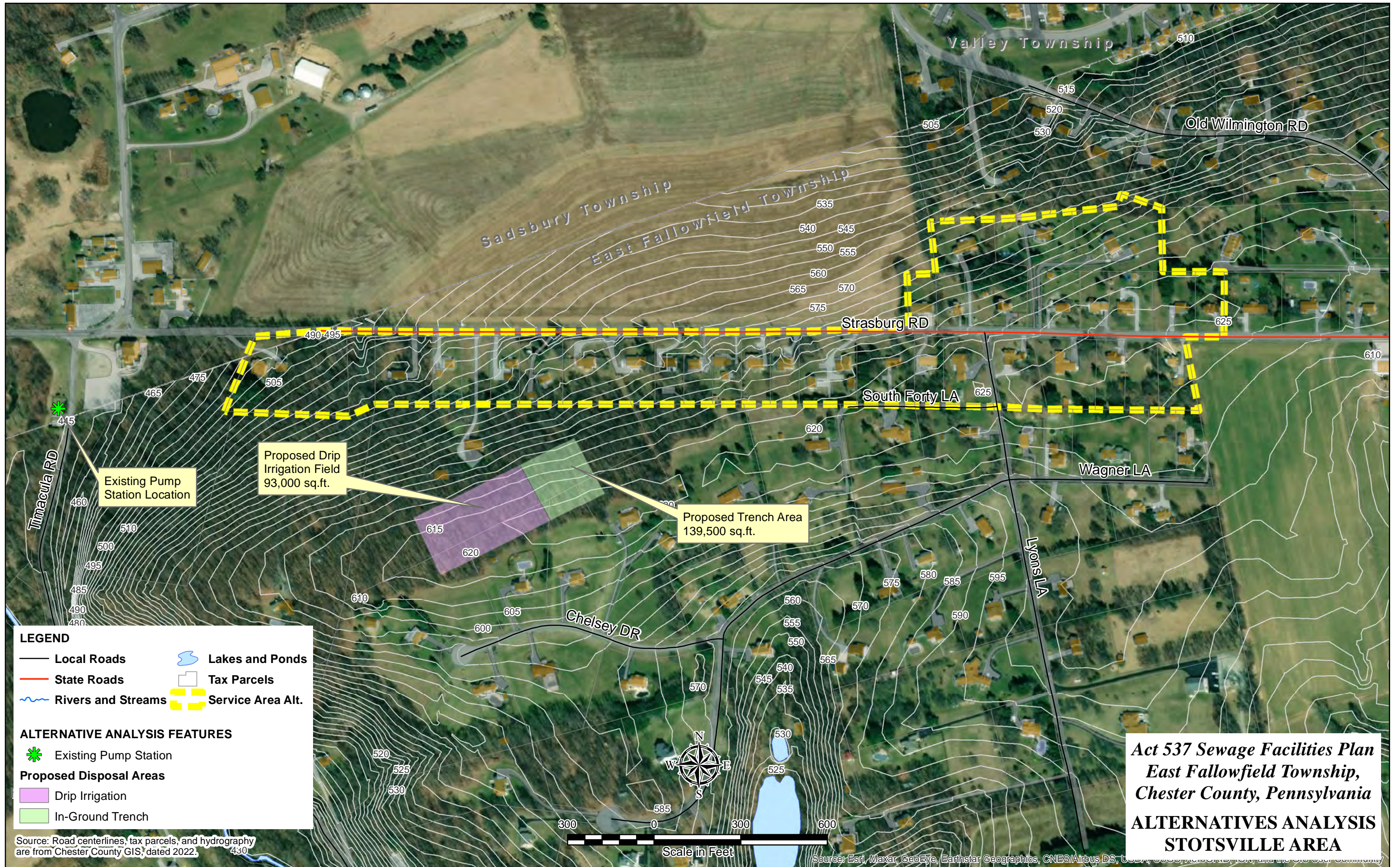
Subtotal	\$	908,288.00
5% Financing, Legal, Easement Acquisition	\$	45,414.40
5% Field Survey	\$	45,414.40
5% Engineering Design	\$	45,414.40
5% Inspections	\$	45,414.40
10% Contingency	\$	90,828.80
Total	\$	1,180,774.40
EDU's to be Serviced =		32
Cost per EDU =	\$	36,899.20

Stottsville Community On-Lot Cost Estimate (In Ground Trench)

Item	Description	Unit	Quantity	Unit Cost	Total Cost
A	Sanitary Sewer (Collection)				
1.	Sanitary Lateral Wyes - 8" x 4"	EA.	32	\$ 154.00	\$ 4,928.00
	Subtotal	EA.	32	\$ 154.00	\$ 4,928.00
2.	Sanitary Laterals - 4" SDR 35 PVC	L.F.	800	\$ 42.00	\$ 33,600.00
	Subtotal	L.F.	800	\$ 42.00	\$ 33,600.00
3.	8" SDR-35-PVC	L.F.	4110	\$ 62.00	\$ 254,820.00
	Subtotal	L.F.	4110	\$ 62.00	\$ 254,820.00
4.	Testing	L.S.	1	\$ 1,540.00	\$ 1,540.00
	Subtotal	L.S.	1	\$ 1,540.00	\$ 1,540.00
5.	Sanitary Manhole (w/ frame and cover)	EA.	18	\$ 3,600.00	\$ 64,800.00
	Subtotal	EA.	18	\$ 3,600.00	\$ 64,800.00
B	Pump Station / Force Main (Conveyance) & WWTP (Treatment)				
1.	1.5" Force Main PVC	L.F.	700	\$ 20.00	\$ 14,000.00
	Subtotal	L.F.	700	\$ 20.00	\$ 14,000.00
2.	WWTP	L.S.	1	\$ 300,000.00	\$ 300,000.00
	Subtotal	L.S.	1	\$ 300,000.00	\$ 300,000.00
3.	Land Acquisition for Disposal Area	L.S.	1	\$ 33,000.00	\$ 33,000.00
	Subtotal	L.S.	1	\$ 33,000.00	\$ 33,000.00
4.	Tree Removal	L.S.	1	\$ 33,000.00	\$ 33,000.00
	Subtotal	L.S.	1	\$ 33,000.00	\$ 33,000.00
C	Site				
1.	Maintenance & Protection of Traffic	L.S.	1	\$ 19,200.00	\$ 19,200.00
	Subtotal	L.S.	1	\$ 19,200.00	\$ 19,200.00
2.	Erosion & Sedimentation Control	L.S.	1	\$ 6,400.00	\$ 6,400.00
	Subtotal	L.S.	1	\$ 6,400.00	\$ 6,400.00

Subtotal	\$	765,288.00
5% Financing, Legal, Easement Acquisition	\$	38,264.40
5% Field Survey	\$	38,264.40
5% Engineering Design	\$	38,264.40
5% Inspections	\$	38,264.40
10% Contingency	\$	76,528.80
Total	\$	994,874.40

EDU's to be Serviced = 32
 Cost per EDU = \$ 31,089.83



LEGEND

- Local Roads
- State Roads
- ~ Rivers and Streams
- ☪ Lakes and Ponds
- ▭ Tax Parcels
- ▭ Service Area Alt.

ALTERNATIVE ANALYSIS FEATURES

- ☪ Existing Pump Station

Proposed Disposal Areas

- ▭ Drip Irrigation
- ▭ In-Ground Trench

Source: Road centerlines, tax parcels, and hydrography are from Chester County GIS, dated 2022.

**Act 537 Sewage Facilities Plan
East Fallowfield Township,
Chester County, Pennsylvania
ALTERNATIVES ANALYSIS
STOTSVILLE AREA**

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

APPENDIX I

**MODEL
HOLDING TANK ORDINANCE**

BE IT ENACTED AND ORDAINED by the _____ (Supervisors)
(Council members) _____ of _____ (Township) (Borough) _____ of
County, Pennsylvania, and it is hereby enacted and ordained as follows:

Section 1. Purposes. The purpose of this Ordinance is to establish procedures for the use and maintenance of existing and new holding tanks designed to receive and retain sewage whether from residential or commercial uses. It is hereby declared that the enactment of this Ordinance is necessary for the protection, benefit and preservation of the health, safety and welfare of the inhabitants of this municipality.

Section 2. Definitions. Unless the context specifically and clearly indicates otherwise, the meaning of terms used in this Ordinance shall be as follows:

- A. “Agency” shall mean _____ (Supervisors) (Council members) _____
of _____ Township, _____ County, Pennsylvania.
- B. “Holding Tank” shall mean a watertight receptacle, whether permanent or temporary, which receives and retains sewage conveyed by a water carrying system and is designed and constructed to facilitate the ultimate disposal of the sewage at another site.
- C. “Improved Property” shall mean any property within the Township upon which there is erected a structure intended for continuous or periodic habitation, occupancy or use by human beings or animals and from which structure sewage shall or may be discharged.
- D. “Owner” shall mean any person vested with ownership, legal or equitable, sole or partial, of any property located in the Township.
- E. “Person” shall mean any individual, partnership, company, association, corporation or other group or entity.
- F. “Sewage” shall mean any substance that contains any of the waste products or excrement or other discharge from the bodies of human beings or animals and any noxious or deleterious substance being harmful or inimical to the public health, or to animal or aquatic life or to the use of water for domestic water supply or for recreation or any substance which constitutes pollution under the Clean Stream Law (35 PS §§ 691.1-691.1001).
- G. “Municipality” shall mean _____ (Township) (Borough) _____,
_____ County, Pennsylvania.

Section 3. Right and privileges granted. That the Agency is hereby authorized and empowered to undertake within the Township the control and methods of holding tank use, sewage disposal and sewage collection and transportation thereof.

Section 4. Rules and Regulations. That the Agency is hereby authorized and empowered to adopt such rules and regulations concerning sewage which it may deem necessary from time to time to effect the purposes herein.

Section 5. Rules and Regulations to be in Conformity with Applicable Law. All such rules and regulations adopted by the Agency shall be in conformity with the provisions herein, all other ordinances of the Township, and all applicable laws, and applicable rules and regulations of administrative agencies of the Commonwealth of Pennsylvania.

Section 6. Rates and Charges. The Agency shall have the right and power to fix, alter, charge and collect rates, assessments, and other charges in the area served by its facilities at reasonable and uniform rates as authorized by applicable law.

Section 7. Exclusiveness of Rights and Privileges.

- A. The collection and transportation of all sewage from any improved property utilizing a holding tank shall be done solely by or under the direction and control of the Agency, and the disposal thereof shall be made only at such site or sites as may be approved by the Department of Environmental Protection of the Commonwealth of Pennsylvania.
- B. The Agency will receive, review and retain pumping receipts from permitted holding tanks.
- C. The Agency will complete and retain annual inspection reports for each permitted holding tank.

Section 8. Duties of Improved Property Owner. The owner of an improved property that utilizes a holding tank shall:

- A. Maintain the holding tank in conformance with this or any ordinance of this Township, the provisions of any applicable law, and the rules and regulations of the Agency and any administrative agency of the Commonwealth of Pennsylvania.
- B. Permit only the Agency or its agent to inspect holding tanks on an annual basis.
- C. Permit only the Agency or its agent to collect, transport, and dispose of the contents therein.

Section 9. Violations. Any person who violates any provisions of Section 8, shall, upon conviction thereof by summary proceedings, be sentenced to pay a fine of not less than Five-hundred (\$500.00) dollars and not more

than Five Thousand (\$5,000.00) dollars and no cents, and in default of said fine and costs of undergo imprisonment in the county prison for a period not in excess of 90 days.

Section 10. Abatement of Nuisances. In addition to any other remedies provided in this ordinance, any violation of Section 8 above shall constitute a nuisance and shall be abated by the municipality or the Agency by either seeking mitigation of the nuisance or appropriate equitable or legal relief from a court of competent jurisdiction.

Section 11. Repeal. All ordinances or resolutions or parts of ordinances or resolutions, insofar as they are inconsistent herewith, be and the same are hereby repealed.

Section 12. Severability. If any sentence, clause, section or part of this ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts of this ordinance. It is hereby declared as the intent of the (appropriate formal title of the legislative body of the municipality) (Board of Supervisors of the Township) that this ordinance would have been adopted has such constitutional, illegal or invalid sentence, clause, section or part thereof not been included therein.

Section 13. Effective Date. This ordinance shall become effective five (5) days after its adoption.

ENACTED AND ORDAINED into an ordinance this _____ day of _____ A.D., 20____, by the _____ (Council members) (Supervisors) of the _____ (Borough) (Township) of _____ County in Lawful Session duly assembled.

(Council members) (Supervisors) OF
THE (Township) (Borough) OF

CERTIFICATION OF ADOPTION

I hereby certify the foregoing to be an exact copy of an ordinance adopted by the
_____ (Supervisors) (Council members) _____ of the _____
_____ (Township) (Borough) _____ County, Pennsylvania, at
a regular meeting of the Board on _____.

_____ Secretary

APPENDIX J

**EAST FALLOWFIELD TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA**

**ORDINANCE NO. ____ OF 2022
ON-LOT SEWAGE MANAGEMENT PROGRAM ORDINANCE**

AN ORDINANCE ESTABLISHING A SEWAGE MANAGEMENT PROGRAM FOR INDIVIDUAL AND COMMUNITY ON-LOT SEWAGE DISPOSAL SYSTEMS WITHIN EAST FALLOWFIELD TOWNSHIP, CHESTER COUNTY, PA

Section I. Short Title: Introduction; Purpose

- A. This ordinance shall be known any may be cited as **“An On-Lot Sewage Management Program Ordinance for East Fallowfield Township.”**

- B. In accordance with municipal codes, the Clean Streams Law (Act of June 27, 1937, P.L. 1987, No. 394 as amended, 35 P.S. §§691.1 to 691.1001), and the Pennsylvania Sewage Facilities Act (Act of January 24, 1966, P.L. 1535 as amended, 35 P.S. §750.1 *et seq.* known as Act 537), it is the power and the duty of Township to provide for adequate sewage treatment facilities and for the protection of the public health by preventing the discharge of untreated or inadequately treated sewage. The Act 537 Official Sewage Facilities Plan Update for East Fallowfield Township indicates that it is necessary to formulate and implement a sewage management program to effectively prevent and abate water pollution and hazards to the public health caused by improper treatment and disposal of sewage.

- C. The purpose of this ordinance is to provide for the regulation, inspection, maintenance and rehabilitation of on-lot sewage disposal systems; to educate owners and operators of individual and community on-lot sewage disposal systems within the Township with regard to proper means and frequency of operation and maintenance of such facilities; to further permit intervention in situations which may constitute a public nuisance or hazard to the public health; and to establish penalties and appeal procedures necessary for the proper administration of a sewage management program.

Section II. Definitions

- A. **“Authorized Agent”** shall mean a sewage enforcement officer, employee of the Township, professional engineer, plumbing inspector, or any other qualified or licensed person with demonstrated knowledge and experience regarding Individual and Community On-Lot Sewer System design, operation, and maintenance who is authorized to function within specified limits as an agent of East Fallowfield Township to administer or enforce the provisions of this ordinance.

- B. “Board” shall mean the Board of Supervisors, of East Fallowfield Township, Chester County, Pennsylvania.
- C. “Community Sewage System” shall mean any system, whether publicly or privately owned, for the collection of sewage from two or more lots, and the treatment and/or disposal of the sewage on one or more lots or at any other site.
- D. “Department” shall mean the Department of Environmental Protection of the Commonwealth of Pennsylvania (DEP).
- E. “Individual Sewage System” shall mean a system of piping, tanks or other facilities serving a single lot and collecting and disposing of sewage in whole or in part into the soil or into any waters of this Commonwealth.
- F. “Malfunction” shall mean a condition which occurs when an on-lot sewage disposal system discharges sewage onto the surface of the ground, into ground waters of this Commonwealth, into surface waters of this Commonwealth, backs up into a building connected to the system or in any manner causes a nuisance or hazard to the public health or pollution of ground or surface water or contamination of public or private drinking water wells. Systems shall be considered to be malfunctioning if any condition noted above occurs for any length of time during any period of the year.
- G. “Official Sewage Facilities Plan” shall mean a comprehensive plan for the provision of adequate sewage disposal systems, adopted by the Township Board of Supervisors, and approved by the Pennsylvania Department of Environmental Protection, pursuant to the Pennsylvania Sewage Facilities Act.
- H. “On-lot Sewage Disposal System” shall mean any system for disposal of domestic sewage involving pretreatment and subsequent disposal of the clarified sewage into a subsurface soil absorption area or retaining tank; this term includes both individual sewage systems and community sewage systems.
- I. “Person” shall mean any individual, association, public or private corporation for profit or not for profit, partnership, firm, trust, estate, department, board, bureau of agency of the Commonwealth, political subdivision, municipality, district, authority, or any other legal entity whatsoever which is recognized by law as the subject of rights and duties. Whenever used in any clause prescribing and imposing a penalty or imposing a fine or imprisonment, the term person shall include the members of an association, partnership or firm and the officers of any local agency or municipal, public or private corporation for profit or not for profit.
- J. “Rehabilitation” shall mean work done to modify, alter, repair, enlarge or replace an existing on-lot sewage disposal system.

- K. “Sewage” shall mean any substance that contains any of the waste products or excrement or other discharge from the bodies of human beings or animals and any noxious or deleterious substances being harmful or inimical to the public health, or to animal or aquatic life, or to the use of water for domestic water supply or for recreation or which constitutes pollution under the Act of June 22, 1937 (P.L. 1987, No. 394), known as “The Clean Streams Law,” as amended.
- L. “Sewage Enforcement Office (SEO)” shall mean a person certified by DEP who is employed by the Township. Such person is authorized to conduct investigations and inspections, review permit applications, issue or deny permits and do all other activities as may be provided for such person in the Sewage Facilities Act, the rules and regulations promulgated thereunder and this or any other ordinance adopted by the Township.
- M. “Sewage Management District” shall mean any area or areas of the Township designated in the Official Sewage Facilities Plan adopted by the Township Board of Supervisors as an area for which a Sewage Management program is to be implemented.
- N. “Sewage Management Program” shall mean a comprehensive set of legal and administrative requirements encompassing the requirements of this ordinance, the Sewage Facilities Act, the Clean Streams Law, the regulations promulgated thereunder, and such other requirements adopted by the Township to effectively enforce and administer this ordinance.
- O. “Subdivision” shall mean the division or redivision of a lot, tract, or other parcel of land into two or more lots, tracts, parcels, or other divisions of land, including changes in existing lot lines. The enumerating of lots shall include as a lot that portion of the original tract or tracts remaining after other lots have been subdivided therefrom.
- P. “Township” shall mean the township of East Fallowfield, Chester County, Pennsylvania.
- Q. For the purposes of this ordinance, any term which is not defined herein shall have that meaning attributed to it under the Sewage Facilities Act and Regulations promulgated thereto.

Section III. Applicability

- A. From the effective date of this ordinance, its provisions shall apply in any portion of the Township identified in the Official Sewage Facilities Plan as a sewage management district. Within such as area or areas, the provisions of this ordinance shall apply to all persons owning any property serviced by an on-lot sewage disposal system and to all persons installing or rehabilitating on-lot sewage disposal systems.

Section IV. Permit Requirements

- A. No person shall install, construct or request bid proposals for construction, or alter an individual sewage system or community sewage system or construct or request bid proposals for construction or install or occupy any building or structure for which an individual sewage system or community sewage system is to be installed without first obtaining a permit from the sewage enforcement officer which permit shall indicate that the site and the plans and specifications of such system are in compliance with the provisions of the Clean Streams Law (35 P.S. §§691.1-691.1001) and the Pennsylvania Sewage Facilities Act (35 P.S. 750.1 *et seq.*) and the regulations adopted pursuant to those Acts.
- B. No system or structure designed to provide individual or community sewage disposal shall be covered from view until approval to cover the same has been given by a sewage enforcement officer. If 72 hours have elapsed, excepting Sundays and Holidays, since the sewage enforcement office issuing the permit received notification of completion of construction, the applicant may cover said system or structure unless permission has been specifically refused by the sewage enforcement officer.
- C. Applicants for sewage permits may be required to notify the sewage enforcement officer of the schedule for construction of the permitted on-lot sewage disposal system so that inspection(s) in addition to the final inspection required by the Sewage Facilities Act may be scheduled and performed by a sewage enforcement officer.
- D. No building or occupancy permit shall be issued for a new building which will contain sewage generating facilities until a valid sewage permit has been obtained from a sewage enforcement officer.
- E. No building or occupancy permit shall be issued and no work shall begin on any alteration or conversion of any existing structure, if said alteration or conversion will result in the increase or potential increase in sewage flows from the structure, until either the structure's owner receives a permit for alteration or replacement of the existing sewage disposal system or until the structure's owner and the appropriate officials of the Township receive written notification from a sewage enforcement officer that such a permit will not be required. The sewage enforcement officer shall determine whether the proposed alteration or conversion of the structure will result in increased sewage flows.
- F. Sewage permits may be issued only by a sewage enforcement officer employed by the Chester County Health Department.

Section V. Inspections

- A. Any on-lot sewage disposal system may be inspected by an authorized agent at any reasonable time as of the effective date of this ordinance.
- B. Such inspection may include a physical tour of the property, the taking of samples from surface water, wells, other groundwater sources, the sampling of the contents of the sewage disposal system itself and/or the introduction of a traceable substance into the interior plumbing of the structure served to ascertain the path and ultimate destination of wastewater generated in the structure.
- C. An authorized agent shall have the right to enter upon land for the purposes of inspections described in this section.
- D. An initial inspection shall be conducted by an authorized agent within one year of the effective date of this ordinance for the purpose of determining the type and functional status of each sewage disposal system in the sewage management district. A written report shall be furnished to the owner of each property inspected and a copy of said report shall be maintained in the Township records.
- E. A schedule of routine inspections may be established to assure the proper functioning of the sewage systems in the sewage management district.
- F. An authorized agent shall inspect systems known to be, or alleged to be, malfunctioning. Should said inspections reveal that the system is indeed malfunctioning, the authorized agent shall order action to be taken to correct the malfunction. If total correction cannot be done in accordance with the regulations of DEP including, but not limited to, those outlined in Chapter 73 of Title 25 of Pennsylvania Code or, is not technically or financially feasible in the opinion of the authorized agent and a representative of DEP; then action by the property owner to mitigate the malfunction shall be required.
- G. If there arises a geographic area where numerous on-lot sewage disposal systems are malfunctioning, a resolution of these area wide problems may necessitate detailed planning and a revision to the portion of the Sewage Facilities Plan pertaining to areas affected by such malfunctions. If a DEP authorized Official Sewage Facilities Plan Revision has been undertaken, repair or replacement of individual malfunctioning sewage disposal systems within the area affected by the revision may be delayed, pending the outcome of the plan revision process. However, immediate corrective action will be compelled whenever a malfunction, as determined by Township officials and/or DEP, represents a serious public health or environmental threat.

Section VI. Operation

- A. Only normal domestic wastes shall be discharged into any on-lot sewage disposal system. The following shall not be discharged into the system.
 - 1. Industrial waste.
 - 2. Automobile oil and other non-domestic oil.
 - 3. Toxic or hazardous substances or chemicals, including but not limited to, pesticides, disinfectants (excluding household cleaners), acids, paints, paint thinners, herbicides, gasoline, and other solvents.
 - 4. Clean surface or groundwater, including water from roof or cellar drains, springs, basement sump pumps and french drains.

Section VII. Maintenance

- A. Each person owning a building served by an on-lot sewage disposal system which contains a septic tank shall have the septic tank pumped by a qualified pumper/hauler within six months of the effective date of this ordinance. Thereafter that person shall have the tank pumped at least once every three years or whenever an inspection reveals that the septic tank is filled with solids or with scum in excess of 1/3 of the liquid depth of the tank. Receipts from the pumper/hauler shall be submitted to the Township within the prescribed six month and three-year pumping periods.
- B. The required pumping frequency may be increased at the discretion of an authorized agent if the septic tank is undersized, if solids buildup in the tank is above average, if the hydraulic load on the system increases significantly above average, if a garbage grinder is used in the building, if the system malfunctions or for other good cause shown. If any person can prove that such person's septic tank had been pumped within three years of the six-month anniversary of the effective date of this ordinance, then that person's initial required pumping may be delayed to conform to the general three-year frequency requirement except where an inspection reveals a need for more frequent pumping frequencies.
- C. Any person owning a property served by a septic tank shall submit, with each required pumping receipt, a written statement, from the pumper/hauler or from any other qualified individual acceptable to the Township, that the baffles in the septic tank have been inspected and found to be in good working order. Any person whose septic tank baffles are determined to require repair or replacement shall first contact a sewage enforcement officer for approval of the necessary repair.

- D. Any person owning or building served by an on-lot sewage disposal system which contains an aerobic treatment tank shall follow the operation and maintenance recommendations of the equipment manufacturer. A copy of the manufacturer's recommendations and a copy of the service agreement shall be submitted to the Township within six months of the effective date of this ordinance. Thereafter, service receipts shall be submitted to the Township at the intervals specified by the manufacturer's recommendations. In no case may the service or pumping intervals for aerobic treatment tanks exceed those required for septic tanks.
- E. Additional maintenance activity may be required as needed including, but not necessarily limited to, cleaning and unclogging of piping, servicing and the repair of mechanical equipment, leveling of distribution boxes, tanks and lines, removal of obstructing roots or trees, the diversion of surface water away from the disposal area, etc.

Section VIII. System Rehabilitation

- A. No person shall operate or maintain an on-lot sewage disposal system in such a manner that it malfunctions. All liquid wastes, including kitchen and laundry wastes and water softener backwash, shall be discharged to a treatment tank. No sewage system shall discharge untreated or partially treated sewage to the surface of the ground or into the waters of the Commonwealth unless a permit for such discharge has been obtained from DEP.
- B. A written notice of violation shall be issued to any person who is the owner of any property which is found to be served by a malfunctioning on-lot sewage disposal system or which is discharging sewage without a permit.
- C. Within seven (7) days of notification by the Township that a malfunction has been identified, the property owner shall make application to the sewage enforcement officer for a permit to repair or replace the malfunctioning system. Within 30 days of initial notification by the Township, construction of the permitted repair or replacement shall commence. Within 60 days of the original notification by the Township, the construction shall be completed unless seasonal or unique conditions mandate a longer period, in which case the Township shall set an extended completion date.
- D. A sewage enforcement officer shall have the authority to require the repair of any malfunction by the following methods: cleaning, repair or replacement of components of the existing system, adding capacity or otherwise altering or replacing the system's treatment tank, expanding the existing disposal areas, replacing the existing disposal area, replacing a gravity distribution system with a pressurized system, replacing the system with a holding tank, or any other alternative appropriate for the specific site.

- E. In lieu of, or in combination with, the remedies described in Subsection D above, a sewage enforcement officer may require the installation of water conservation equipment and the institution of water conservation practices in structures served. Water using devices and appliances in the structure may be required to be retrofitted with water saving appurtenances or they may be required to be replaced by water conserving devices.
- F. In the event that the rehabilitation measures in Subsections A through E are not feasible or effective, the owner may be required to apply for a permit to install an individual spray irrigation treatment system or to DEP for a single residence treatment and discharge system. Upon receipt of said permit the owner shall complete construction of the system within 30 days.
- G. Should none of the remedies described in this Section be totally effective in eliminating the malfunction of an existing on-lot sewage disposal system, the property owner is not absolved of responsibility for that malfunction. The Township may require whatever action is necessary to lessen or mitigate the malfunction to the extent necessary.

Section IX. Liens

The Township, upon written notice from a sewage enforcement officer that an imminent health hazard exists due to failure of property owner to maintain, repair, or replace an on-lot sewage disposal system as provided under the terms of this ordinance, shall have the authority to perform, or contract to have performed, the work required by the sewage enforcement officer. The owner shall be charged for the work performed and, if necessary, a lien shall be entered therefor in accordance with law.

Section X. Disposal of Septage

- A. All septage originating within the sewage management district shall be disposed of in accordance with the requirements of the Solid Waste Management Act (Act 97 of 1980, 35 P.S. §§6018.101 *et seq.*) and all other applicable laws and at sites or facilities approved by DEP. Approved sites or facilities shall include the following: septage treatment facilities, wastewater treatment plants, composting sites, and approved farmlands.
- B. Pumper/haulers of septage operating within the sewage management district shall operate in a manner consistent with the provisions of the Pennsylvania Solid Waste Management Act (Act 97 of 1980, 35 P.S. §§6018.101–6018.1003) and all other applicable laws.

Section XI. Administration

- A. The Township shall fully utilize those powers it possesses through enabling statutes and ordinances to effect the purposes of this ordinance.
- B. The Township shall employ qualified individuals to carry out the provisions of this ordinance. Those employees shall include a sewage enforcement officer and may include an administrator and such other persons as may be necessary. The Township may also contract with private qualified persons or firms as necessary to carry out the provisions of this ordinance.
- C. All permits, records, reports, files, and other written materials relating to the installation, operation and maintenance and malfunction of on-lot sewage disposal systems in the sewage management district shall become the property of, and be maintained by, the Township. Existing and future records shall be available for public inspection during regular business hours at the official office of the Township. All records pertaining to sewage permits, building permits, occupancy permits, and all other aspects of the sewage management program shall be made available, upon request, for inspection by representatives of DEP.
- D. The Township shall establish all administrative procedures necessary to properly carry out the provisions of this ordinance.
- E. The [township board/borough council] may establish a fee schedule, and authorize the collection of fees, to cover the cost to Township of administering this program.

Section XII. Appeals

- A. Appeals from final decisions of the Township or any of its authorized agents under this ordinance shall be made to the [borough council/board of supervisors] in writing within 30 days from the date of written notification of the decision in question.
- B. The appellant shall be entitled to a hearing before the [borough council/board of supervisors] at its next regularly scheduled meeting, if a written appeal is received at least 14 days prior to that meeting. If the appeal is received within 14 days of the next regularly scheduled meeting. If the appeal is received within 14 days of the next regularly scheduled meeting, the appeal shall be heard at the next regularly scheduled meeting. The municipality shall thereafter affirm, modify, or reverse the aforesaid decision. The hearing may be postponed for a good cause shown by the appellant or the Township. Additional evidence may be introduced at the hearing provided that it is submitted with the written notice of appeal.
- C. A decision shall be rendered in writing within 30 days of the date of the hearing.

Section XIII. Penalties

Any person failing to comply with any provision of this ordinance shall be subject to a fine of not less than Five Hundred dollars (\$500) and costs, and not more than Five Thousand dollars (\$5,000) and costs, or in default thereof shall be confined in the county jail for a period of not more than 90 days. Each day of noncompliance shall constitute a separate offense.

Section XIV. Repealer

All ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed to the extent of such inconsistency.

Section XV. Severability

If any section or clause of this ordinance shall be adjudged invalid, such adjudication shall not affect the validity of the remaining provisions which shall be deemed severable therefrom.

The above Ordinance is hereby Duly **ENACTED AND ORDAINED** this ____ day of _____, 2022 by the Board of Supervisors of East Fallowfield Township, Chester County, Pennsylvania, in lawful sessions duly assembled.

ATTEST:

**EAST FALLOWFIELD TOWNSHIP
BOARD OF SUPERVISORS**

Township Manager

Wilson T. Lambert, Jr., Chairman

Joe Heffern, Vice Chairman

Katja DiRado, Member

John Nielsen, Member

Al Wright, Member

APPENDIX K

APPENDIX L

APPENDIX M

MUNICIPAL COMMENTS AND RESPONSES

EAST FALLOWFIELD TOWNSHIP PLANNING COMMISSION

APPENDIX N

COUNTY COMMENTS AND RESPONSES

**CHESTER COUNTY PLANNING COMMISSION
CHESTER COUNTY HEALTH DEPARTMENT**

APPENDIX O

PUBLIC COMMENTS AND RESPONSES

APPENDIX P

RESOLUTION ADOPTING ACT 537 PLAN UPDATE

APPENDIX Q